

Figma Redesign Final Report

Jason Dong, Siyun Ji, Rouwan Yang, Sarah Espinosa

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Introduction

Figma is a web-based application tool that is used for collaborative interface design. It is still a relatively new emerging UI design tool that will compete with well-established design products, therefore, it lacks some important functionalities that its competitors have so we tried to address these issues in our redesign.

This report presents the progress in our group's redesign on Figma. Our team redesigned Figma by adding/changing some features, which depended on the data we got from usability testing and cognitive walkthrough. The purpose of this document is to present our process for redesigning Figma. During the process, our group analyzed the software by conducting competitor analysis, user interviews, online surveys, usability tests, and cognitive walkthrough. The purpose of these methods is to figure out the usability issues of the product based on users' evaluation and analysis, so that we can apply the appropriate improvements to the redesign of the application. After we identified the usability issues, we prioritized our targets for redesign. The redesign process also depended on our own understanding of a design tool and collaboration application.

After redesigning our targets for redesign, we evaluated our mockups by conducting the heuristic evaluation using the 10 Usability Heuristics for User Interface Design by Jakob Nielsen. In this report, we will discuss our findings and appropriate recommendations to improve the issues we found.

Competitive Analysis

Focal Product

- Figma: <https://www.figma.com/>
 - A web-based application built for UI design. It supports instant team collaboration through the web.

Direct Competitors

- Sketch: <https://www.sketchapp.com/>
 - A digital design app that is used for UI, mobile, web, and icon design.
- Adobe XD: <https://www.adobe.com/products/xd.html>
 - An all-in-one UX/UI application that supports vector design, wireframing, and creating simple interactive click-through prototypes

Indirect Competitors

- Adobe Photoshop: <https://www.adobe.com/products/photoshop.html>
 - A vector graphic editor that is mainly used for creating logos, icons, images, and illustrations.
- Draw.io: <https://www.draw.io/>
 - A diagramming tool used for making flowcharts, process diagrams, org charts, UML, ER diagrams, network diagrams, and much more

Figma is a UI design tool, so two of its direct competitors are Sketch and Adobe XD.

Figma is free for a “Starter Team”, meaning unlimited files and viewers, up to 3 projects, and

version history up to 30 days. Since Figma is still a relatively new product compared to its direct competitors, it offers something that no competitor has: a web-based design application with real-time feedback. Being a web-based application means that anyone with a computer and internet connection can use this software, making it best suited for novice designers wanting to get into design work. In comparison, Sketch has a higher barrier of entry, only being available to Mac users and only free for a 30-day trial. If the user wants to continue using it, they would have to spend \$99, with a renewal fee of \$69/yr to continue receiving software updates. In addition, Adobe XD is also a desktop application, which means that it has system requirements in order to run optimally. However, it offers a free version that includes one active shared prototype and design spec at a time with 2GB cloud storage. For \$9.99/mo, users can have unlimited shared prototypes and design specs, and 100GB cloud storage. All three softwares offer almost the same features, however, Figma is the only software that allows multiple people to work on the same file at the same time. This is Figma's biggest selling point compared to its competitors, and with the right improvements to their current user interface, it could beat the well-established design tools that came before it.

Figma also has indirect competitors that are not directly targeted towards UI design, which are Adobe Photoshop and Draw.io for example. Photoshop has been widely popular and used in many types of design work for years. However, it is mostly good for photo editing and it is \$20.99/mo. Creating mockups using it would also be difficult because it doesn't have grids, templates, and tools used in UI design work. In contrast, Draw.io is a free web-based diagramming collaboration tool that comes with the full set of features. Similar to Figma, users can create diagrams using any browser and save their work using cloud storage. Since it is a

diagramming tool, it is more suited for wireframing because it does not include the aesthetics of the design. However, users could probably make mockups using this product, it would just be tedious because it doesn't have UI design tools.

User Research

To better understand our users and other stakeholders, our team conducted an online survey and user interviews.

Target Population

The target population are mostly designers who use software applications in their design process, such as UI and UX designers or designers in related field. For this population, they need many digital tools and software applications to provide better design for the user experience in their designing system. In addition, most designers need to collaborate on teamwork for designing and completing a project which means that they need to use collaboration tools and application for working together. For these two aspects, our product can fulfill the two goals at the same time. Also, the target population can include designers who use Adobe Photoshop for creating images or use Lucidcharts or Draw.io to make design diagrams for better collaboration.

The direct stakeholders are users who currently use Figma and give straightforward feedback about this application. The feedback can be a part of our redesign process and clearly shows what needs to be improved in Figma. When we propose these changes, this population is affected. For figma users, the user experience will be changed. For Figma stakeholders, the changes may affect their businesses. The indirect stakeholders are people who use similar application like Sketch or Adobe Photoshop, also the owner of company of the application. Other

indirect stakeholders are also project managers and development teams. Indirect stakeholders can give analysis for other applications that are related to collaboration design applications and define the advantages or disadvantages in those application, which may help us do comparison to find missing features and functionalities in Figma. For other design tool users, our changes can influence their decisions of choosing design tool and our changes may affect their design strategies.

Survey Methods

Our team created ten quick-answer questions on Google Form which take about ten minutes to complete. We wanted our surveys to reach a broader audience so the questions are about personal habits, preferences, and opinion. We have shared the surveys to friends, family, and social media.

Survey Findings

For surveys, we got 49 responses through posting the link on facebook and wechat. After gathering up those data and analyzing the statistical result, for question about technology savvy, we found that most people stay in the medium level, and fewer people stay in the low level. And on the whole, 40 out of 48 participants have the medium and higher level of ability to use the technology. For this part, we can assume that most users have the basic knowledge to use the technology. For question about multitasking, we found the distribution of choice(yes/no/sometimes) is closed to each other which is around 30%, but most people are sometimes multitasker, the fewest people are not multitasker, which means most people do different tasks at the same time. For this part, if necessary, we can add the window of multi tasks for users who need that for efficiency. For the checkbox question about daily usage of smart

devices, we found that most people use mobile phone and laptop more than other devices, which separately take up 93.9% and 89.8%. It is easy to see that mobile phone is the most popular smart device for users so that mobile applications have much space to explore and develop. And for the multiple choice question about the smart device for using most, mobile phone also take up the highest percentage(75.5%) and is far higher than the second one -- laptop(20.4%). This finding tells us that many people like to use mobile design which we will take in consideration for our redesign. For the question about preference of operating system, most people prefer to use iOS system and half of users also prefer some other operating system such as Mac OS, Windows, and Android. For that, we should not limit the platform and we should try to develop the web which can adapt to different operating platform to meet diverse populations' needs. And the following four questions are all about the involvement of using the smart device. One is about time for using smart device in a day, most people spend 7-10 hour in day and only 2 out of 49 spend less than 2 hours in day. And the second one is extent of involving smart devices in workplace, which has the result that most users' workspace need smart device. The following one is what users use smart device for, and the result shows that users use them mainly for social media and school. The left one is how long people can live without smart devices, whose response shows that half percent of people can not live without smart device more than 3 hours. From the four questions mentioned above, we can see that the time we daily spend on the smart device take up almost half of a day, and we mainly use them for work or social life. And smart device play more and more important role in people's daily life which have already became the necessities for people. The last question is about the factors affecting users to choose the smart device, and we found that users care about design and quality more than pricing and brand.

Therefore, we should pay more attention on the web design to improve the sense of artistry and some suggested design for convenience to use.

Interview Methods

Our group developed the protocols to be semi-structured with five main questions; however, not all five questions are the same for each interview because we had to revise some interview questions based on the T.A.'s feedback. All of the interview questions are open ended that focus on design. For each main question, there are also follow up questions depending each interviewee's response. We want our interview questions to be based on design because we want to get deeper and more meaningful answers from the designers. Each team member is responsible for two 30-minute interviews in person or remotely. Since our product is relatively new and mainly used by UI/UX designers, we wanted to recruit participants who have had some design background. Based on the result, all of our participants are Undergraduate and Graduate students.

Interview Findings

For interviews, we conducted eight interviews in total and gather up all information for making affinity diagram. Based on the diagram, we analyze the data to come up with the findings. The first finding of the interviews is most of our target users have had experience in design. Their design background varies from doing personal design projects, or team projects. Users have the knowledge of doing UI/UX mainly depend on the number of projects they have involved in. For the question about the major step of design process, almost everyone needs to draw sketch and brainstorm more ideas at the beginning and then use some techniques such as prototype, interview, mockup or wireframe to get feedback to realize their goal. For the design

tools, more interviewees like using pen and paper to draw sketch first, and then use some software applications such as Figma, PhotoShop to do further designing work. This finding allows us to see that we should include templates to facilitate the brainstorming phase. For the collaboration tool, google applications are mentioned frequently because of the convenience of usage and easiness of tracking others' working situation. This finding shows that team collaboration is widely used and there's a need for collaboration tool. When we ask interviewees' collaboration process, we found that most people have the detailed divide of work and specific role to better for teamwork. Our last interview question is to ask interviewees' expectations from interface design tool. From this question, the easy usability such as simple explanation of functionalities, easy communication, suggested design is the most important things they expect.

Personas

Based on our interview and survey findings, we created three key stakeholders to guide our design process. The first stakeholder is someone who manages a project team and wants an easy way for the team to collaborate on design work. The second stakeholder is someone who is in a design team that is frustrated with how slow it takes to get design feedbacks. The last stakeholder is someone who is aspiring to become a UI designer and is looking for an affordable design software that is easy to use.

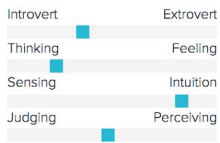
Michael



"Time is money"

Age: 42
Work: Project Manager at Oracle
Family: Married with 2 kids
Location: Oakland, CA

Personality



Goals

- Spend quality time with his kids
- Have an easy way for the project team to interact and collaborate on work
- Spend less time waiting for feedback, spend more time working on designs

Frustrations

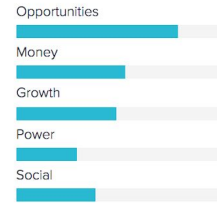
- It's hard getting the designers and developers on the same page when working on a project. He wants to use a tool that would make it fast and easy to share ideas and get feedback

Bio

Michael is a hard-working husband and father who wishes to split his time between work and family fairly. However, he also needs to spend a lot of time managing his team in order to get the project done on time. His designers currently use Adobe XD for their designs, but he is frustrated with the slow turnaround time. He wishes to use a tool where his designers can collaborate on designs in real-time, so there is not a lot of time wasted waiting to get feedback.

Dependable Observant Encouraging Loyal

Motivation



Technical Skills

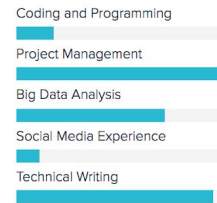


Figure 1: Persona 1

Jason



"Find joy in everything you chose to do"

Age: 28
Work: Interaction Designer at Creative Group
Family: Single
Location: San Jose, CA

Personality



Goals

- Become a project manager
- Be happily married with kids and a corgi
- Work efficiently with his design team and clients

Frustrations

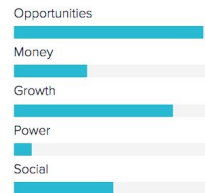
- It's hard working on designs remotely when team members are not working on the same version of the design
- It's hard to get quick feedbacks on his designs. He often has to wait at least an hour (on a good day) to get a response from his team or clients

Bio

Jason is an adventurous person who likes to travel in his free time. When he is not working at Creative Group, he likes to visit new breweries, watch movies, or do outdoor activities. Since he likes to live an active lifestyle, he only checks his phone when he gets a notification. He prefers to live in the moment instead of constantly using his phone. He wishes to use a software where his design team can work on the current version of designs, so they don't keep bothering him for feedback when he is off work and living life.

Confident Adventurous Helpful Self-motivated

Motivation



Technical Skills

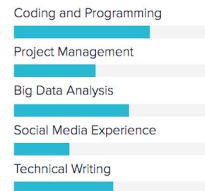


Figure 2: Persona 2

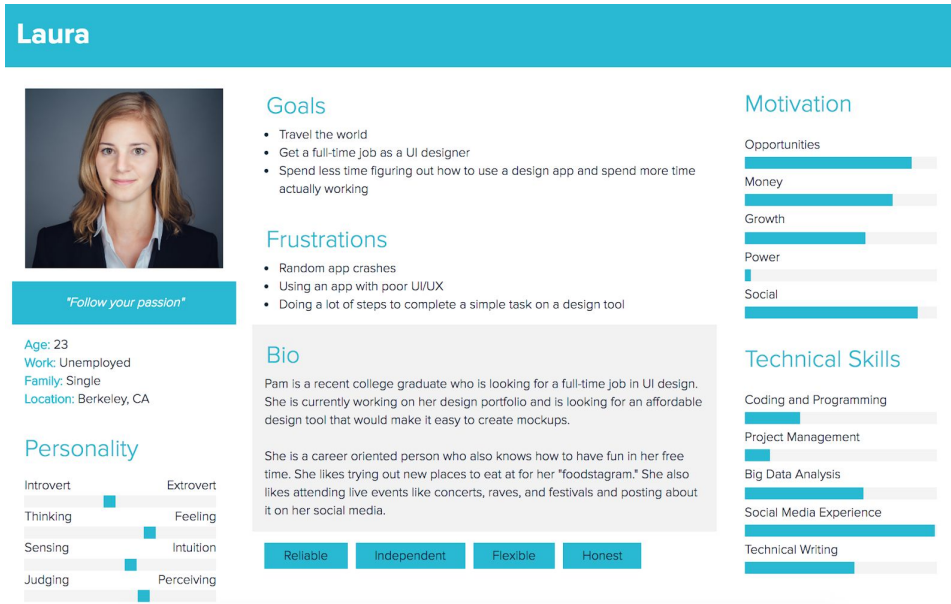


Figure 3: Persona 3

Usability Testing

To identify the usability issues of Figma, our team has conducted usability testing and cognitive walkthrough. For each type of test, we created a set of protocols to carry out before and during testing.

User Population

By analyzing the results of the surveys and interviews, we found that most people have had some experience in design which includes web design, art design, structural design, or robot design. But most of people stay in the medium or low level of technology savvy, and there are no participants out of 28 people that have the high level of technology savvy. Therefore, we set our user population for user testing to people who are not professional UI/UX designers because it can help improve the accuracy of the testing result and find more flaws of this application. In

order to improve the usability as much as possible, we set our target user population to be people who do not have much experience in using designing software and have never used Figma. If the testers have a lot of experience using other designing softwares, they might use Figma based on their past experience and knowledge to operate their design software, which might make it more difficult for us to accurately identify usability issues. Additionally, since this is a free web-based application, we wanted to test novice designers who is looking for a free and easy way to create prototypes with their team.

Usability Test

Protocols

- We used think-aloud method so we can capture the thought process of participants. Before the test, we informed the participants about the purpose of the test, consent form, and the rules of the test. For each usability test, we had each participant perform the test on a laptop using our testing account. There are two team members to conduct each test, one person is the facilitator who provide instructions and keeps the flow of the test while the other is the note taker who observes the participants and record the information. At the end of each test, we ask participants some questions about their background and the tests to collect additional information.

Recruiting Participants

- We chose UCI students who have never used Figma before as the participants. The reason is because this demographic is more likely to have some experience with collaboration or design work and would like an affordable way to work collaboratively on designs in real-time.

Evaluation

- We created 8 tasks that we think would best capture the main functionalities of Figma while being doable for beginners. Each task has a 5-minute time limit because of the time constraint. If a participant cannot finish within 5 minutes, the task is considered as failed. If a participant is stuck on a task for more than 2 minutes, we will give a small hint of where they should look at on the screen. Usability test duration varies from 25 to 40 minutes. All of the information related to the tests is kept for further analysis.

Cognitive Walkthrough

Protocols

- We created 3 main tasks, which each had 5 to 9 steps to complete. At each step, the notetaker observed the testers and answered 4 questions which are “What is the user’s goal at this point?” “Why is it their goal?” “Are the necessary actions obviously available in the interface? Once users see the control, will they recognize that it does what they want?” “After the action is taken, is the feedback appropriate? Will the user understand it so they can move on to the next action with confidence?”. The facilitator controlled the flow of the cognitive walkthrough. The two testers performed the tasks together on a laptop.

Recruiting Participants

- We performed the cognitive walkthrough as a group. We assigned roles to have two members who are testers, one member to be the facilitator who controls the test, and the other member to be the note taker.

Evaluation

- At each step, we paid careful attention to when the testers struggled with the tasks and if it's difficult for the notetaker to answer the four questions. If the testers cannot figure out how to do the tasks or they do the tasks incorrectly, we consider it as one of the usability issue. After conducting both usability test and cognitive walkthrough, we used Trello to analyze the data. We created 4 categories which are Usability Test Issues, Cognitive Walkthrough Issues, Important Findings, and Main Findings. Each team member went over the testing notes and identified the usability issues. We then sorted those issues into the Important Findings and discussed the findings together to identify 5 main findings for the tests. The findings were evaluated based on its significance and frequency. For example, if a significant usability issue is found frequently among participants, we will consider it to be one of the main findings. Table 1 summarizes the usability test and cognitive walkthrough data.

Testing method	Number of Participants	Type of participants	Duration	Number of tasks	Location
Usability Test - Think aloud protocol, 1 facilitator and 1 notetaker for each participant	5	UCI students	30 to 45 minutes each	8 tasks	UCI campus
Cognitive Walkthrough - Group test, 1 facilitator, 1 notetaker, and 2 testers	4	UCI students	50 minutes	3 main tasks with 5 to 9 sub-steps for each task	UCI campus

Table 1. Cognitive Walkthrough and Usability Summary Table

Usability Test and Cognitive Walkthrough Findings

1. Right clicking menu lacks functionalities

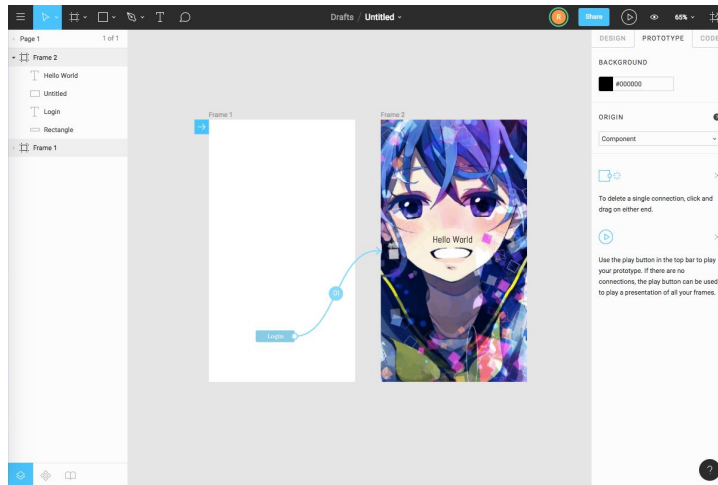


Figure 1. Design Screen



Figure 2. Right clicking the blank space to show Menu

As shown in Figure 2, this usability issue is found when users want to make some change and add a layer in the file more conveniently in the usability test. The right click menu just gives three options when the user right clicks on the blank space and it cannot add functionality such as “add layer” or “create shape”. From multiple tests, the user also wanted to “import image” or “export file” using the right click menu.

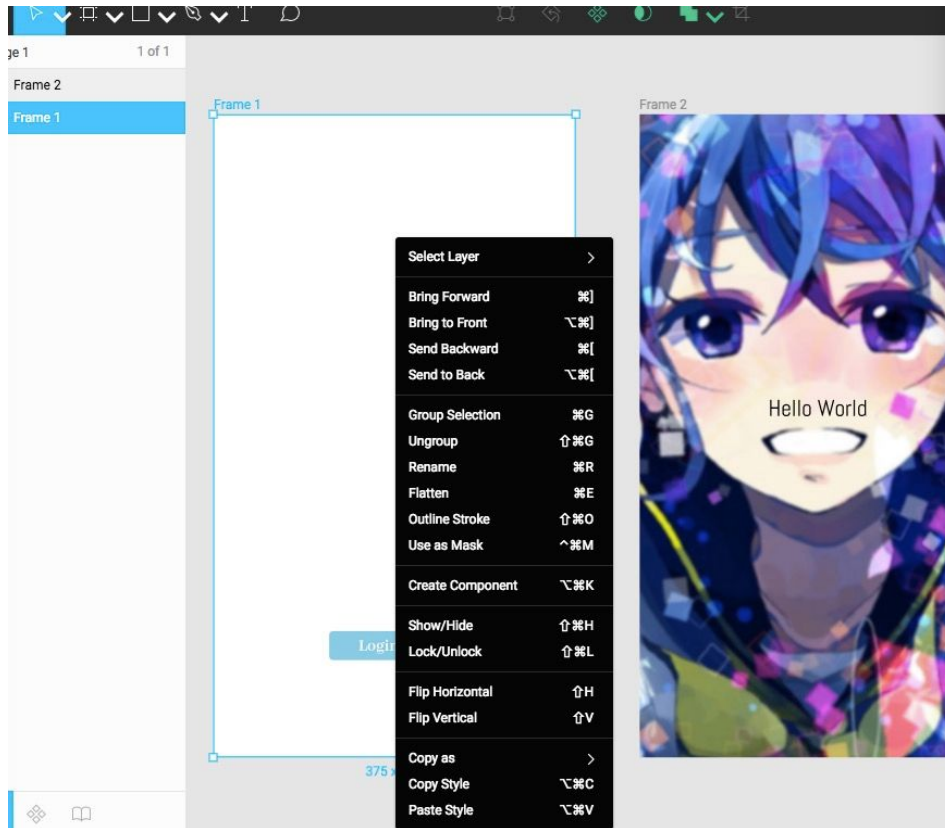


Figure 3. Right clicking the layer to show Menu

When the user right clicks the layer, it has no option such as “add text” in the certain location where the user points as shown in Figure 3. Once users are already used to applications that have necessary functionalities in the right click menu, it’s very frustrating to use a system that lacks it.

2. Icons are confusing



Figure 4. Tool Icons

From the usability tests and cognitive walkthrough, we found that the icon design in Figma is really confusing for new users to recognize as shown in Figure 4. From the navigation, most users considered the second and third icon to be the same. Instead, the second one is “frame tool” and the third one is “shape tool.” It is confusing for users to know what the icons mean on the toolbar, they usually have to scan their cursor over each icon to see a text description about it. This wastes time that could be spent on designing and disrupts the flow of their design process. During our cognitive walkthrough, we found that you can actually insert image using the “shape tool” as shown in Figure 5. An important functionality like this should not be hidden under the shape tool and should instead be placed in the right click menu.

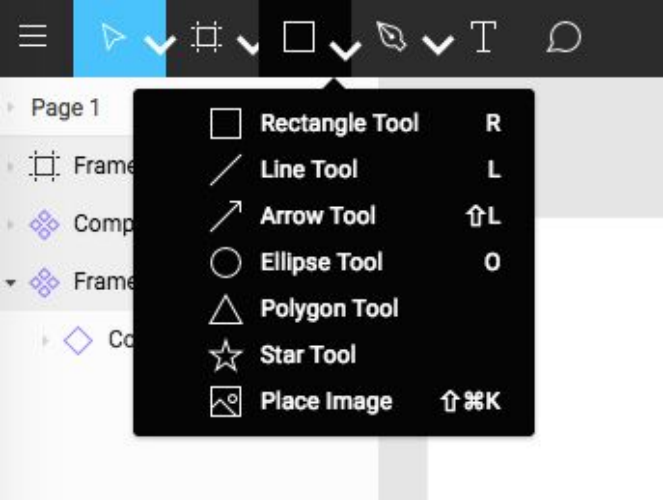


Figure 5. Tool Drop Down Menu

3. Exporting files is confusing

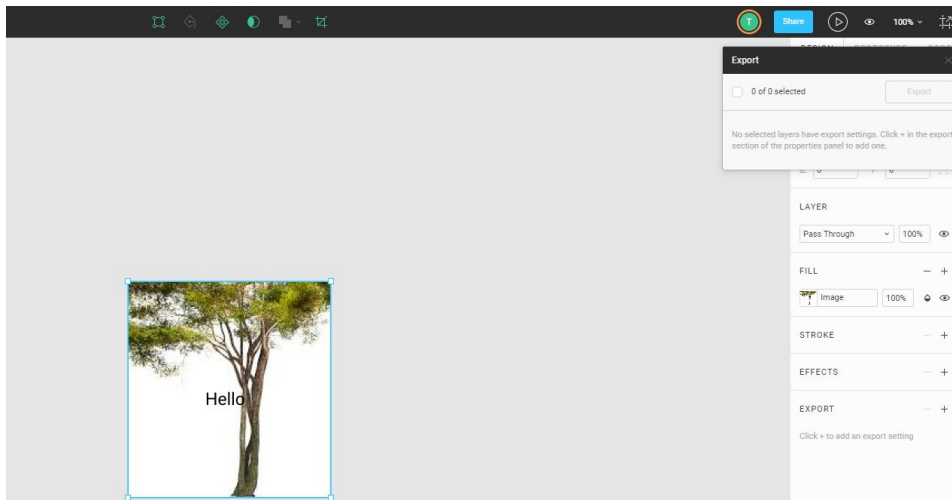


Figure 6. Unable to Export

This usability issue is found on multiple user testing. A design application should make it easy for users to export their files. However, exporting files on Figma is confusing and difficult for new users. Figure 6 shows when users try to export an object for the first time. When users click on “Export” function, the application should allow the user to choose file format and download to the computer. However, users cannot export any file. Even though there is instruction after clicking on “Export”; however, the font is very light and small so most users do not read the instruction. In order to do that, users have to click on the small “+” sign next to “Export” as shown in Figure 7.

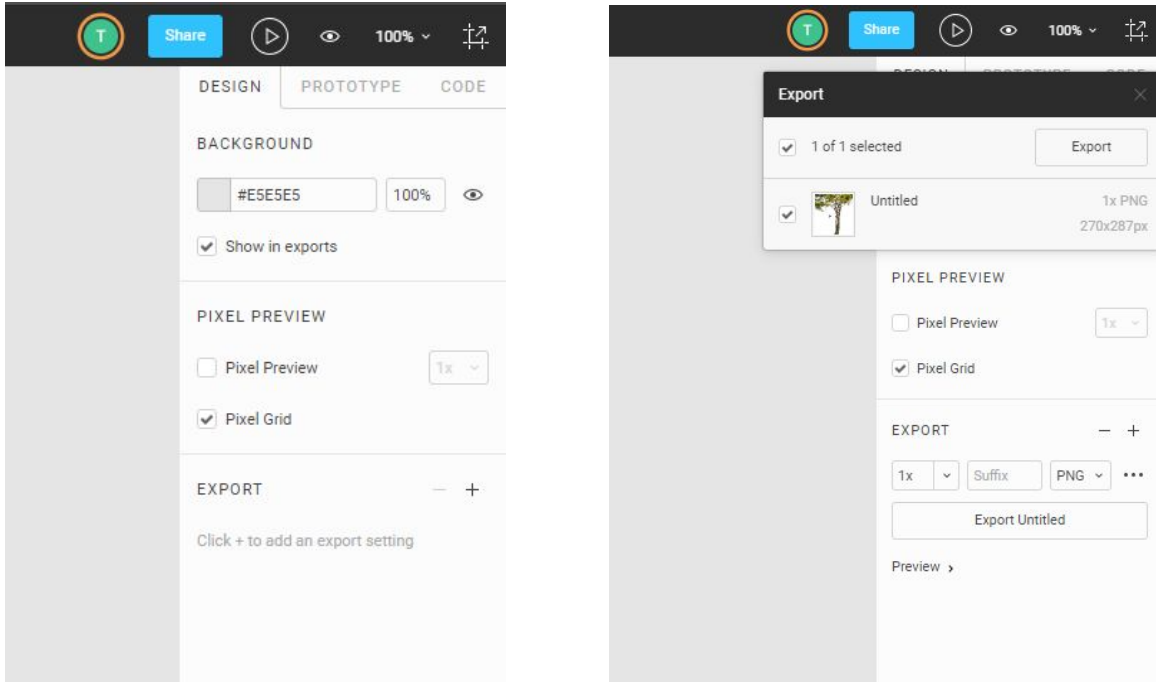


Figure 7. Exporting Files

Then, they would have to choose the files they want to export and click “Export” again. This important and simple process should be quick yet some participants had trouble doing it.

4. Many functionalities are hidden

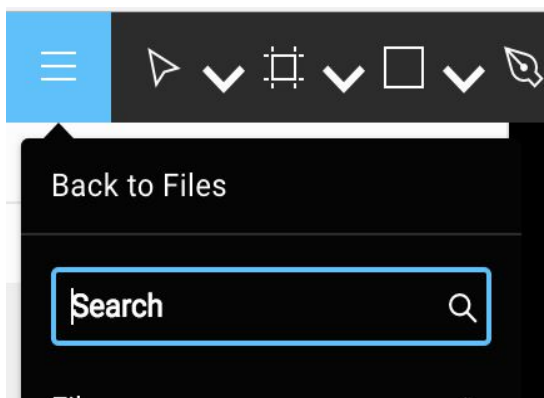


Figure 8. Search function

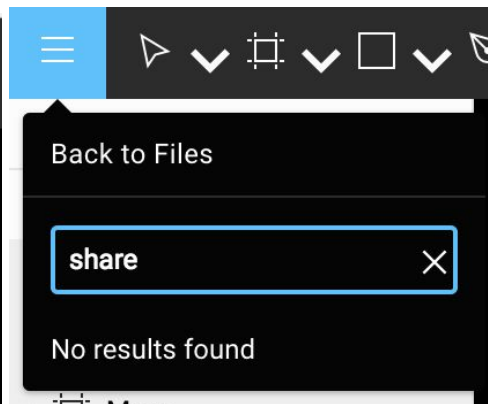


Figure 9. Search Function Yields No Result

During our usability tests, some users had trouble finding the “share” button to share their work. Although there was a share button on the top-right corner, users tried using the search bar to find the share option as shown in Figure 9. But when they use this functionality to type and search “Share”, no results are found. This is a big usability issue because some functionalities are searchable and some are not. Figma needs to set consistency in their design so users do not feel confused when they cannot find something. Moreover, many functionalities of the app hides beneath the hamburger menu as shown in Figure 10. To find certain features, users will have to go through lists of features, which can be very frustrating for novice designers who are just starting to learn how to design.

5. Lack of common templates and symbols

At the end of our user testing, we asked our participants if there are any improvements they would recommend to improve the user experience of the system. 4 out of 5 of our participants said that Figma lacked common templates and symbols that a designer would typically need to create a mockup. For a design tool that targets novice designers, it should make it as easy as possible for them to create basic mockups. Users should not have to manually create each UI button that they need. They also should not have to google search any UI icons/symbols and use a photo editing software to get it to the specifications they need.

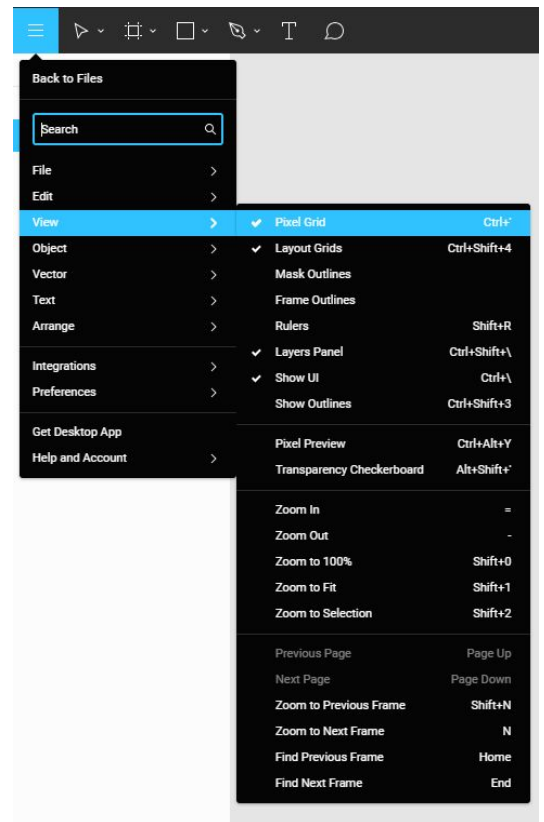


Figure 10. Hidden Features

Redesign

1. Design Menu Lacking Functionalities

Redesign motivation and rationale:

When we do the user testing, we found that users often try to right click to find some functionalities, such as inserting some shape, exporting file. And they often view the box after right clicking for a long time due to the long length of the box, (as shown in **figure 1**) however, they still can not find the functionalities they need and spend more than one minute to look over all content in the box. And when users click on blank part on the screen, they only have three options to choose which often make users confused and feel hard to find the functionalities through right click (as shown in **figure 2**). We hope after the redesign, the interface can be as simple as possible for users to easily use and quickly to find the functionalities that they need.

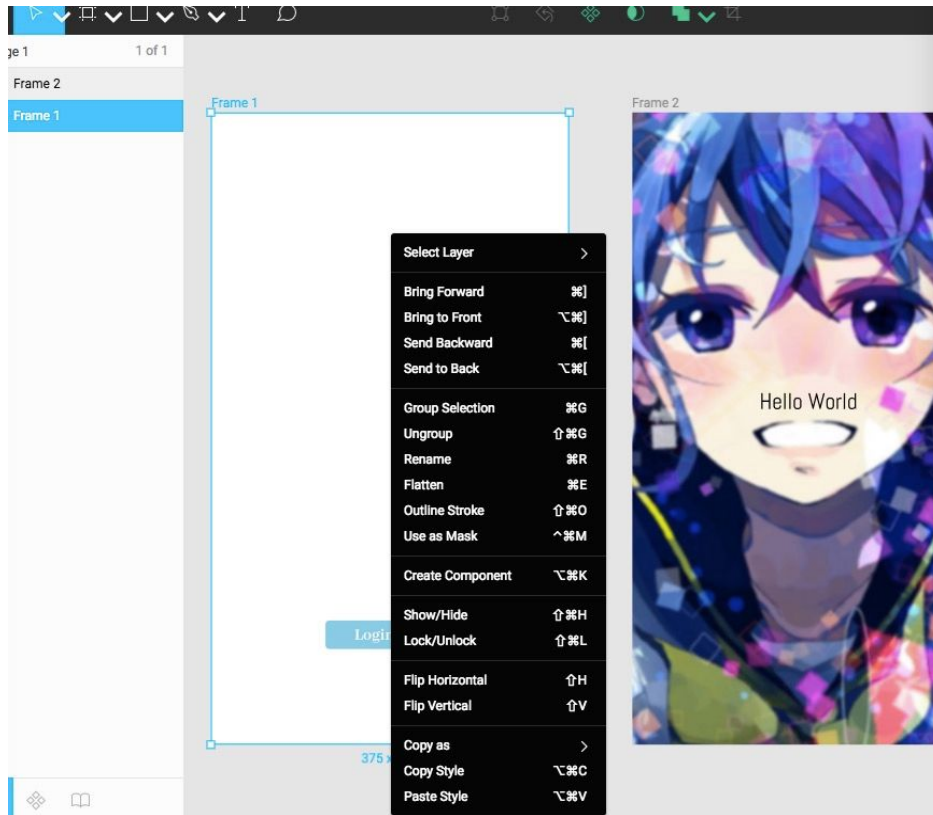


Figure 1: Right Click on Layer(originally)

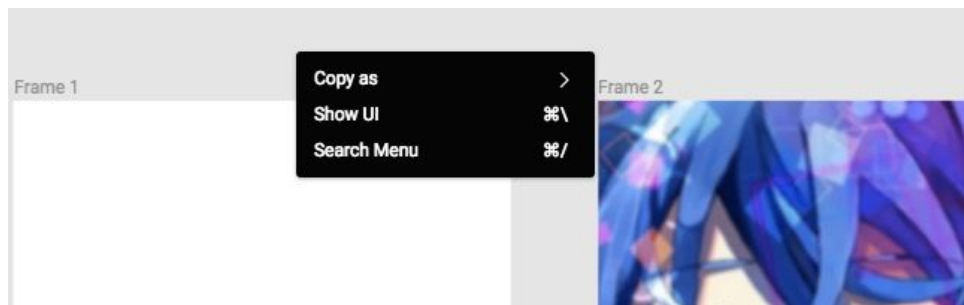


Figure 2. Right clicking the blank space to show Menu (original)

To tackle this problem, we try to decrease the length of menu through combining some functions which are from the same category to one classification and these functionalities can be found and used by the drop down sign. Our sketches on this issue are similar to each other, so we

focus on one sketch to compare and find the best solution. In **Figure 3** there are three versions shown for right clicking on layer. The idea in version 1 is to add more functionalities into the menu list but it will make the menu even more cluttered; The idea in version 2 is to combine some functionalities into groups. For example, we add “Add Text”, “Add Shape”, “Add comment” and “Add drawing” into one group. The last idea is to combine both ideas together that we can add more features, and at the same time, we can place the options with similar or related functionalities into one group. After discussion, we plan to use the combined one to redesign the right clicking.

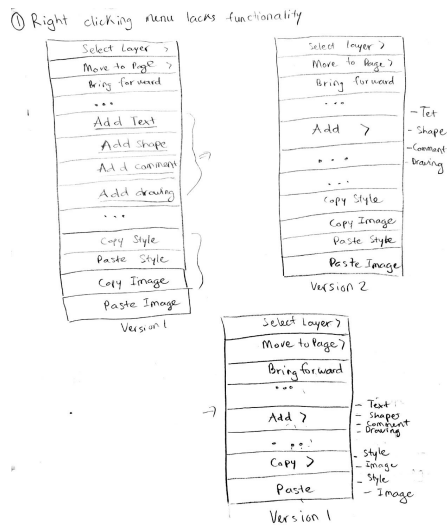


Figure 3: Right Click Lacks Functionalities Sketch

The sketch in **Figure 4** is our final sketch for mock up, it shows that the similar and related functionalities are placed into one group. Thus when users need the related functions, they will click on it to find more specific functionalities they need. And if they do not need this related functionalities, they will save time from viewing one option instead of four options. Apart from

that, we added some other main functions in right click when users right click on blank part on screen, such as exporting and add shape or texts to provide more functionalities to find through right click.

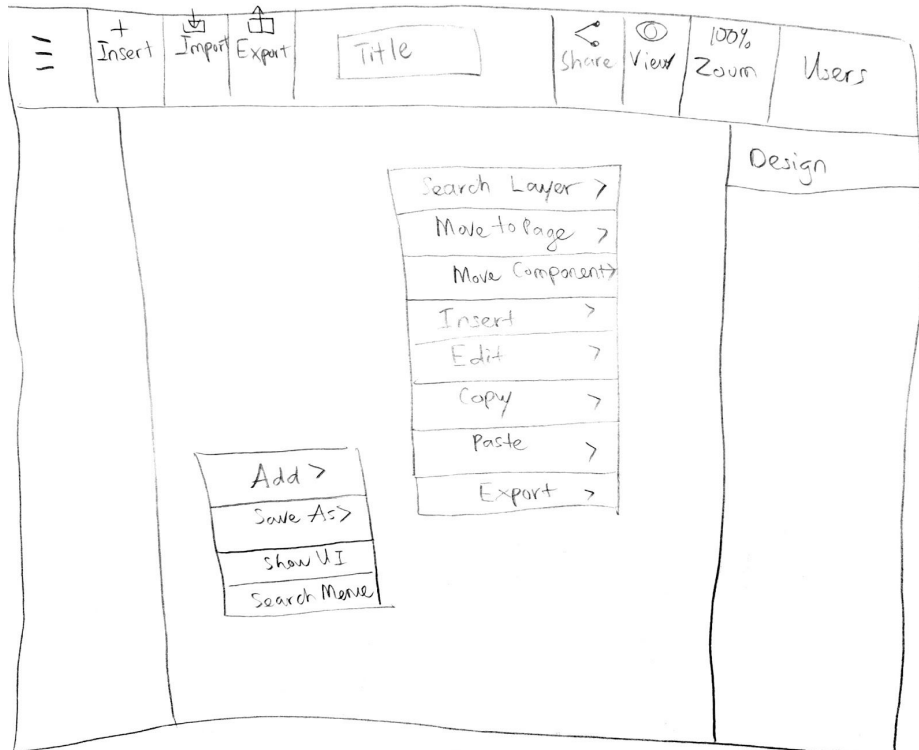


Figure 4: Right Click Lacks Functionalities Sketch

Wireframe:

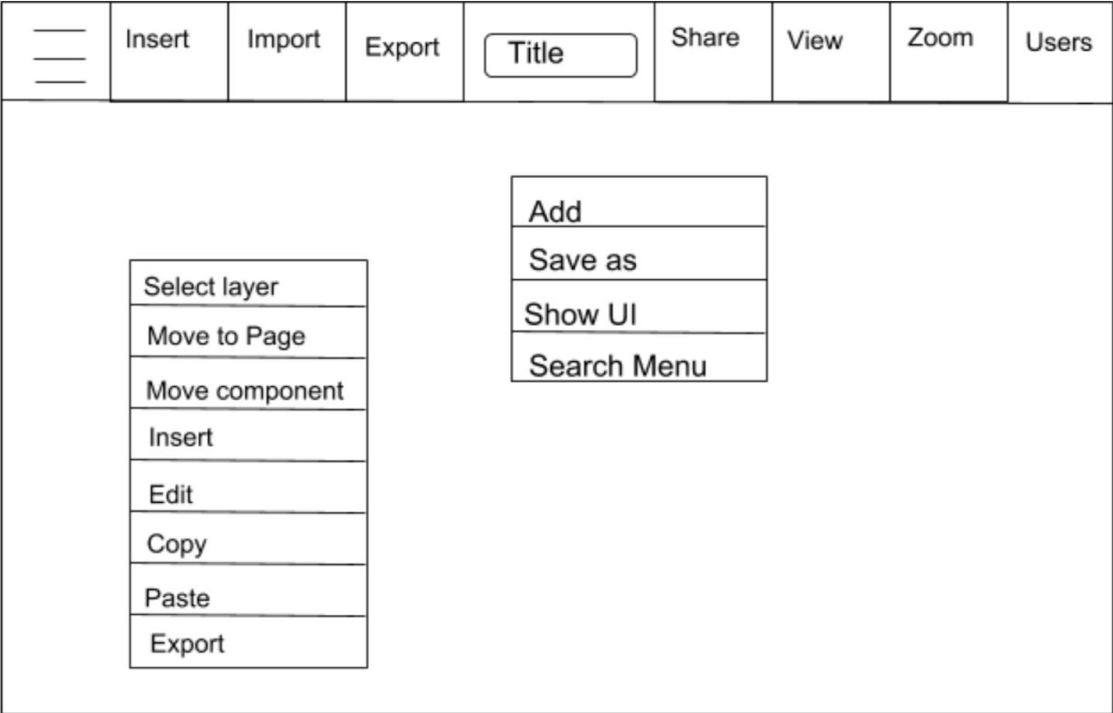
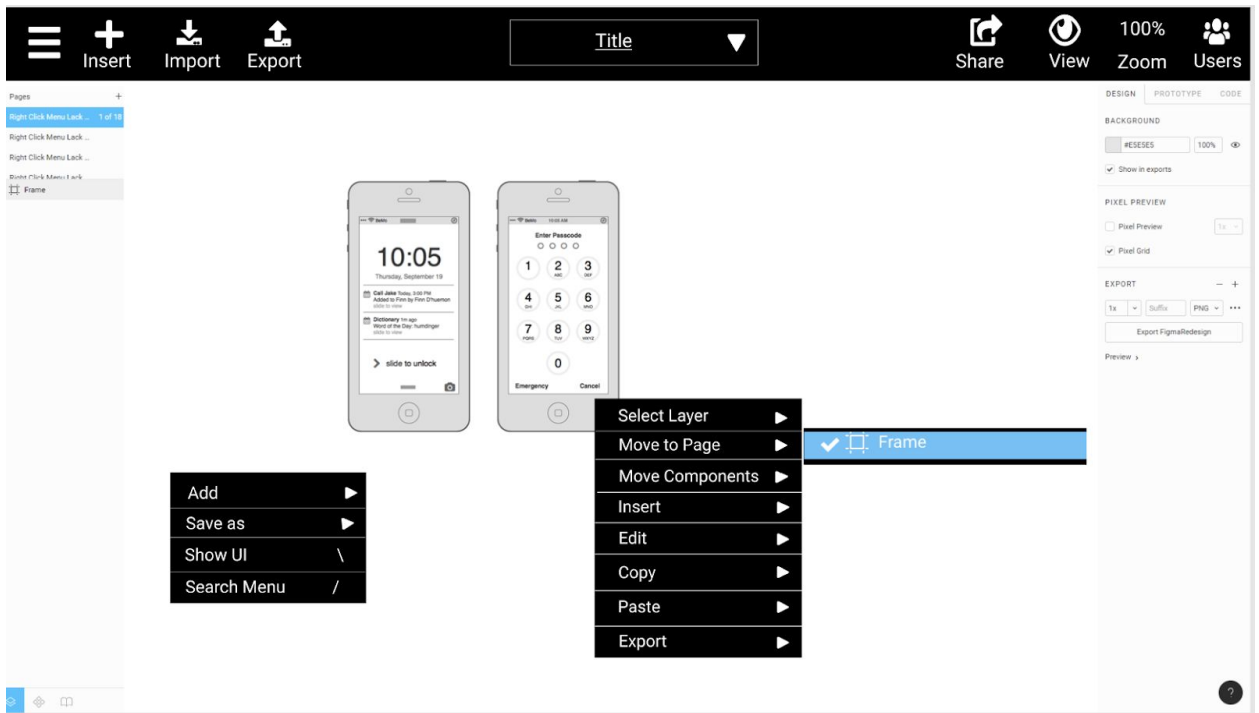
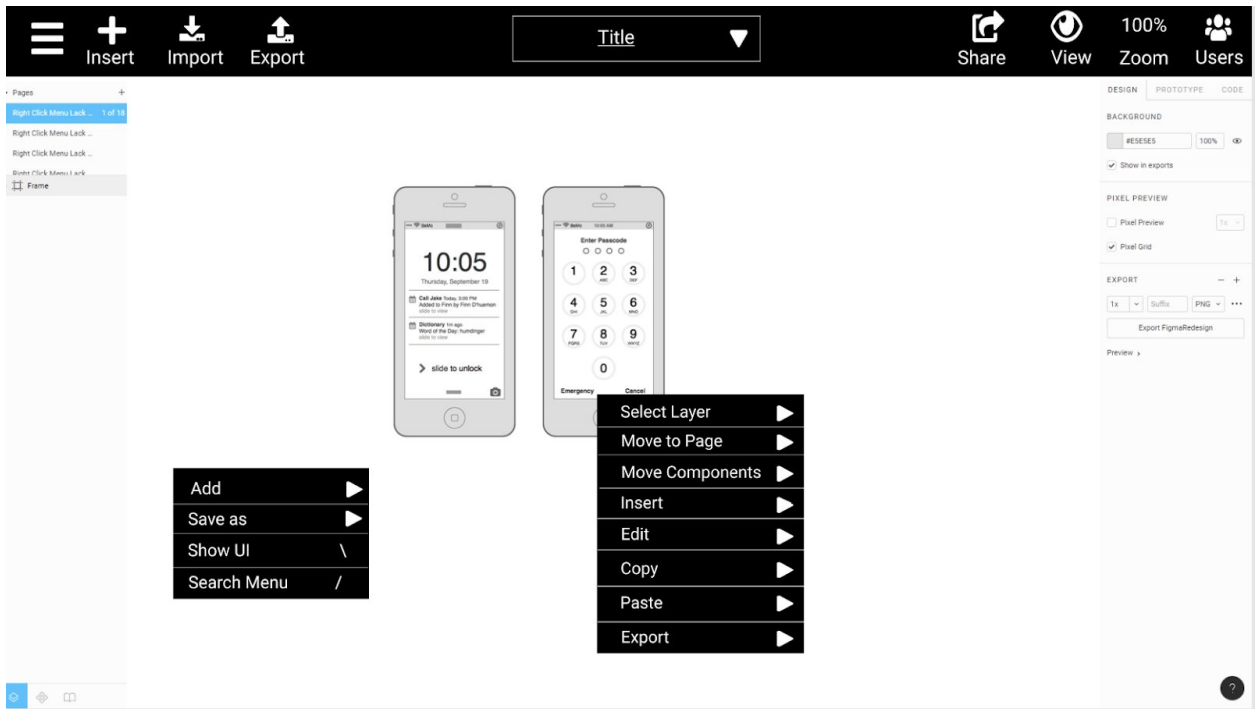
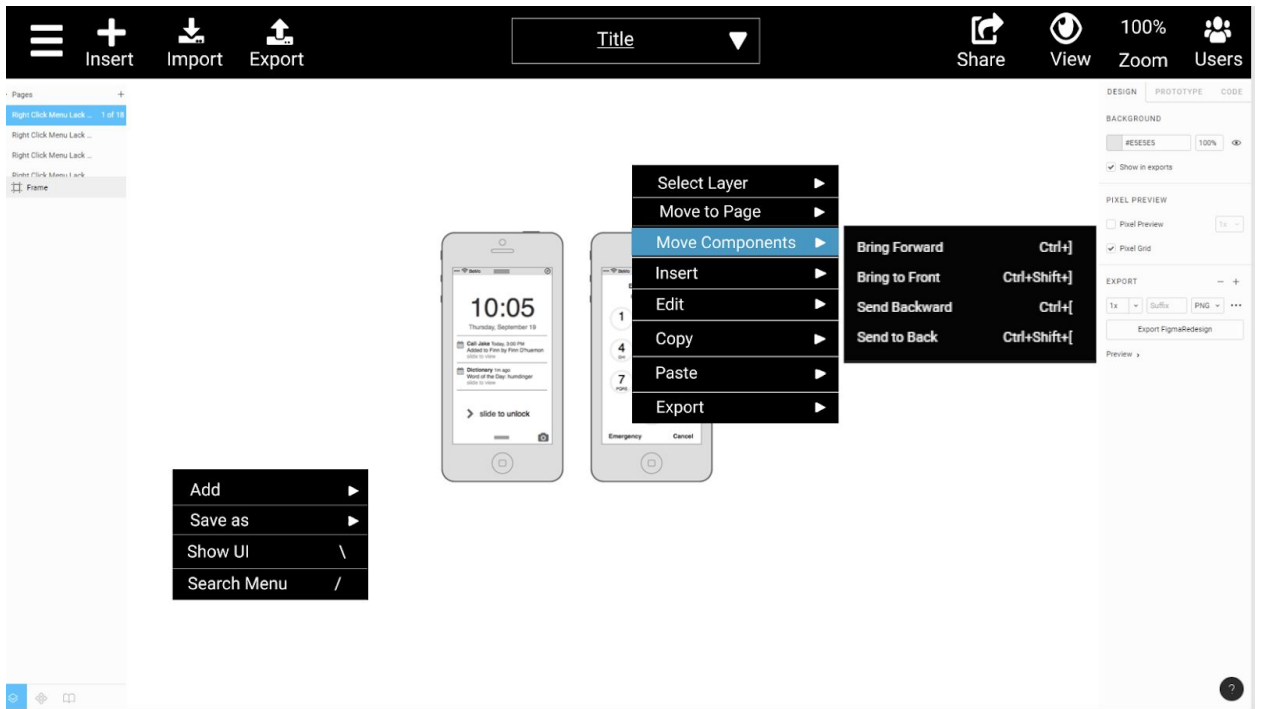
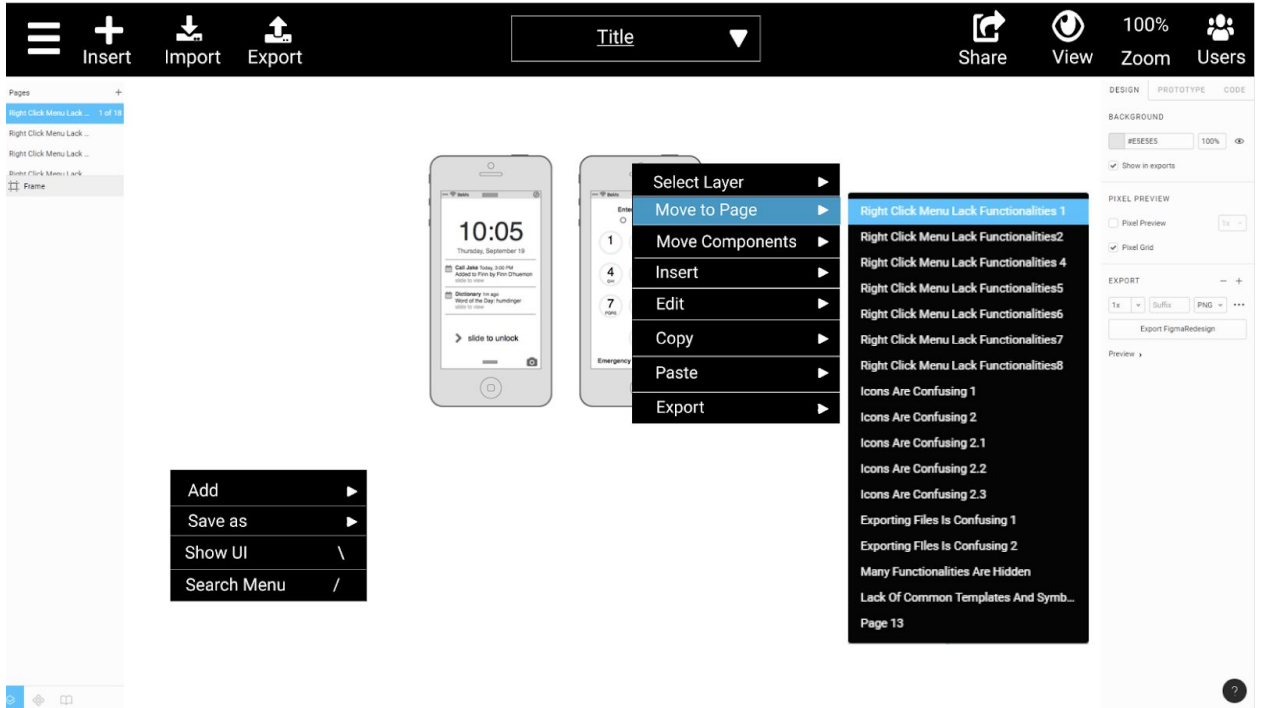
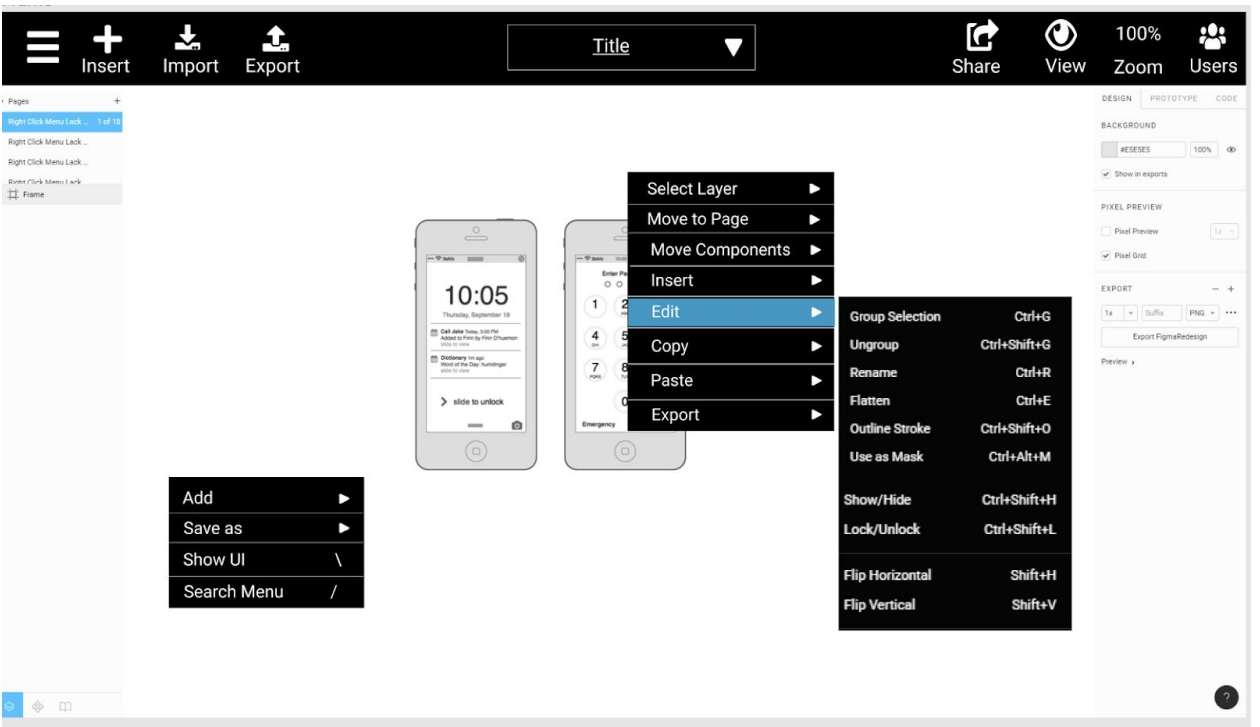
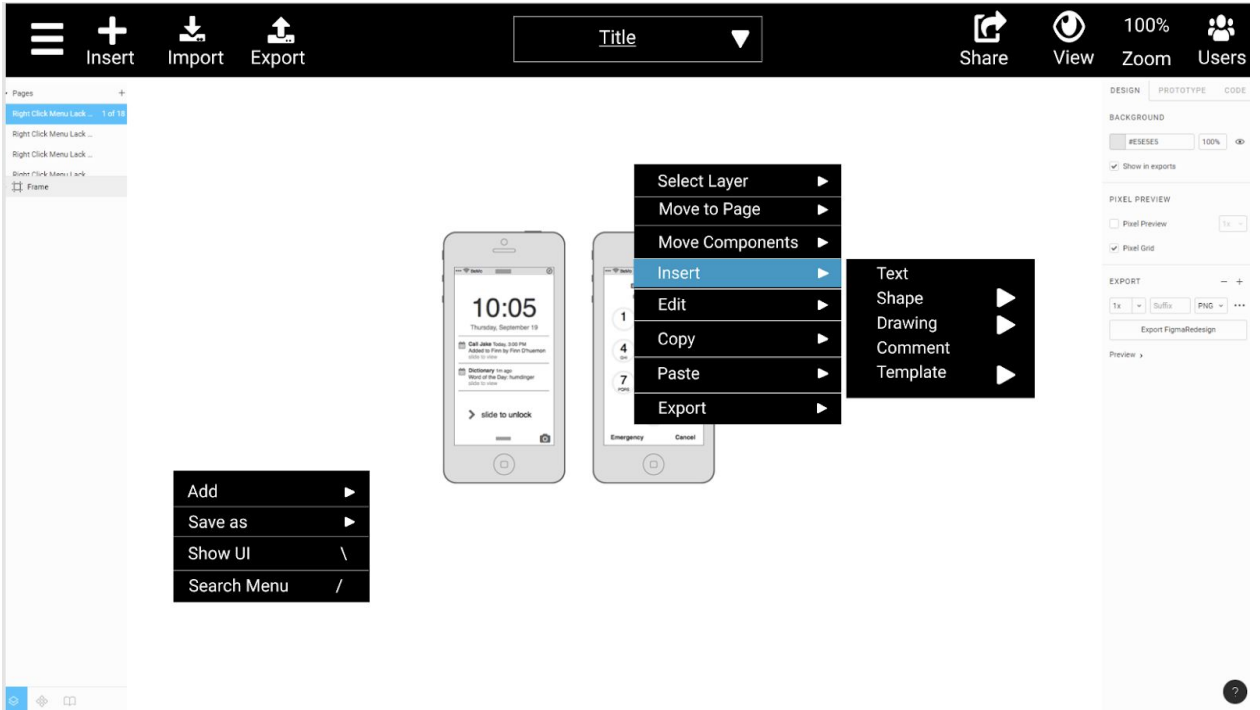


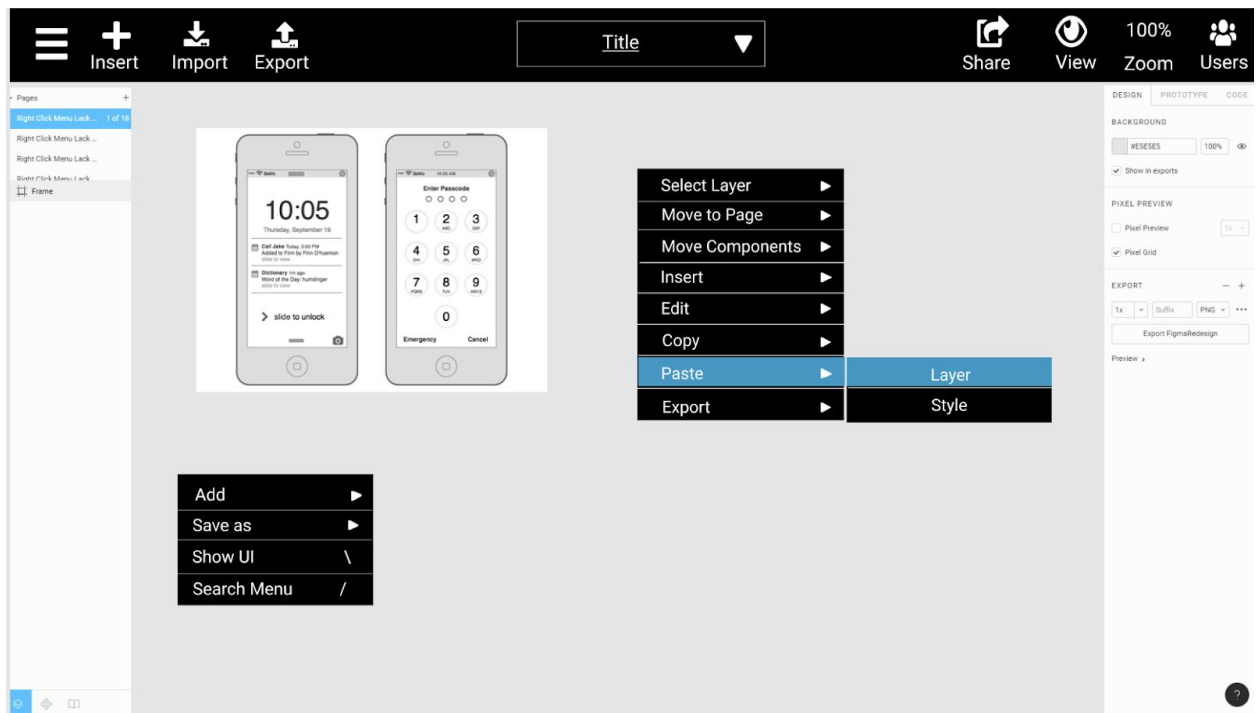
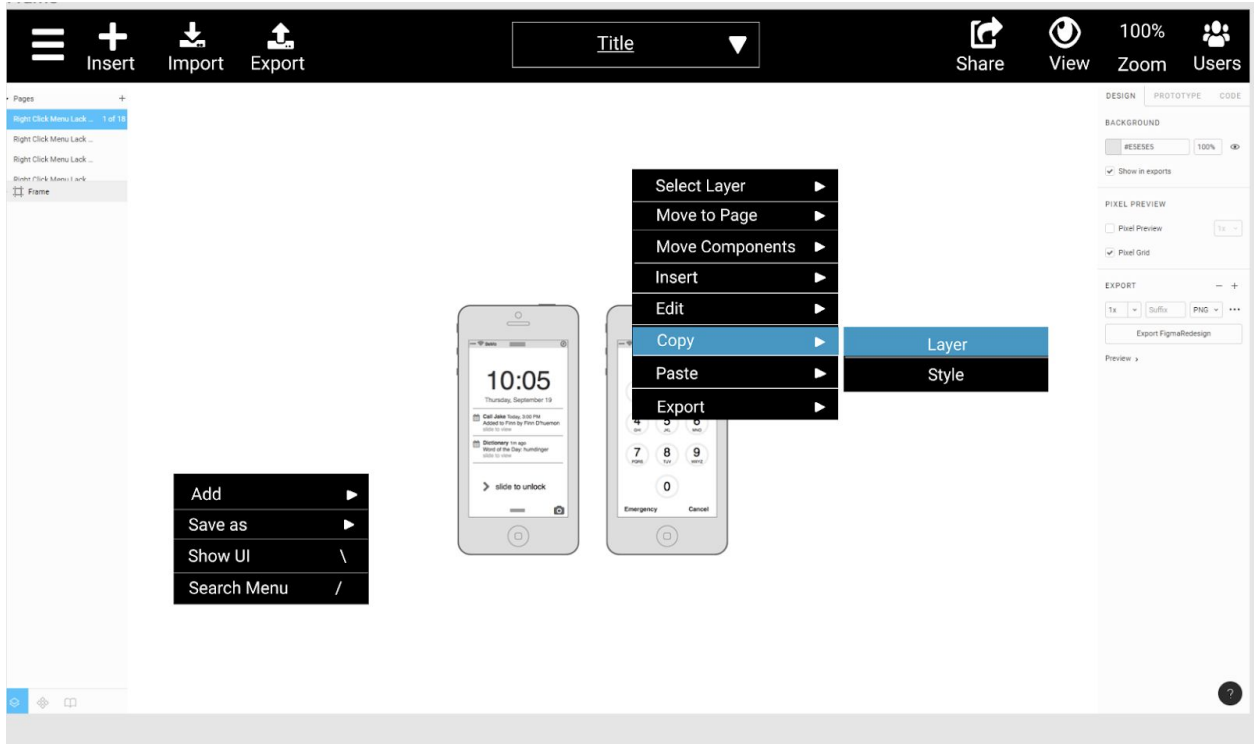
Figure 5: Right Click Lacks Functionalities Wireframe

Mockups









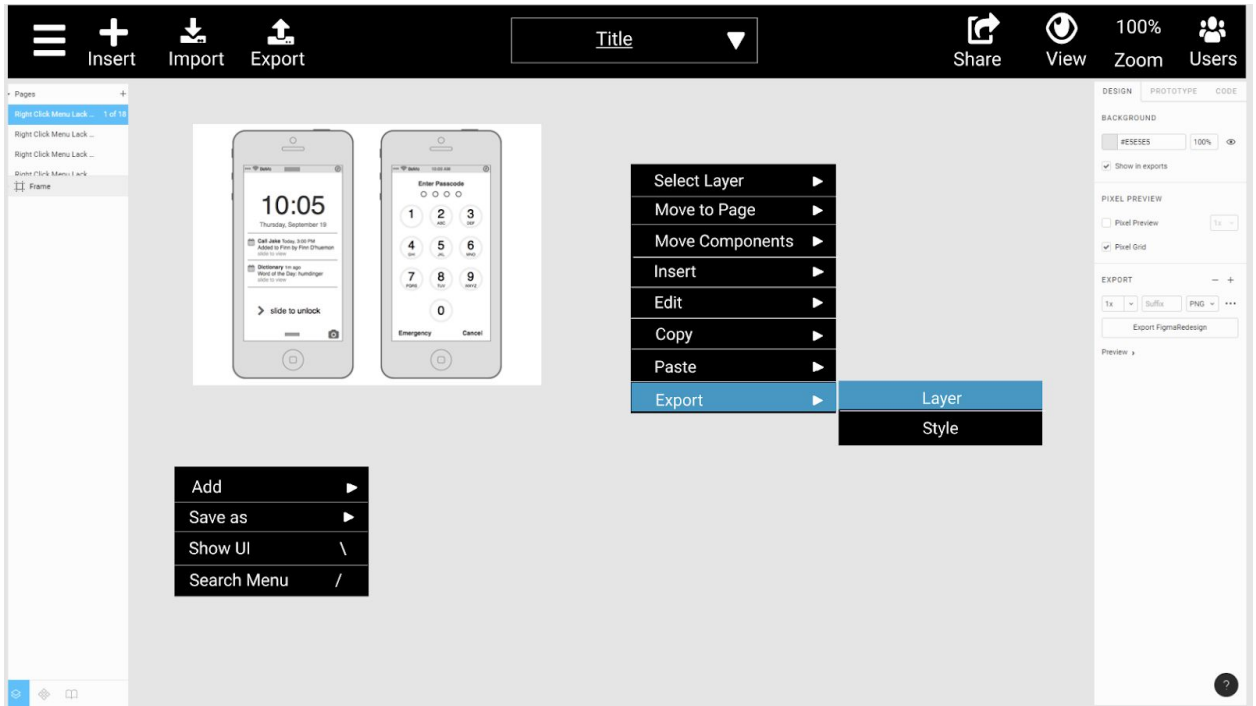


Figure 6 : Right Click Lacks Functionalities Mockups

2. Icons Are Unintuitive

Redesign motivation and rationale:

When we created the tasks for the usability tests and cognitive walkthrough, we focused on tasks you typically need to do while creating a basic mockup. Our results show that new users spent a lot of time hovering over the icons on Figma’s toolbar in order to determine what it does. Since Figma’s target population is novice designers, it should have an intuitive user interface that is simple and easy to use for beginners. Therefore, we wanted to redesign the toolbar to include labels and recognizable icons so the users know what each button does right away.

Our group came up with different sketches for this design target, however, the only difference between the sketches were the icons used and the placement of the icons on the toolbar. We chose our final sketch because it shows the most important functionalities on the toolbar, such as inserting objects, importing/exporting files, viewing revision history, sharing/viewing your project, and seeing which users are currently active on the project. Additionally, it doesn't show too many options to the user so they're not overwhelmed when they first use it.

Sketch:

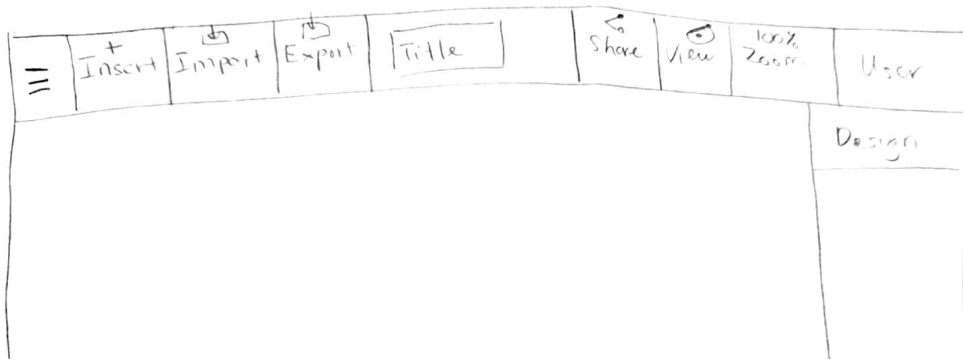


Figure 2. Icons Unintuitive Sketch

Wireframe:



Figure 3. Icons Unintuitive Wireframe

High-Fidelity Mockup:

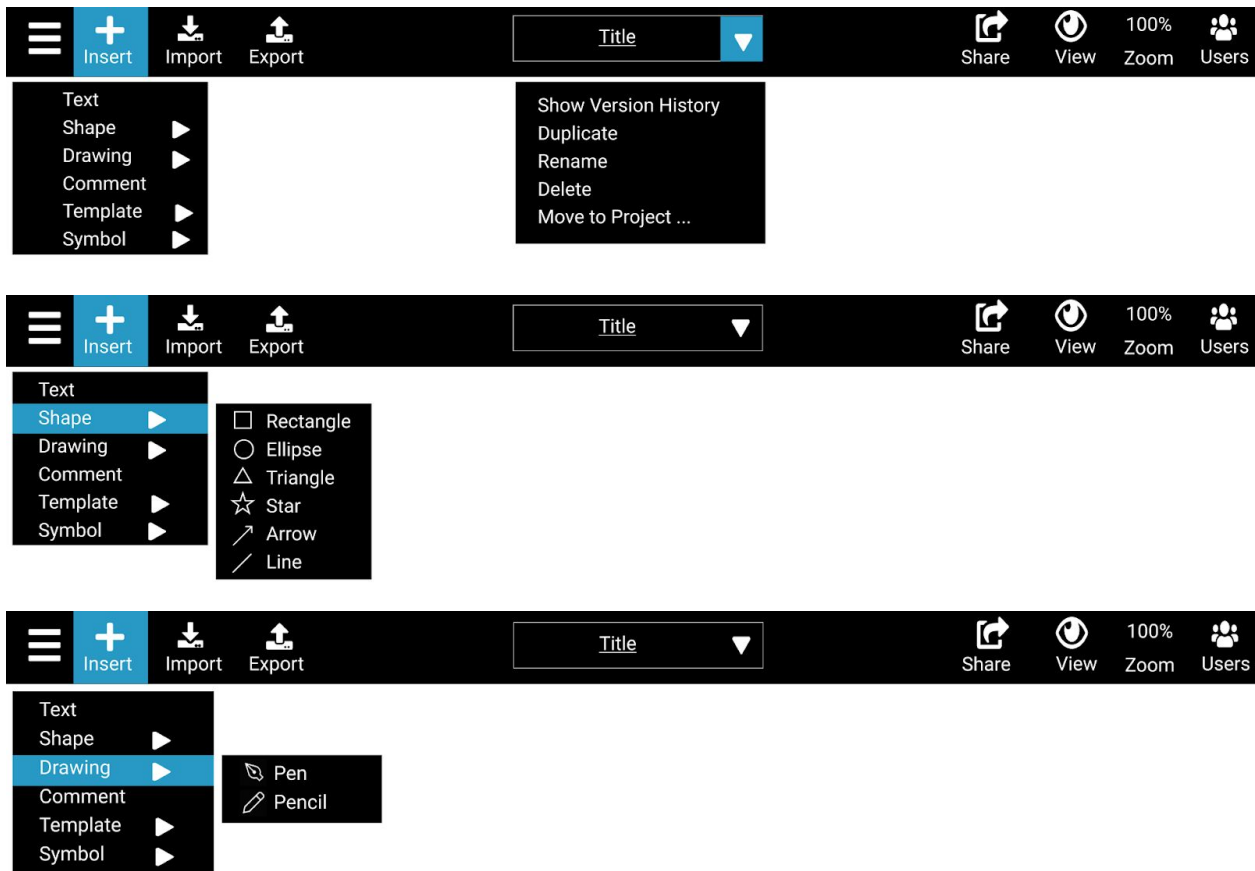


Figure 4. Icons Unintuitive Mockup

3. Functionalities Are Hidden

Redesign motivation and rationale:

During our Usability test, we noticed that many users tried to look for ways to complete the tasks in the Drop-down hamburger menu. However, most of the users were confused because they had to navigate through a huge list of functionalities. During the Cognitive Walkthrough, our team went through similar process but we noticed that many lists of

functionalities could be combined into fewer groups. We also noticed that many functionalities were never used because they were buried deep in the list hierarchy. The current way that Figma presents the functionalities is confusing and unintuitive because it does not seem to follow the standards of other competitors. The features are randomly placed the menu. Another reason we decided to tackle this usability issue is because our target users are novice designers. This population may not be familiar with the technical design term. We wanted to have a list of functionalities that are appropriately grouped together so the users can adapt quickly to this system.

We initially had two different approaches to solve this problem. The first idea is to add more functionalities to the Toolbar at the top (Figure 1).

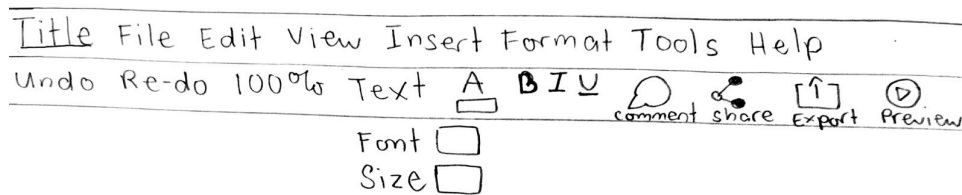


Figure 1: Tool Bar Sketch

This idea will help users to see the functionalities easily and they will not have to look for it in the drop-down hamburger menu. However, this solution can create a cluttered user interface which defeats the purpose of a simple and intuitive UI redesign. Moreover, we also partly tackled this issue in another redesign target by adding features in design menu (Redesign Target 1). On the other hand, the other solution is to redesign the drop-down hamburger menu (Figure 2).

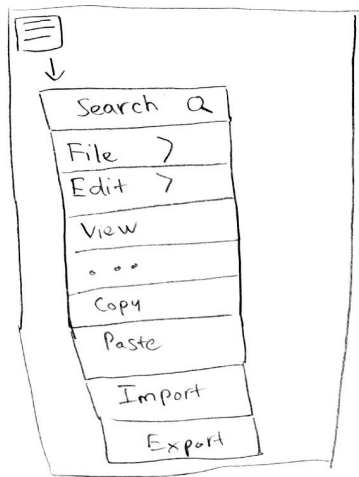


Figure 2: Drop-down menu sketch

This solution appropriately places different functionalities into groups which allows users to easily trace and find the features. The reason we chose this solution over the other one is because it keeps the simplicity of the redesign and reorganizes the hierarchy of functionalities.

After deciding on the approach, we created a simple wireframe that shows the layout of the redesign (Figure 3).

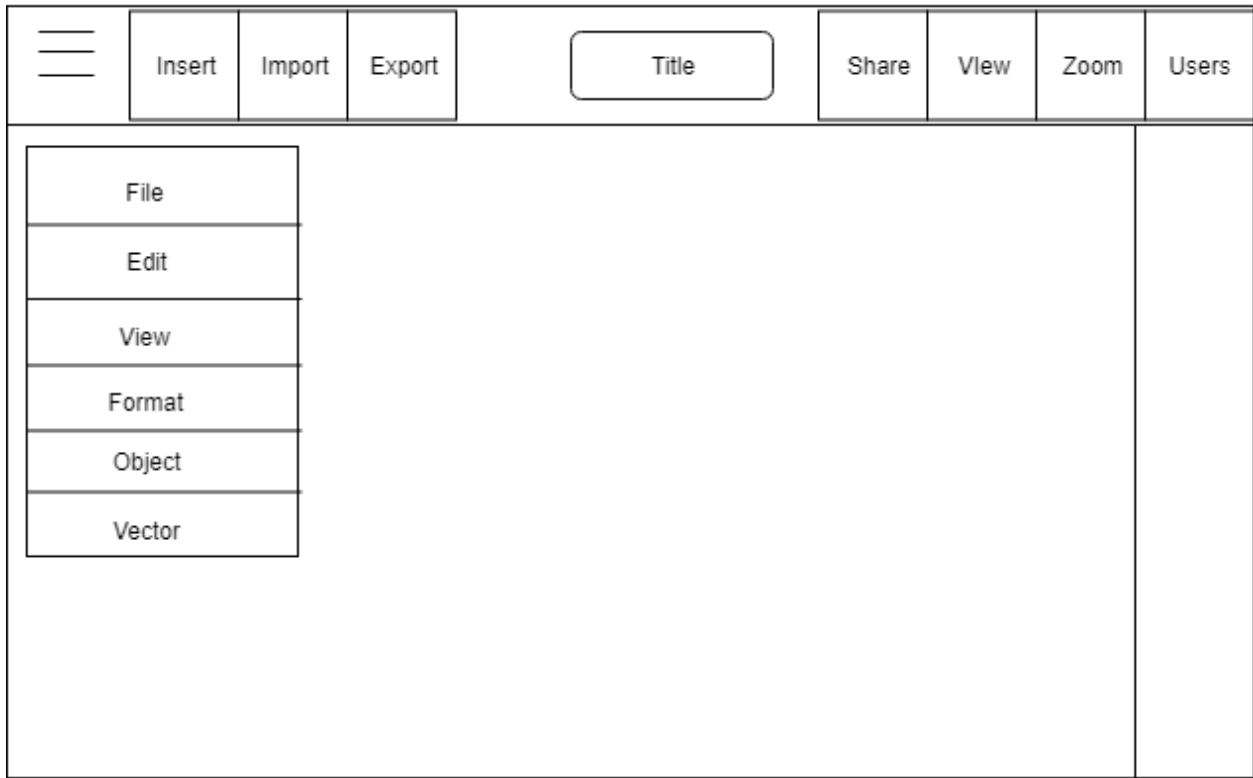


Figure 3: New Drop-down Menu Wireframe

We then used this wireframe as the framework for the mockup and began to think about grouping the functionalities appropriately. We looked at other similar competitors to see how they arrange the functionalities. We wanted to maintain the original Figma’s naming convention while making sure it’s still intuitive to the users. Based on the wireframe, we created a sketch that shows how the new drop-down menu may look like (Figure 4).

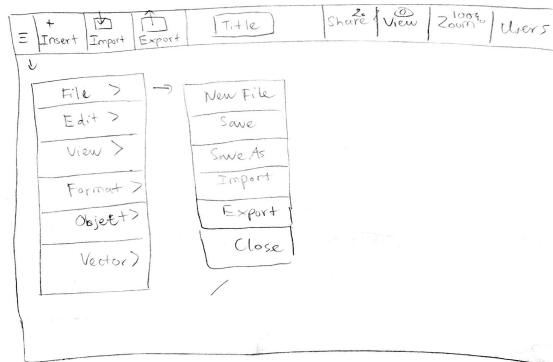
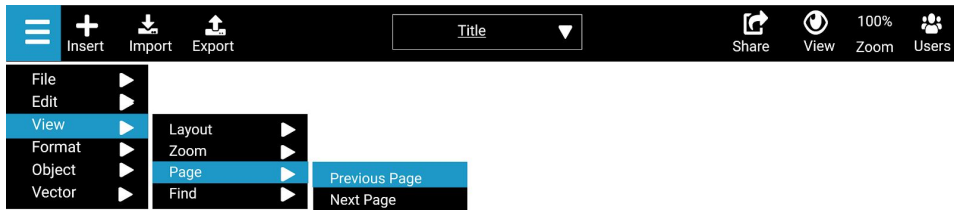
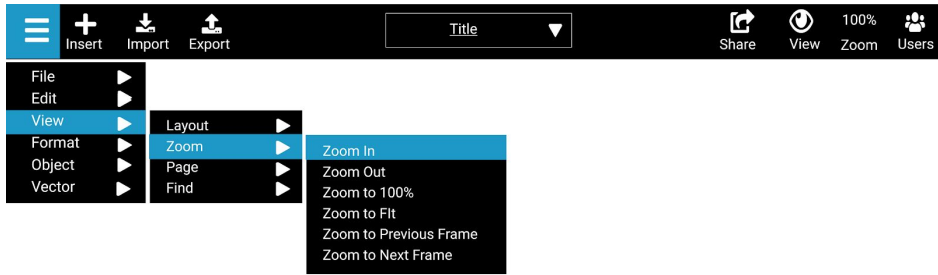
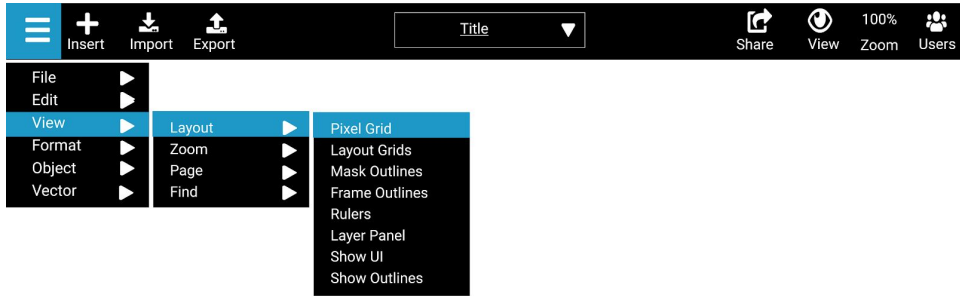
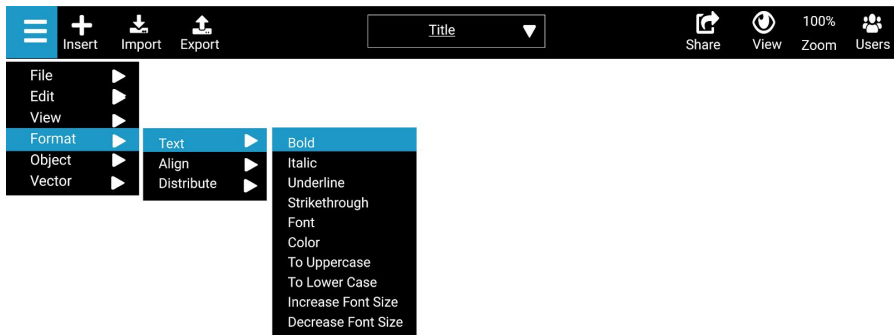
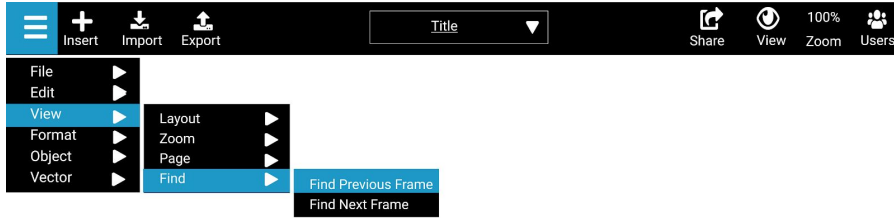


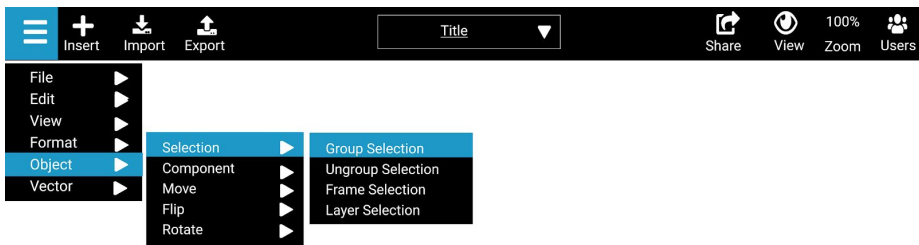
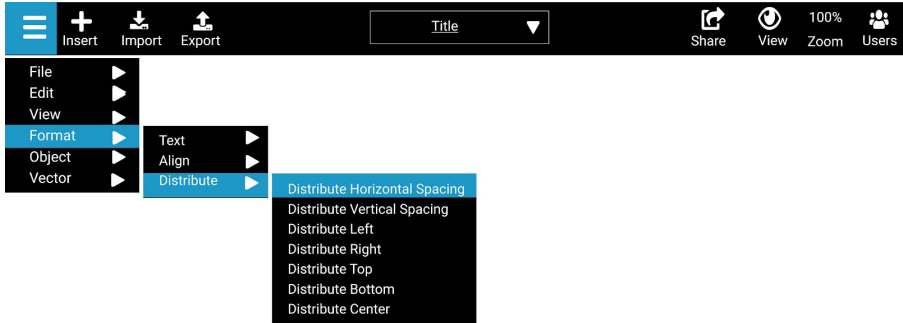
Figure 4: Drop-down Menu Sketch

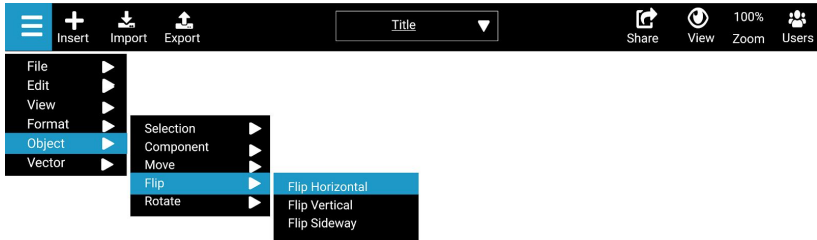
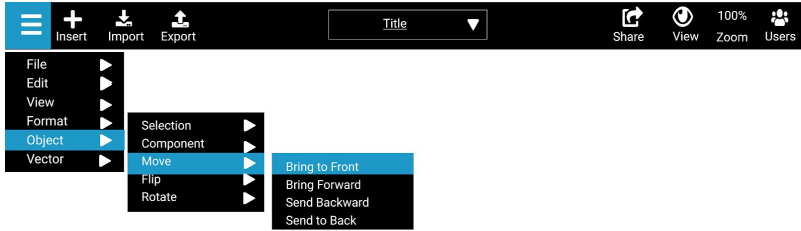
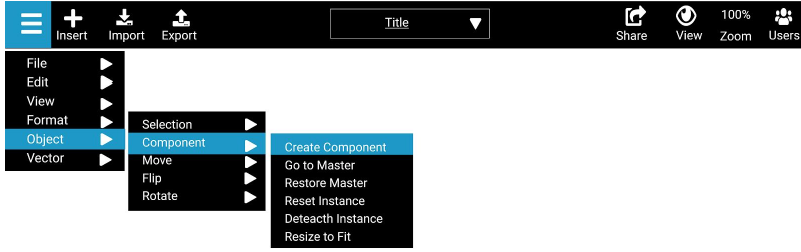
The last step is to create high-fidelity mockups based on this sketch.

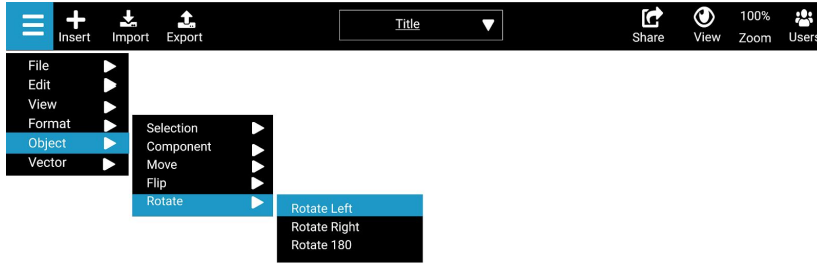












Figures: Hidden Functionalities Mockups

4. Exporting Files Is Confusing

Redesign motivation and rationale:

In our usability testing and cognitive walkthrough, one of the task was to export the files to the computer. During Usability Test, we have found that multiple testers had trouble exporting the files. Some participants were taking a long time to successfully export the files. During Cognitive Walkthrough, we found that the exporting process is very confusing. We identified two main problems which were the Export icon is unrecognizable and the exporting process requires more steps than it should. Moreover,

we also recognized the importance of exporting files because it's one the last process of a design. Another reason we chose to tackle this usability issue because we have seen it frustrated many users including us. We had to to fix this issue to bring a better user experience to this product.

To tackle this problem, we went through multiple iterations of design. After we identified exporting files as a problem, we initially agreed that we needed to make exporting files to be more intuitive both visually and functionally. From the visual aspect, our sketches all had similar idea which is to change the Export icon, add a name to it, and move it at the tool bar. As you can see in Figure 1, the original Export icon looks very similar to the Frame tool and it requires users to hover over it to recognize it as Export.

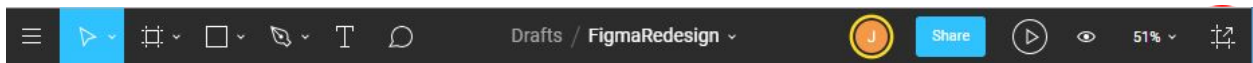


Figure 1: Original Export Icon

Initially, we made the new Export function to be on the right of the Tool bar to be as the original location (Figure 2).

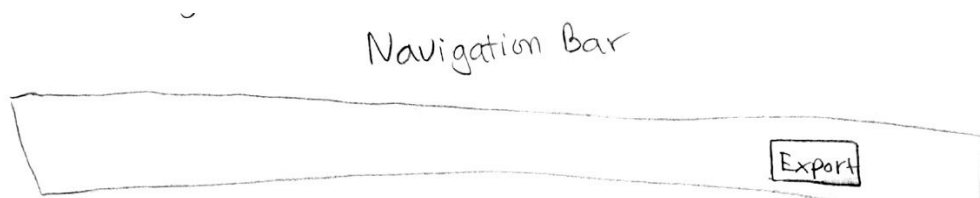


Figure 2: Export Icon Sketch

Another approach was to put the Export function in the drop-down hamburger menu (Figure 3)

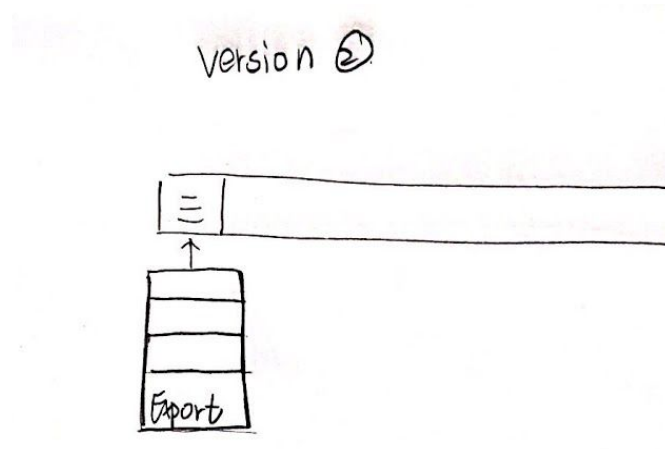


Figure 3: Export in Drop-down Menu

However, we think that exporting files is an important step and users should see it easily, so we decided to go with the first approach. We later moved the Export function to the left of the Toolbar to be consistent with other functions.

To eliminate the unnecessary steps of exporting files, one of the ideas was to allow users to export files in two steps instead of five by combining the Exporting process into one section (Figure 4). Users can Export files on the same position instead of using the whole screen as before.

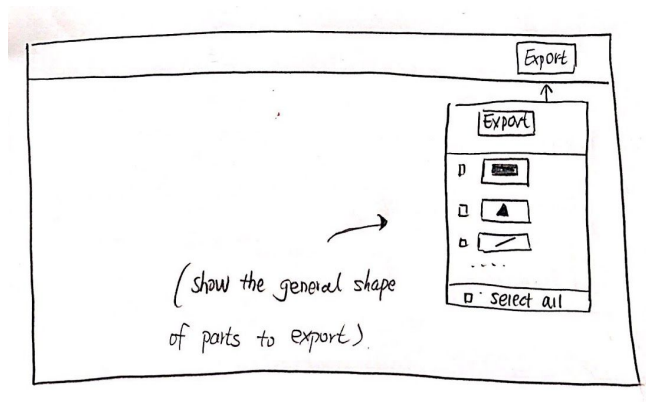


Figure 4: Export Sketch

Another approach was to allow users to choose how they want to export the files. It allows users to choose the layers and file type (Figure 5).

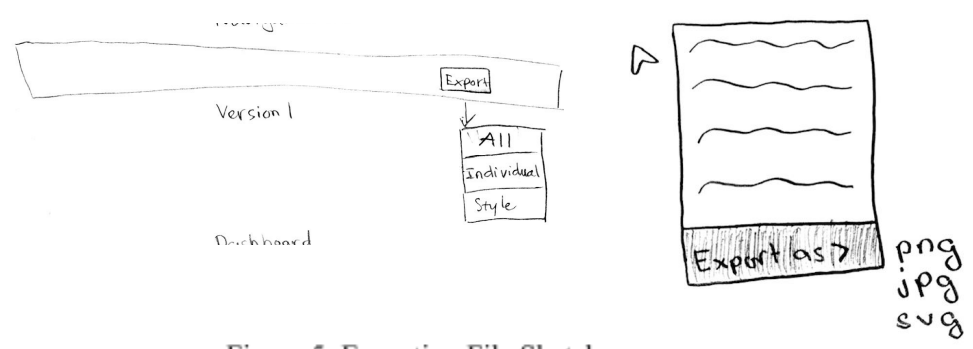


Figure 5: Exporting File Sketch

When we had the changes that we wanted to make, we combined these ideas into one and created a wireframe (Figure 6).

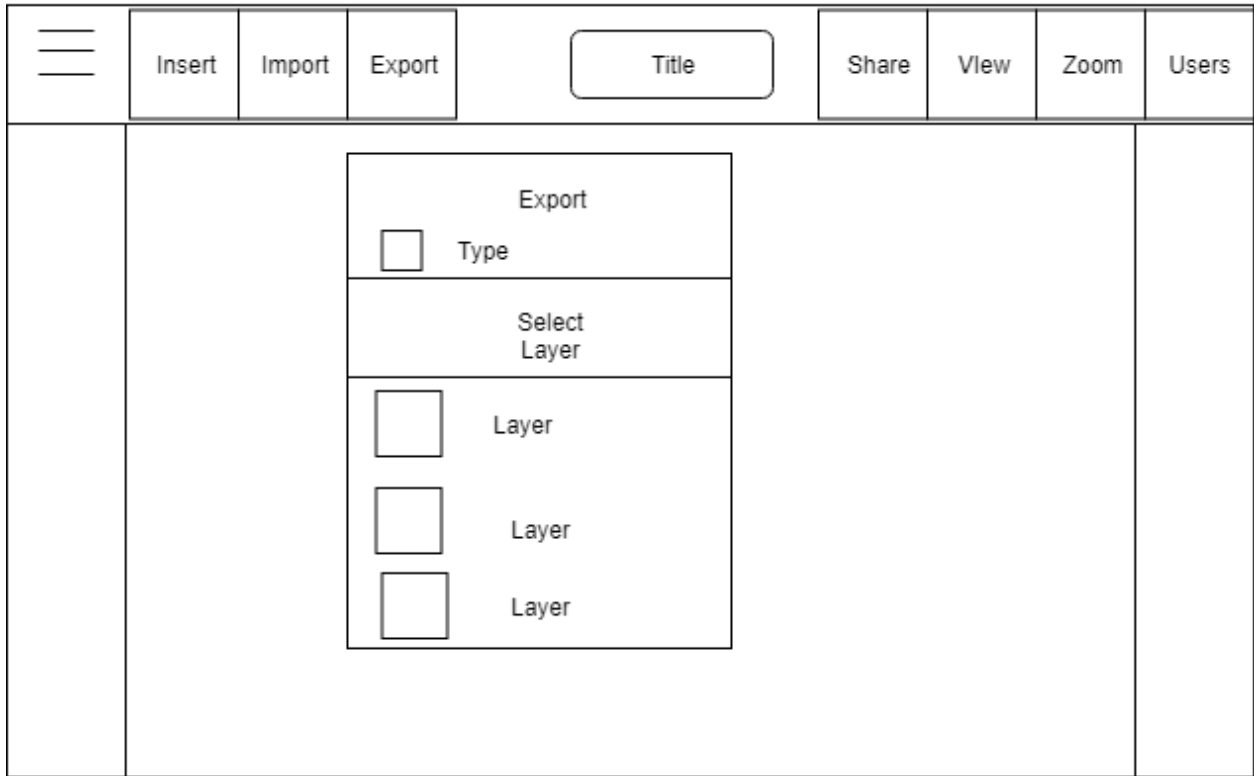


Figure 6: Export Wireframe

When we have the basic layout of the page, we made a sketch that shows how the page will look exactly on a mockup (Figure 7).

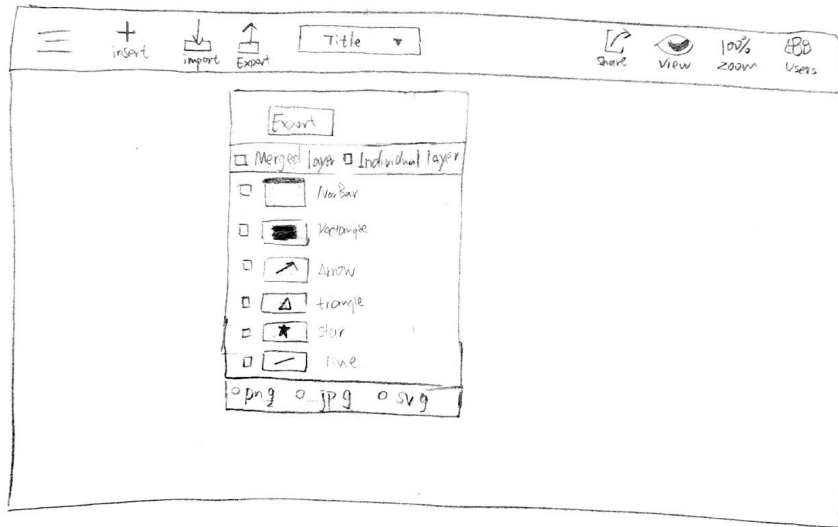


Figure 7: Export Final Sketch

The last step was to create a high fidelity mockup that illustrates our changes to Exporting files process (Figure 8).

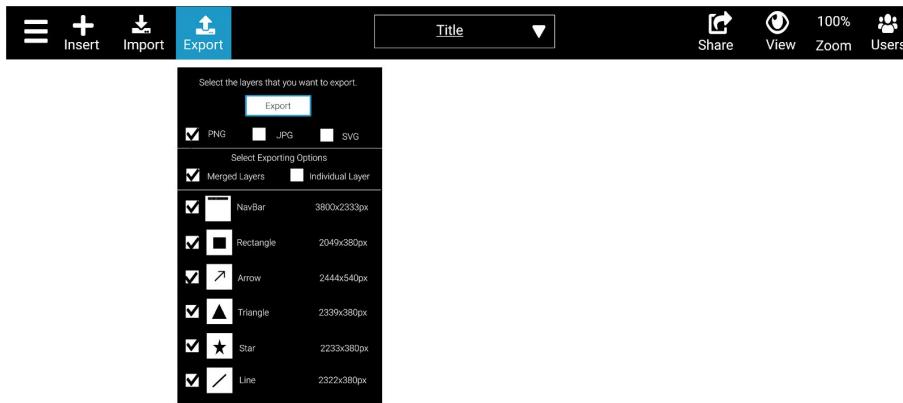


Figure 8: Export High-Fidelity Mockup

The new Export function allow users to easily recognize it and export the files. This version has default export values which are exporting as PNG and Merged Layers. Users

would just need to click on Export to see the layers and file type, then click Export again to download the files to their device. This change was made based on the majority of our testing. It will eliminate the needs of looking for Export, selecting all layers, clicking the plus sign, pressing the Export icon, and choosing the layers of the current design (Figure 9).

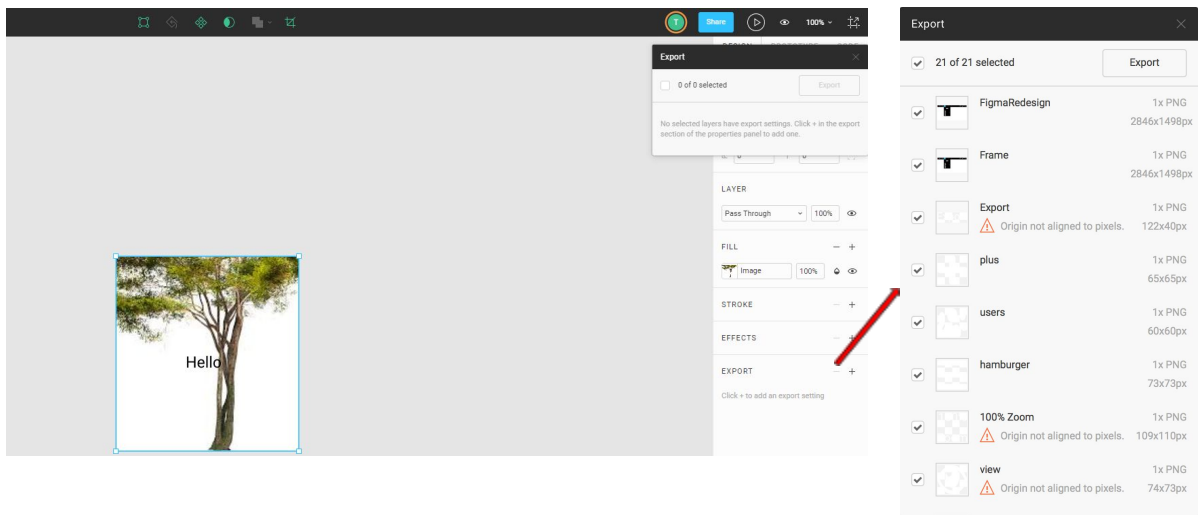


Figure 9: Original Exporting Process

5. Lack of Common Templates And Symbols

Redesign motivation and rationale:

From the usability test, we found some users want to create the iphone frame but most of users cannot create a perfect iphone frame in short time. During the survey after the usability test, we got responses from users that they wanted to make prototype or mock ups more efficiently. Having template and common symbol helps user reduce their design time for some unnecessary steps. Users do not need to spend a lot of time in design the common iphone or tablet frames after Figma has default template in the system.

To solve this problem, we got plenty of sketches from each team member and we compared all sketches during the group meeting. In this part, we only need to add this feature and present it in the user interface. Most of sketches focus on the way to present the template. We also add the feature that users can make their own templates or some icons. Most of us had similar ideas about the templates. One solution is to have all the design templates in the same section; however, this solution will make the users spend a lot of time looking for the template they want. The other solution is having categories for templates such as iOS, Android, Web,.. This solution helps users look for the template much quicker. (Figure 1)

⑤ Lack of common template and symbols.

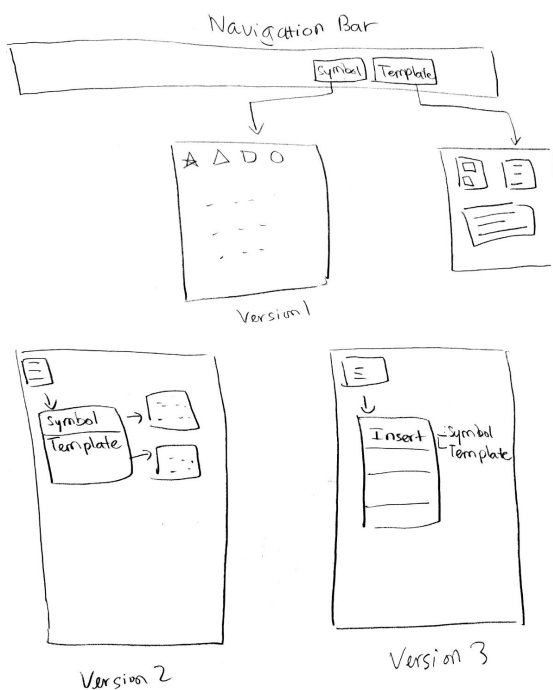


Figure 1: Add the feature template

Users can create the new file or drag the component from template and choose the template they need. Also, they can add their own templates and all those templates will be saved in “my library”. (Figure 2)

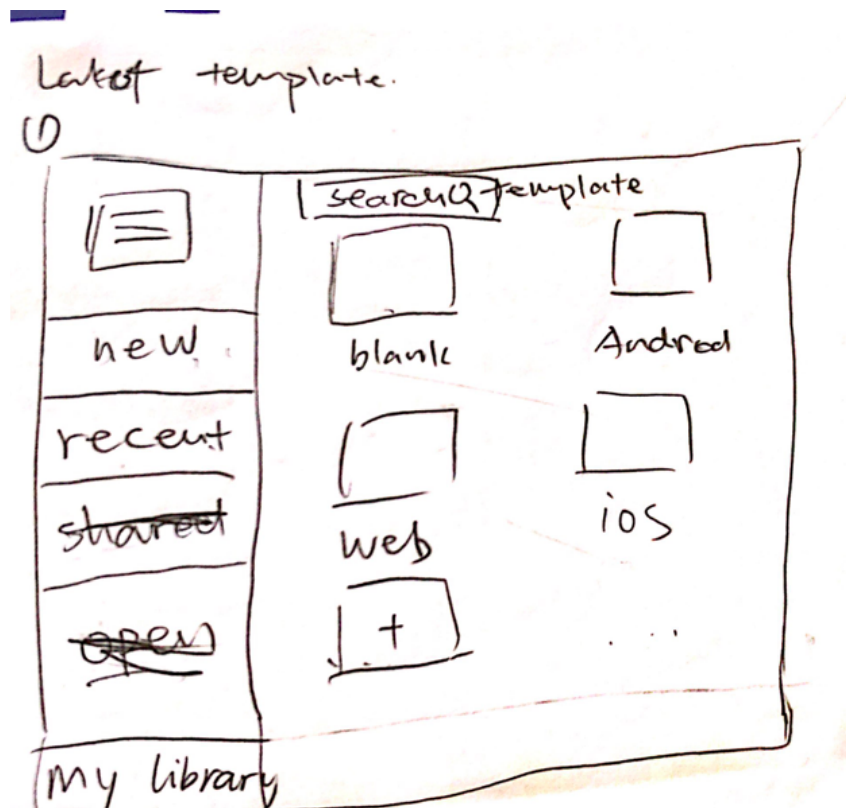


Figure 2: The window of template

The template can be a frame or a component so it should be in the list of insert. Based on the toolbar, we created in the previous four redesign parts, we add the feature that template and symbols in the “insert” option in order to help users to find it efficiently. Symbol and template should be different insert option. The window should be the same

and separate to two different windows. (Figure 3)



Figure 3: Template and symbol are different option

This is the wireframe we created based on the sketches and ideas we have.

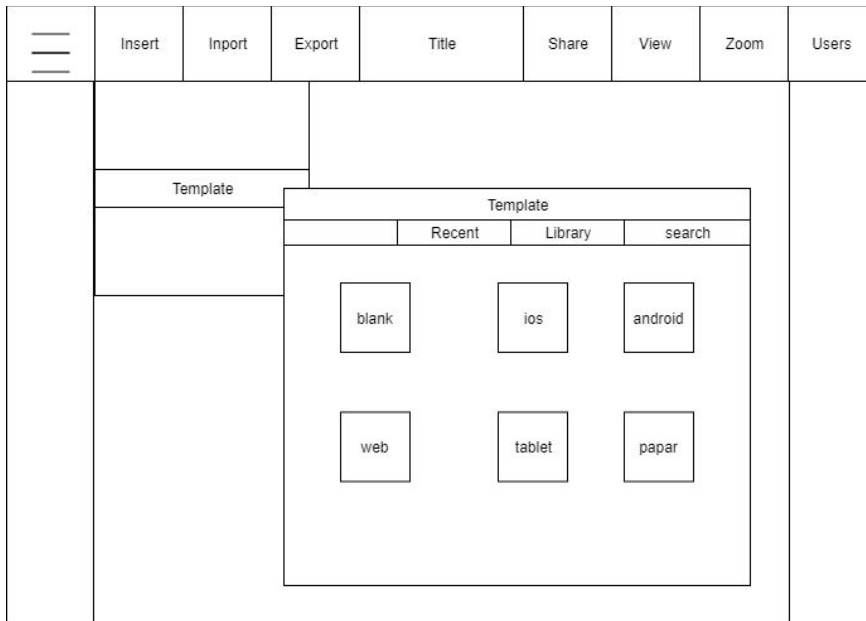


Figure 4: Wireframe

The last step is to make the high-fidelity mockups. (Figure 5 and 6)

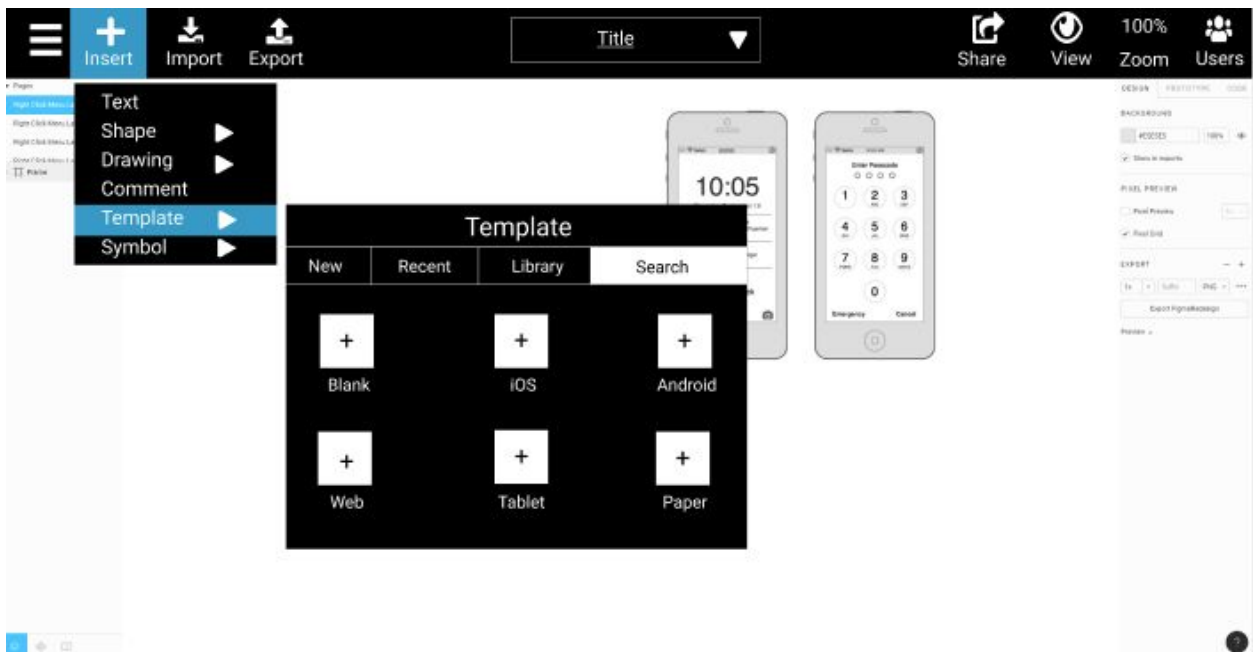


Figure 5: Mockup 1

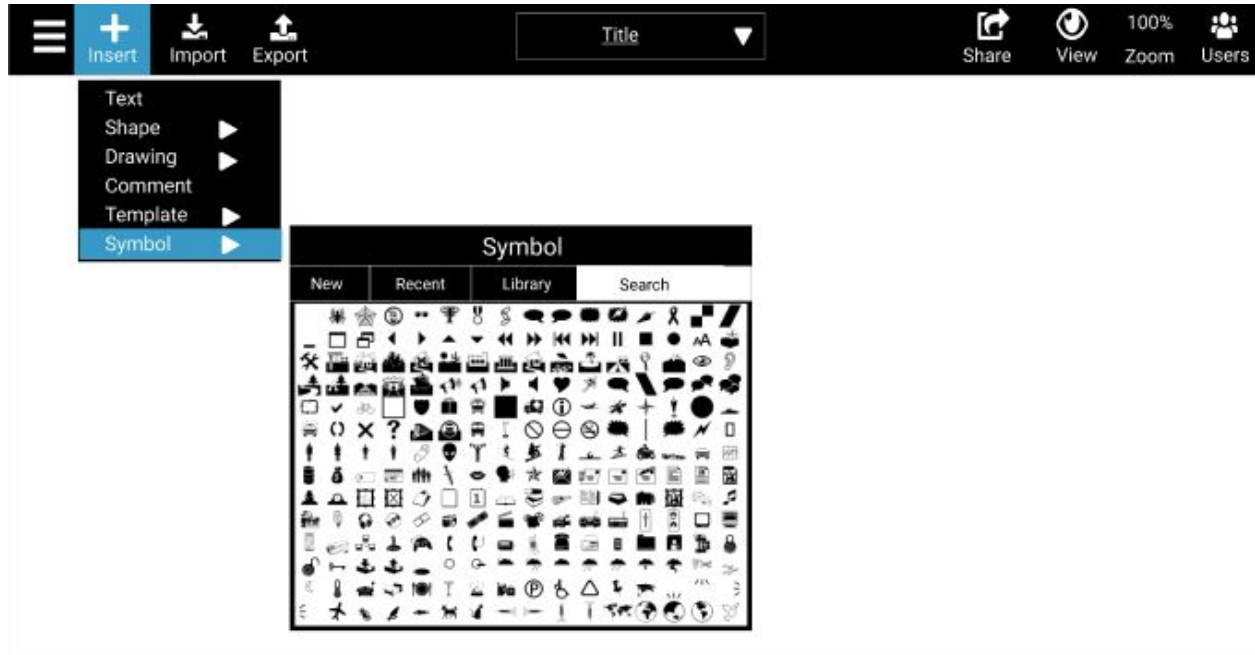


Figure 6: Mockup 2

Redesign Heuristic Evaluation Technique

Methods

In this assignment, our team conducted the heuristic evaluation using the 10 Usability Heuristics for User Interface Design by Jakob Nielsen. Our first step was to create a Review Checklist template which consists of the same review questions for each heuristic. Each member completed five review checklists for five redesign targets. The reason that we used the same questions for the redesigns is we wanted the team members (evaluators) to evaluate the system using the same questions so that we can compare the results. After the individual evaluation, our team discussed the results together to identify what to exclude and include in the team reevaluation of the redesigns. We also created a Severity Rankings defined by Jakob Nielsen for

each redesign. From the identified issues, we discussed and made appropriate recommendation on how the issues will be improved based on the Usability Heuristics.

Heuristics Used

Before the individual evaluation, we discussed and decided on what Heuristics affect the redesigns. The heuristics that are not relevant to the redesigns were marked Not Applicable in the Review Checklist template. We used seven Usability Heuristics by Jakob Nielsen which are:

1. Visibility of System Status
2. Match Between System and the Real World
3. User Control and Freedom
4. Consistency and Standards
5. Error Prevention
6. Recognition Rather Than Recall
7. Aesthetic and Minimalist Design

Prioritization of Problems

Another part of the evaluation is grouping the problems to understand its impacts. As a group, we estimated the severity of the issues and the ease of fixing of the problems. Severity ranking shows how significant that the issues may have on the system and users. The ease of fixing ranking shows how the problems can be fixed or improved. The two tables below display the severity rankings and ease of fixing ranking which were defined by Jakob Nielsen's Severity ratings for usability problems.

Severity Ranking Table

Ratings	Definition of Rating
---------	----------------------

0	Violates a heuristic but doesn't seem to be a usability problem.
1	Superficial usability problem: may be easily overcome by user or occurs extremely infrequently. Does not need to be fixed for next release unless extra time is available.
2	Minor usability problem: may occur more frequently or be more difficult to overcome. Fixing this should be given low priority for next release.
3	Major usability problem: occurs frequently and persistently or users may be unable or unaware of how to fix the problem. Important to fix, so should be given high priority.
4	Usability catastrophe: Seriously impairs use of product and cannot be overcome by users. Imperative to fix this before product can be released.

Ease of Fixing Table

Ratings	Definition of Rating
0	Problem would be extremely easy to fix. Could be completed by one team member before next release.
1	Problem would be easy to fix. Involves specific interface elements and solution is clear.
2	Problem would require some effort to fix. Involves multiple aspects of the interface or would require team of developers to implement changes before next release or solution is not clear.
3	Usability problem would be difficult to fix. Requires concentrated development effort to finish before next release, involves multiple aspects of interface. Solution may not be immediately obvious or may be disputed.

Heuristic Analyzation and Reevaluation of Redesign

1. Design Menu Lacking Functionalities

- **Benefit of Redesign:** This redesign targets the lack of functionalities in the design menu when users right-click on the design object. It allows users to quickly add, remove or modify objects on the same location instead of having to move to the toolbar. This redesign quickly facilitates the design process of users.
- **Problem of Redesign:**

Problem	Severity Ranking	Ease of Fixing Ranking	Heuristic Violated
Design Menu Lacking Functionalities	3	2	Aesthetic and Minimalist Design

The evaluators have found that the right-click menu has too many options which can be overwhelming for new users (Figure 1).

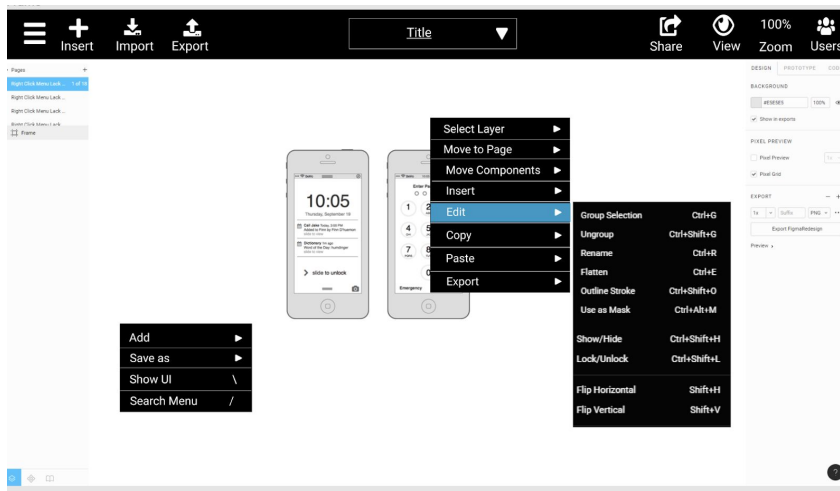


Figure 1: Right-click menu

While the added features can be

useful, it may violate the “Aesthetic and minimalist design” which should not contain extra information and diminish the simplicity of design.

- Recommendation: One solution that can be applied to fix this problem is to remove the features that are not necessary from the menu which could be Export and Insert because these features are already in the toolbar.

2. Icons Are Unintuitive

- Benefit of Redesign: The redesign makes the actions readily available on the toolbar with recognizable icons that are typically used in most user interface. We also ensured that all icons are labeled so users don't spend too much time hovering over them in order to figure out what it does.
- Problem of Redesign:

Problem	Severity Ranking	Ease of Fixing Ranking	Heuristic Violated
Functionalities Are Hidden	1	2	Aesthetic and Minimalist Design

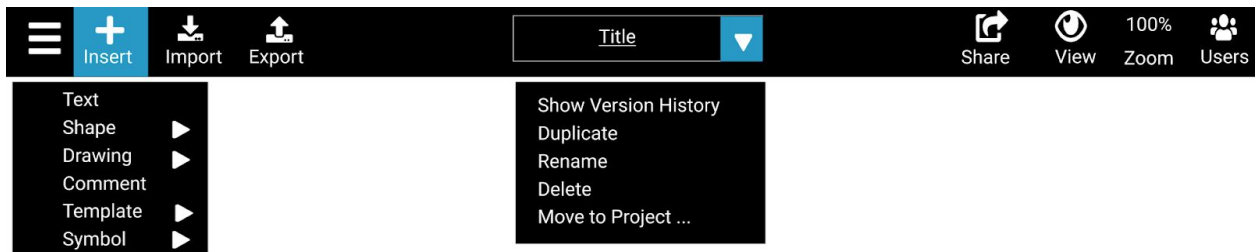


Figure 1. Icons Unintuitive Mockup

While we used recognizable icons that are typically used in editing tools, novice designers who have never used a design software before may not be familiar with the terms “Import” and “Export” (Figure 1).

- Recommendation: One solution would be to have a feature that would display an explanation for what each icon does when users hover over them. This feature can be disabled by more experienced users in the settings menu.

3. Functionalities Are Hidden

- Benefit of Redesign: The redesign organizes the functionality hierarchy in hamburger menu. It appropriately groups features into category. This redesign allows users to quickly find the functionality that they need.
- Problem of Redesign:

Problem	Severity Ranking	Ease of Fixing Ranking	Heuristic Violated
Functionalities Are Hidden	3	3	Recognition rather than recall

Although this redesign helps to reorganize the hamburger drop-down menu, it might have not solved all the issues since the similar features are still grouped together, so users would still need to go through the lists to use that functionality. This issue violates the “Recognition rather than recall” heuristic which minimizes the user’s memory load by making actions visible. For example, Figure 1 shows that users have to click on Format -> Text -> Bold to darken the text. So users have to remember three actions to darken the text.

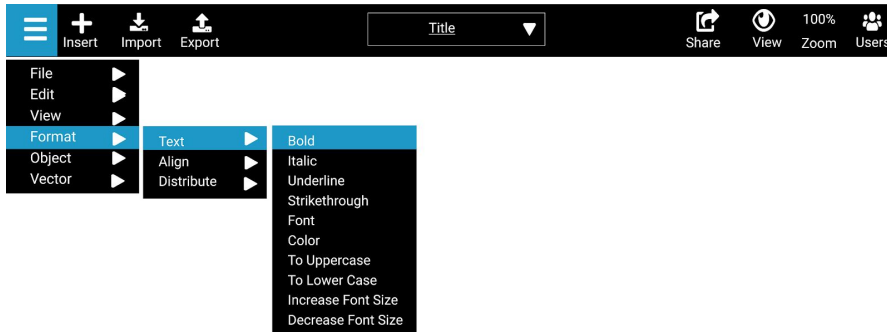


Figure 1: Formatting Text

- Recommendation: One solution can be having the more commonly used features such as Formatting and Aligning to be at the tool bar. However, this solution may negatively affect the simplicity of the design.

4. Exporting Files Is Confusing

- Benefit of Redesign: The Exporting Files redesign improved the original design visually and functionally. The design is minimalistic while it reduces the steps that users have to make exporting files. Users have full control on what they can export while the default values tailor to the most frequent uses of exporting files.
- Problem of Redesign:

Problem	Severity Ranking	Ease of Fixing Ranking	Heuristic Violated
Exporting Files Is Confusing	1	1	Match between system and the real world

In this redesign, evaluators noticed that the system does not speak the language of the target user base. It uses technical terms such as “Export”, “Merged Layer”, and “Individual Layer” as shown in Figure 1. While these terms are the same as what Figma originally uses, it may be difficult for novice users to understand what it means. This issue violates “Match between system and the real world” heuristic which the system should speak the users’ language.



Figure 1: Exporting Files

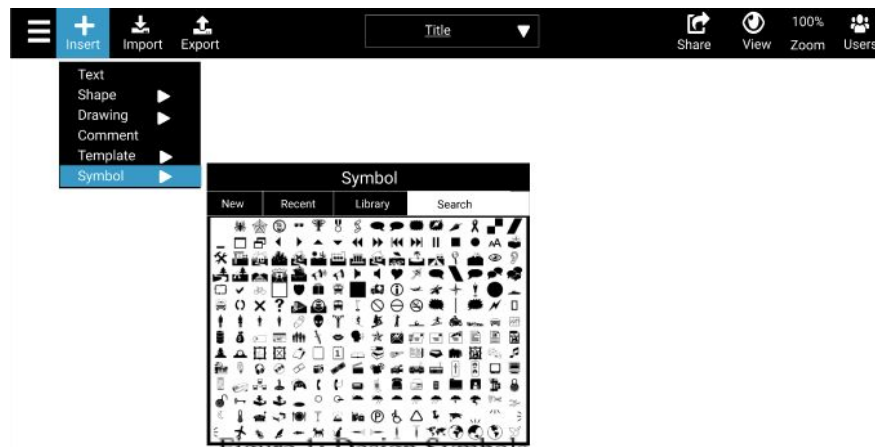
- Recommendation: One solution that can be made is to have an “Info” icon in this section that when it’s clicked, it will display information to explain what these fields mean. This solution will help new users to learn about the terms while it won’t bother more experienced users.

5. Lack of Common Templates And Symbols

- Benefit of Redesign: This redesign was done based on the needs of users after usability testing. We have found that many users wanted to have design templates and symbols so they would not have to create objects manually. This redesign facilitates design process as well as creates convenience to users.
- Problem of Redesign:

Problem	Severity Ranking	Ease of Fixing Ranking	Heuristic Violated
Problem of Redesign	2	1	Consistency and Standards

Based on the reviews of evaluators, we have found that the redesign of adding template and symbol is not consistent with other features of Figma. First of all, the symbols are black in white background while other Figma icons are white in black background. Secondly, the redesign templates and symbols are not labeled which users have to rely on their abilities to recognize what the symbols and templates represent (Figure 1).



This issue violates the

Figure 1: Design Symbols

“Consistency and Standards” Heuristic which users should not have to wonder what the symbols mean.

- Recommendation: This issue can quickly be solved by labeling all the symbols and templates so that users do not have to guess what they mean. Also, the symbols’ color can be changed to white on a black background to match other features.

Conclusion

In conclusion, Figma’s ability to allow multiple users to work on the same file at the same time remains its biggest selling point against its competitors. By being web-based, it allows teammates to design, prototype, and gather feedback all in one place. Since Figma’s target users are novice designers, our goal for the redesign is to make the software easy and intuitive to use for beginners. From our usability evaluation findings, we found that Figma makes it tedious to complete some common tasks you typically need to do while creating a basic mockup because it lacks some important functionalities that its competitors have.

We redesigned and evaluated our design targets based on Jakob Nielsen’s Usability Heuristics for User Interface Design. From our evaluation, we identified some problems with our redesigns. For the design menu lacking functionalities issue, novice users may be overwhelmed with the amount of options the right-click menu offers. For the icons are unintuitive and exporting files is confusing issue, we found that users who have no experience with design softwares may not know what “Import” and “Export” mean. For the functionalities are hidden issue, users have to remember multiple steps in the drop-down menu to complete a task, which violates the “recognition rather than recall” heuristic. Lastly, for the lack of common templates

and symbols issue, we found that our styling did not match Figma's styling and that the templates and symbols did not have labels. All of the issues that we found from our heuristic evaluation are minor and have simple fixes. Once we address these issues with the recommendations stated earlier in this report, Figma can have the potential to compete with its well-established competitors in the UI/UX design world.

Appendix

I. Interview Protocol

- Each team member interviewed two people remotely or in person. Each person served as facilitator as well as recorder. At the beginning of each interview, the interviewer explains the process to interviewees and show them the consent form. During the interviews, there are five main questions but facilitators also ask follow-up questions if necessary. Some of the interview questions have been changed based on TA's feedbacks. We decided to change the interview protocols because I decided that the original protocol was giving us helpful data. Below shows the lists of two interview versions.
- Initial interview questions:
 - Can you tell us about your software designing background?
 - What do you like to see in an app (mobile/web)?
 - What stops you from using an app?
 - Describe your creative process. What are the major steps?
 - What tools do you use to design?
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- Revised interview questions:
 - Can you tell us about your user interface/software design background?
 - Describe your creative process for visual design. What are the major steps?
 - What key metrics do you use to track your design's success?

- What tools do you use to design?
 - Can you tell us about your experience?
 - Are you still using the tool(s)?
 - What do you like most about it?
 - What do you dislike most about it?
 - Are you satisfied with using it?
 - What stops you from using it?
 - Will you pay for design applications with better user experience?
 - Do you want your design tools to have templates about common icons and symbols?
- How do you collaborate with your project team?
 - What tools do you use to collaborate on a project?
 - What is your favorite collaboration tool?
 - What do you like most about it?
 - What do you dislike most about it?
- What do you expect from an online collaboration interface design tool?

II. Survey Protocol

- Our team arranged 10 survey questions and post the survey through Google survey, then we share the survey link to our friends and groups to get the response. We also included the survey purpose and consent form on the survey form. For now we got 49 responses and we have the analyze chart for all those responses to help us identify the preference and requirements about users.
- Survey Questions:
 - How technology savvy are you?
 - Scale 1 - 5
 - Novice to Expert
 - What smart devices do you use on a daily basis?
 - Mobile phone
 - Fitness tracker
 - Smartwatch
 - Desktop computer
 - Laptop

- Tablet
- What smart devices do you use the most?
 - Mobile phone
 - Fitness tracker
 - Smartwatch
 - Desktop computer
 - Laptop
 - Tablet
- Are you a multi-tasker?
 - Yes
 - No
 - Sometimes
- Which operating system do you like?
 - iOS
 - Android
 - Mac OS
 - Windows
 - Linux
- How many hours do you use electronics in a day (in hours)?
 - 0 - 2
 - 2 - 5
 - 5 - 10
 - >10
- What do you use smart devices for the most?
 - Music
 - Social media
 - Gaming
 - School
 - Work
 - Others
- Which of the following factors will affect your preference for electronic smart devices?
 - Design
 - Pricing
 - Brand
 - Quality
 - Other (please specify)
- How long can you live without electronic smart devices?
 - Less than one hour

- 1~3 hour
- 3 hours ~ one day
- More than one day
- To what extent do electronic smart devices involve in your workplace?
 - Always
 - Very often
 - Often
 - Sometimes
 - Seldom
 - Never

III. Cognitive Walkthrough - Task Description and Evaluation Protocols

Participants:

- Jason Dong: Note taker
- Sarah Espinosa: Facilitator
- Siyun Ji: Tester
- Rouwan Yang: Tester

Set-up: Two testers will perform the tasks together on the same laptop. The facilitator reads the tasks and keeps the flow of the test. Notetaker observes and takes notes. Before the test, the team creates two iPhone-8 frames in the same page and name them Frame1 and Frame2.

4 questions to be asked during each step:

- What is the user's goal at this point?
- Why is it their goal?
- Are the necessary actions obviously available in the interface? Once users see the control, will they recognize that it does what they want?
- After the action is taken, is the feedback appropriate? Will the user understand it so they can move on to the next action with confidence?

Task #1: Create a button component

1. Named “Login”: Create a rectangle component
2. Color 89CBE5: Change the background color of the rectangle to 89CBE5
3. “Login” text to be color FFFFFFFF: Add a text box on top of the rectangle, make sure the text is in color 000000
4. “Login” text to be in font Arial 18 Bold
5. Button width 100: Make the width of rectangle to be 100 pixels
6. Button height 30: Make the height of the rectangle to be 30 pixels
7. Button corner radius 4: Make the corner radius of the rectangle to be 4
8. Align text to be center: Align the “Login” text to be in center of the button
9. Wrap everything and create component

Task #2: Importing an image to Frame2

1. Create a file and name it testing
2. Select iphone 8 frame as your main screen size
3. Change the background color of the frame to 89CBE5
4. Import an image (of your choice) from computer to Figma
5. On the image you just import, add a “layer blur” effect to it
6. Add the message “Hello World” to the image, make sure the text to be in font 24 points Roboto and the message to be in the center of the image.
7. Download this file as png into the computer
8. Share your file with another person (email is lvdong@uci.edu) to collaborate, make sure they can edit the file

Task #3: Create a clickable prototype

1. Add login button component to Frame1
2. Select login component
3. Connect Frame1 to Frame2 by using the prototype function
4. Change the transition behavior to Move
5. Change the duration to 200ms
6. Change the direction to right
7. Change transition to ease out
8. Copy the link to the clickable prototype and share it

IV. Usability Test - Task Description and Evaluation Protocols

Participants: 5 UCI undergraduate students. Team members rotate the roles

Setup:

- Participants will be informed that they will be doing a usability test on Figma.com which is a design tool. Participants will be informed that they will perform tasks and their activities will be recorded for analysis purposes.
- Before the test, participants will be asked if they have used or heard of figma before.
- Participants will be performing the test on a laptop connected to the Internet.
- Participants will not need to create Figma account or login. We have created a test account for the participants. The website will not contain any files that can interfere with the testing. After each test, all the files will be deleted.
- Think-aloud protocol because it'll help to see the thought process of the participants

- If the participants are stuck on a task for more than 2 minutes, we will tell them where they should look at on the screen.
- Each task will be stopped if it's not finished in 5 minutes (the time constraint of the test)
- Scenario: Your friend, Brian, wants to know more about Figma. However, Brian does not know what Figma is about. He asks you to create a sample and show it to him so he knows what Figma is about. In order to do that, you must complete these tasks.

Tasks:

1. Create a file and name it testing
2. Select iphone 8 frame as your main screen size
3. Change the background color of the frame to 89CBE5
4. Import an image (of your choice) from computer to Figma
5. On the image you just import, add a "layer blur" effect to it
6. Add the message "Hello World" to the image, make sure the text to be in font 24 points Roboto and the message to be in the center of the image.
7. Download this file as png into the computer
8. Share your file with another person (email is lvdong@uci.edu) to collaborate, make sure they can edit the file

End-of-interview questions:

1. How old are you?
2. What is your current job/major?
3. What did you think of the tasks?
4. How difficult was the test? 1(easy) to 5(very hard)

5. What did you think about Figma?
6. Would you consider using Figma for design work?
7. Would you recommend Figma to a friend/colleague?
8. Are there any improvements you would recommend to improve the user experience of the system?