

WireFrame Tool

CSE 3001 Software Engineering

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Acknowledgement

The project “WIREFRAME TOOL” was made possible because of inestimable inputs from everyone involved, directly or indirectly. I would first like to thank my guide, Prof. Swati J.N, who was highly instrumental in providing not only a required and innovative base for the project but also crucial and constructive inputs that helped make my final product. My guide has helped me perform research in the specified area and improve my understanding in the area of web development and internet of things and I am very thankful for her support all throughout the project. I am really thankful to her for her patience, insightful comments, enthusiasm, practical, helpful information and unceasing ideas that have helped us tremendously at all times in the completion of this project. Without her support and guidance, this project would not have been possible. We could have not imagined having a better faculty in our study . We would also like to expand our gratitude to all those who have directly and indirectly guided us in the realization of the project.

Executive Summary

A wireframe is a basic, two-dimensional visual representation of a web page, app interface, or product layout. You can think of it as a low-fidelity, functional sketch. ... It's why most wireframes look simple: grayscale instead of colors, placeholders for images, and Lorem Ipsum for text. Wireframe is commonly used to layout content and functionality on a page which takes into account user needs and user journeys. Wireframes are used early in the development process to establish the basic structure of a page before visual design and content is added.

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Abbreviation

HTML – Hyper Text Mark-up Language

JS – Java Script

Introduction

1.1 Objective:

The purpose of the Software Requirements Specification is to describe the specific requirements of the Wireframe Tool project that are to be met by the implementation effort of our team. Included with the description of the requirements is a description of any constraints or assumptions that the project is working within. This document also provides a description of any project dependencies that need to be explicitly expressed. Along with the requirements descriptions, it is also the purpose of this document to describe any performance requirements that need to be met. If there are any standards that need to be considered when developing the software are also listed. Lastly, the purpose of this document is to communicate the system attributes of the Wireframe Tool software. These system attributes include reliability, availability, scalability, maintainability, and portability.

1.2 Motivation:

The motivation for this project is that there was not a standard tool in the industry which everyone used. These tools are not available on every platform out there. Hence we made a web based tool which can be used on every platform, i.e. mac, windows, androids etc.

1.3 Background:

The user requirements are a tool that will provide a clean 2-dimensional layout or blueprint of the application or website he or she is developing, along with proper fitting of the application or websites for various devices such as a smartphone, a desktop, and smart watches. The functional requirements of the wire framing tool are to supply a host of various layouts of different devices of different proportions, to provide layouts of a logo, image box, text box, etc., and basic functionality of saving the wireframe in various format. The non-functional requirements are that the tool must be reliable, dependable and seamless in the basic and most valuable functionality that a wireframe tool must achieve. It is more efficient than other models and will help us achieve our final goal quicker. Other process models like incremental and spiral requires us visiting stages of software product development time and time again, but since we have a clear picture of requirements we adopted waterfall model.

2. Project Description and Goals

Every UX designer during the product design requires an architectural blueprint, a skeletal outline of a webpage or an app. This process is known as wireframing. The aim is to develop a wireframe tool which will provide a clear overview of the page structure, layout, information architecture, user flow, functionality, and intended behaviours. A tool which strives to satisfy both the designer and the stakeholders, during the exploratory phase of product life cycle. The scope of this tool covers wireframes for mobile applications, websites and smart watches. The objective is to provide the necessary components, such as black and white layout for logo, image box, navigation bar, etc., and simultaneously saving the wire framing and giving print options for the final wireframe.

3. Technical Specification

Hardware:

- A computer with Windows 7(min)
- Internet Connection
- RAM 2GB
- Mouse(in laptops for easier access)

Software:

- Web Browser (Google Chrome, Microsoft Edge)
- Java Script installed
- HTML supported

4. Design Approach & Details

4.1 Design approach/ Materials & Methods

4.1.1 Architecture Model

We have used standard repository model.

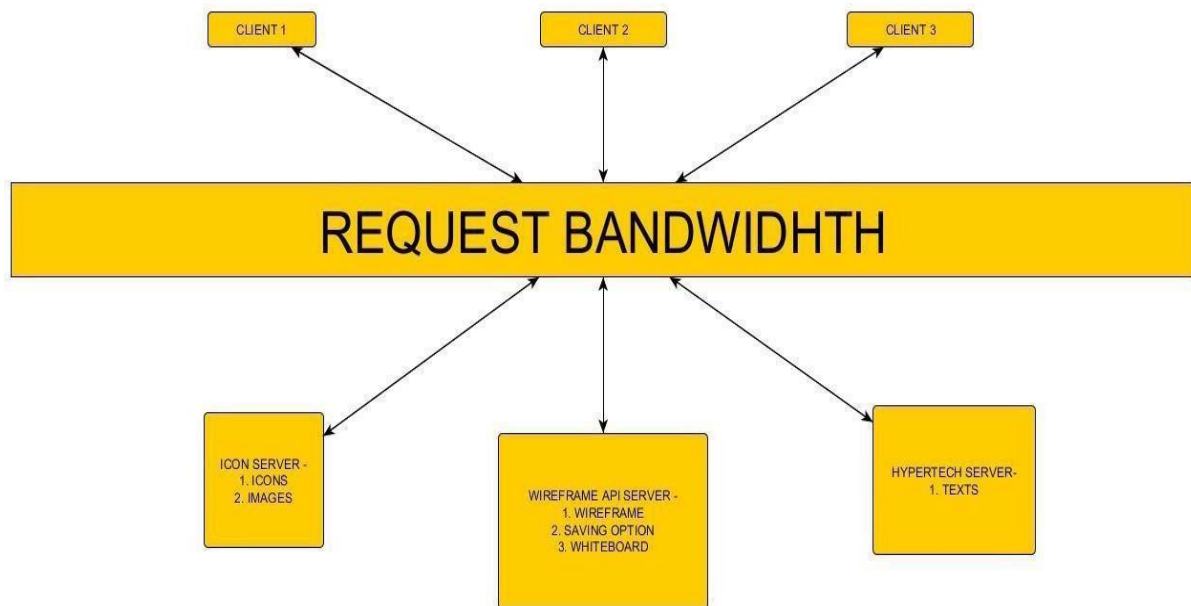


Figure 4.1.1

4.1.2 Process Model

Waterfall Model: Because we know the requirements which are:

The user requirements are a tool that will provide a clean 2-dimensional layout or blueprint of the application or website he or she is developing, along with proper fitting of the application or websites for various devices such as a smartphone, a desktop, and smart watches.

The functional requirements of the wireframing tool are to supply a host of various layouts of different devices of different proportions, to provide layouts of a logo, image box, text box, etc., and basic functionality of saving the wireframe in various format.

The non-functional requirements are that the tool must be reliable, dependable and seamless in the basic and most valuable functionality that a wireframe tool must achieve.

It seems efficient and will help us achieve our final goal quicker.

4.1.3 Sequence Diagrams

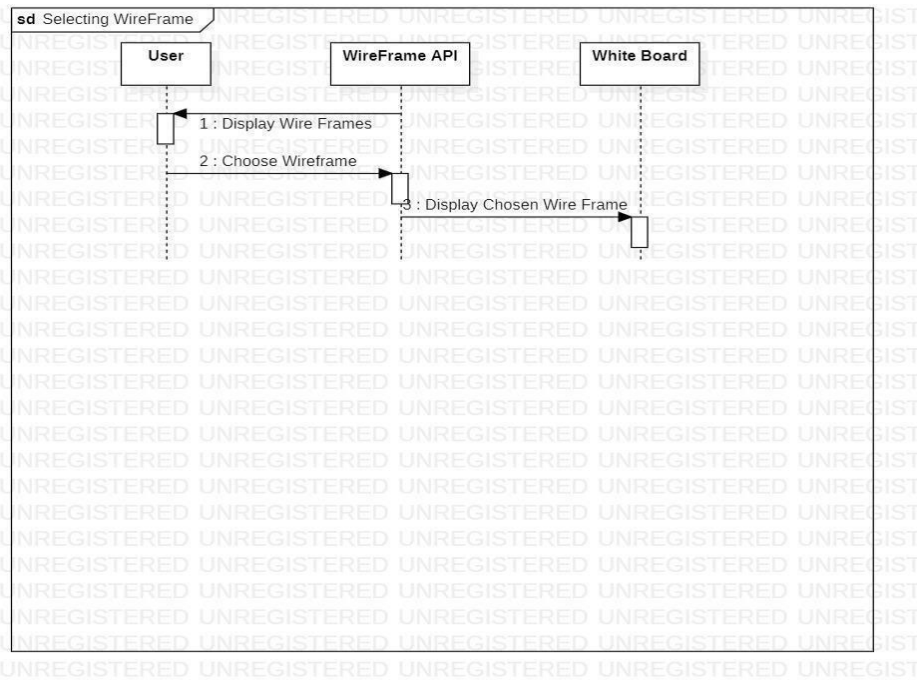


Figure 4.1.3.1

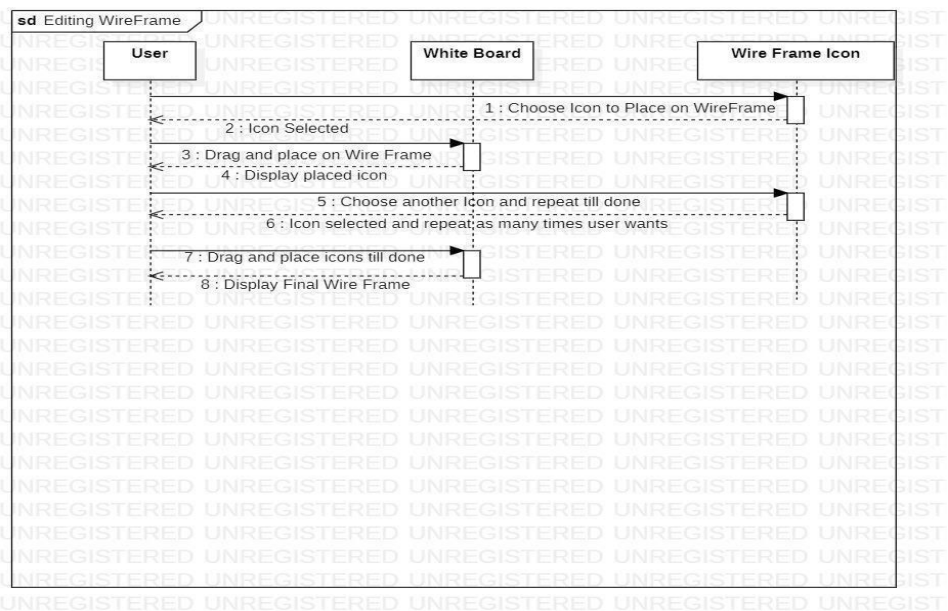


Figure 4.1.3.2

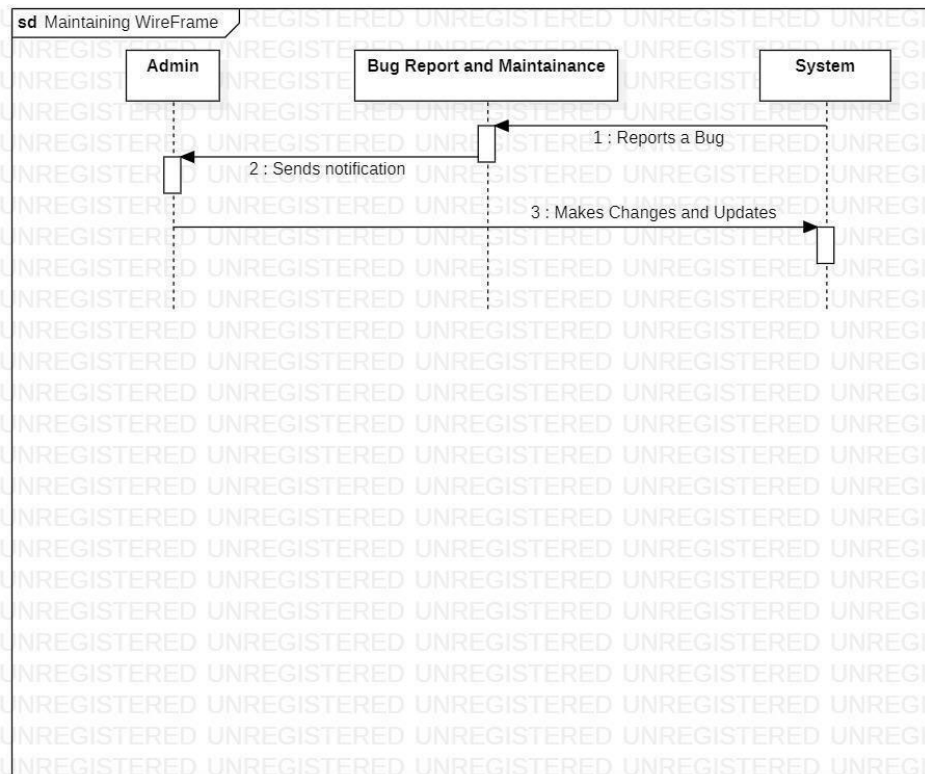


Figure 4.1.3.3

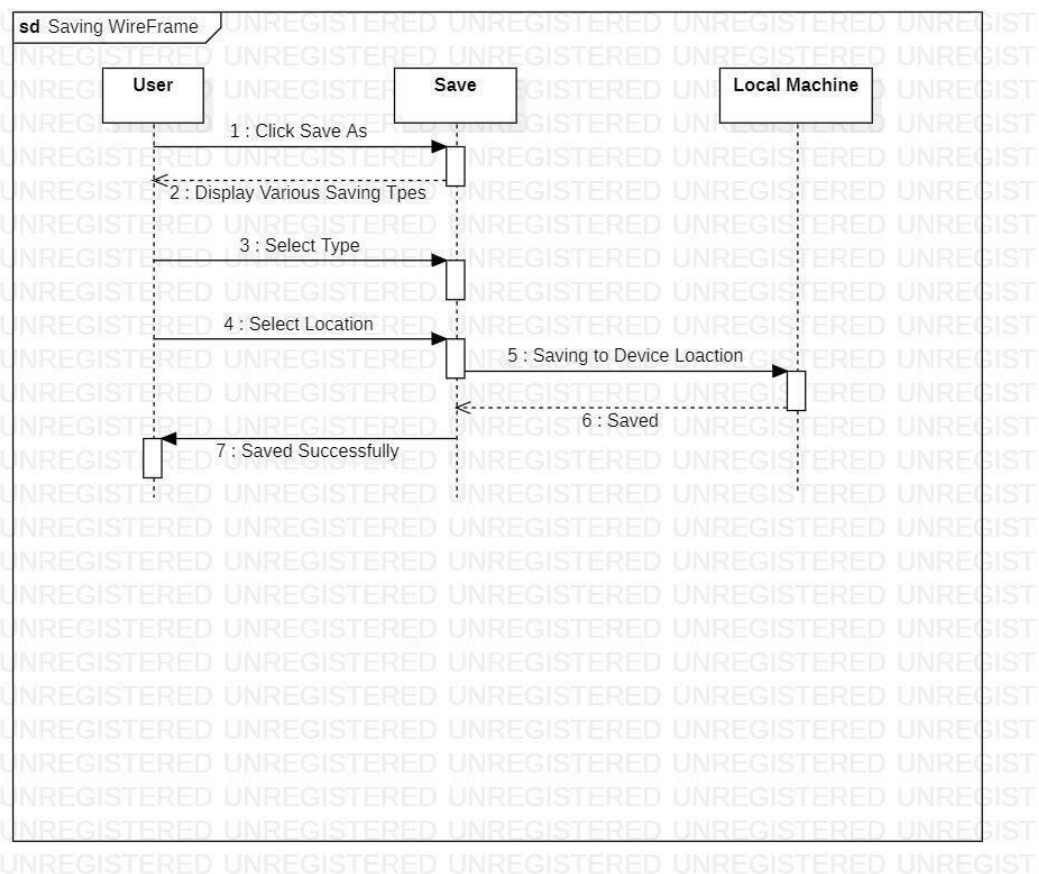


Figure 4.1.3.4

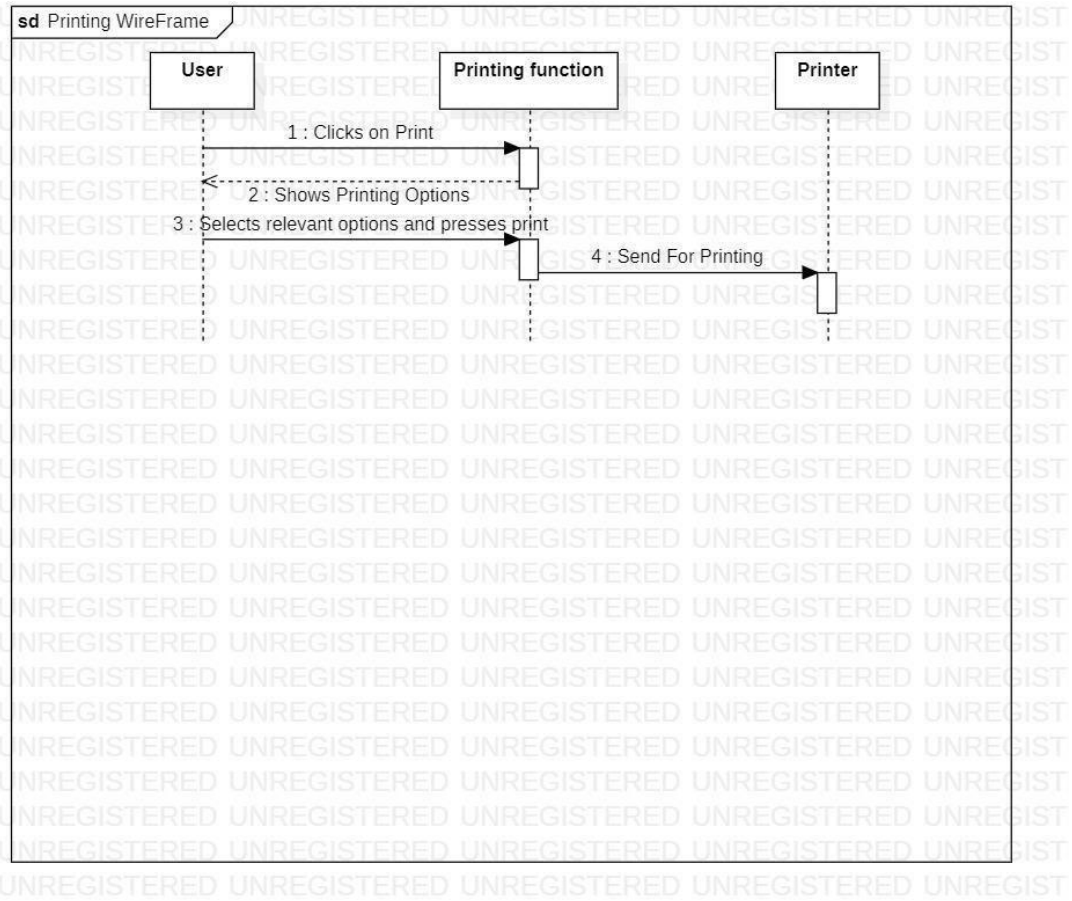


Figure 4.1.3.5

4.1.4 Collaboration Diagram

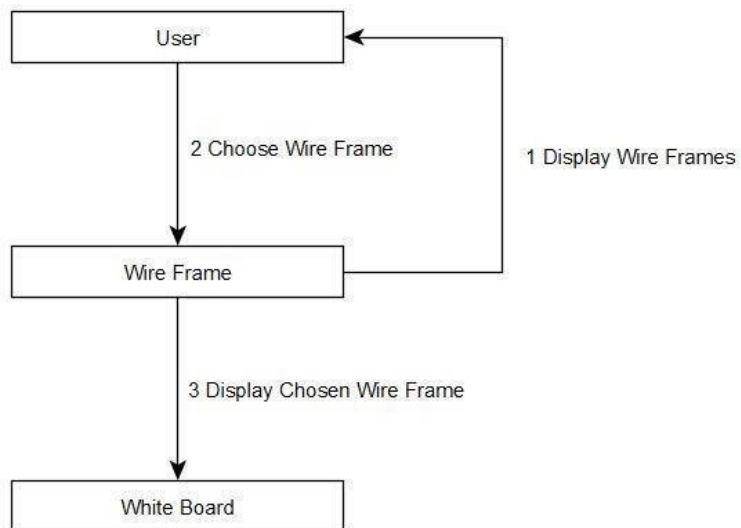


Figure 4.1.4.1

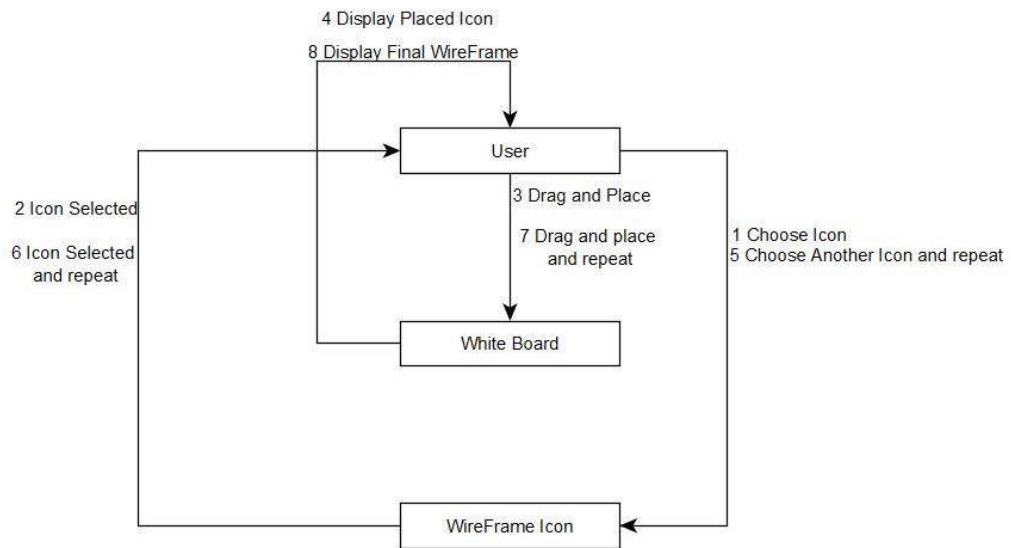


Figure 4.1.4.2

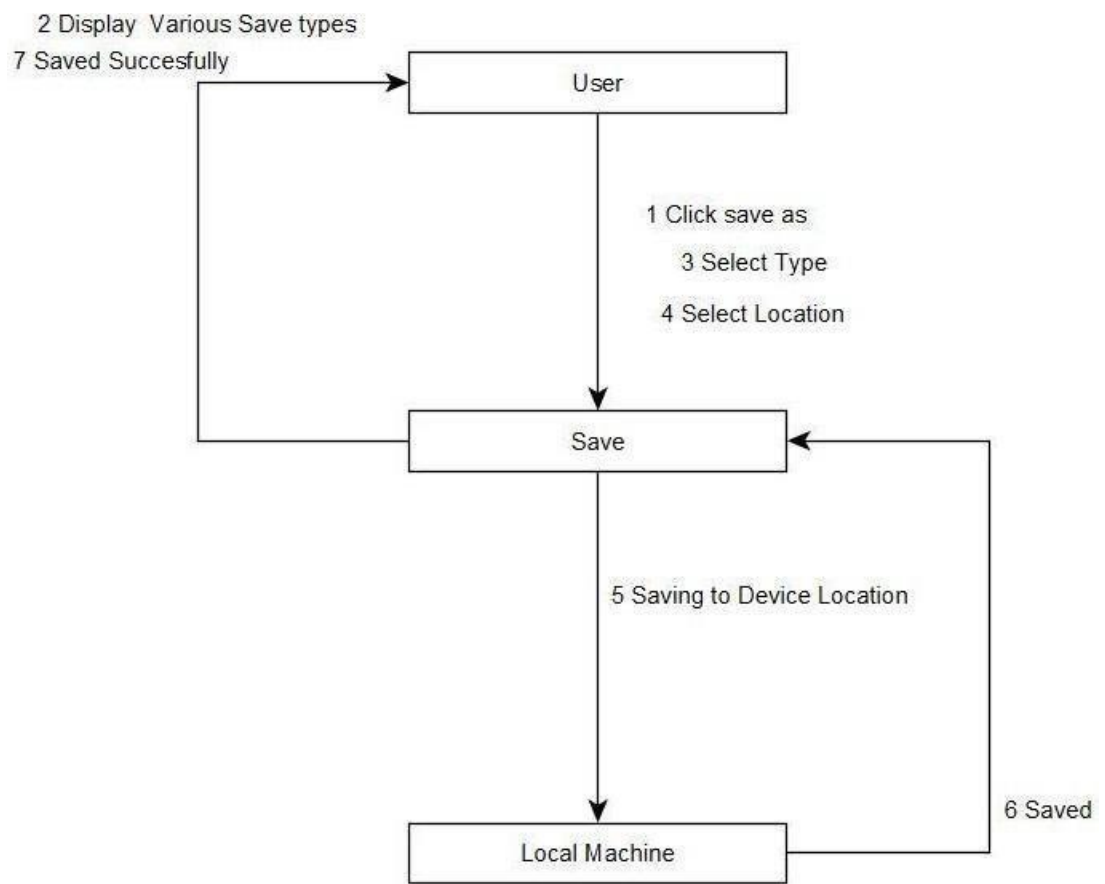


Figure 4.1.4.3

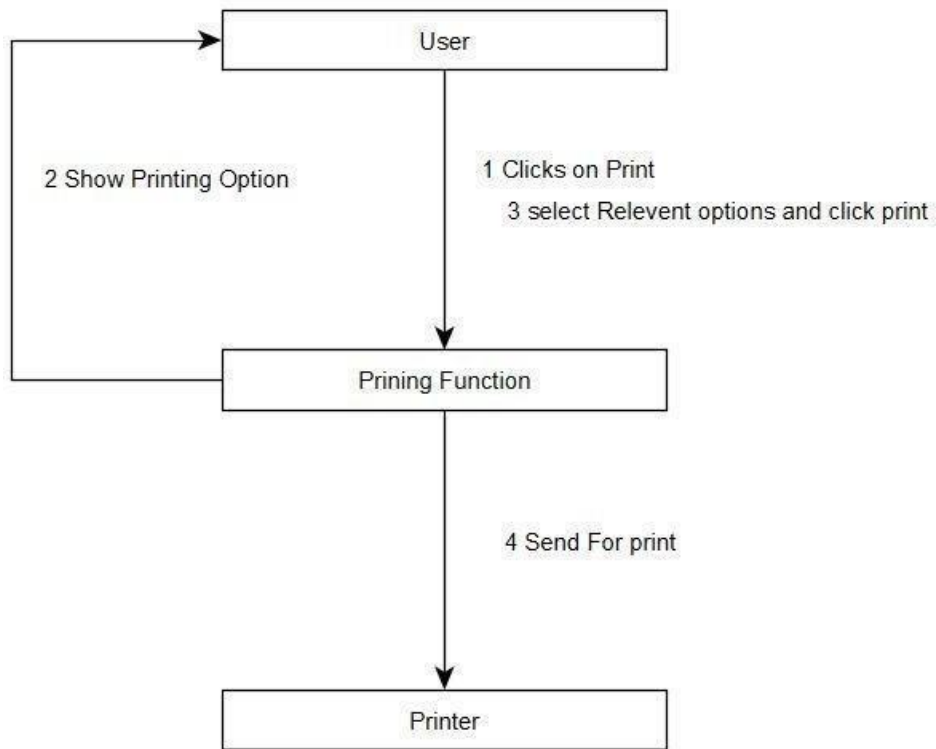


Figure 4.1.4.4

4.1.5 Activity Network (Swim lane diagram)

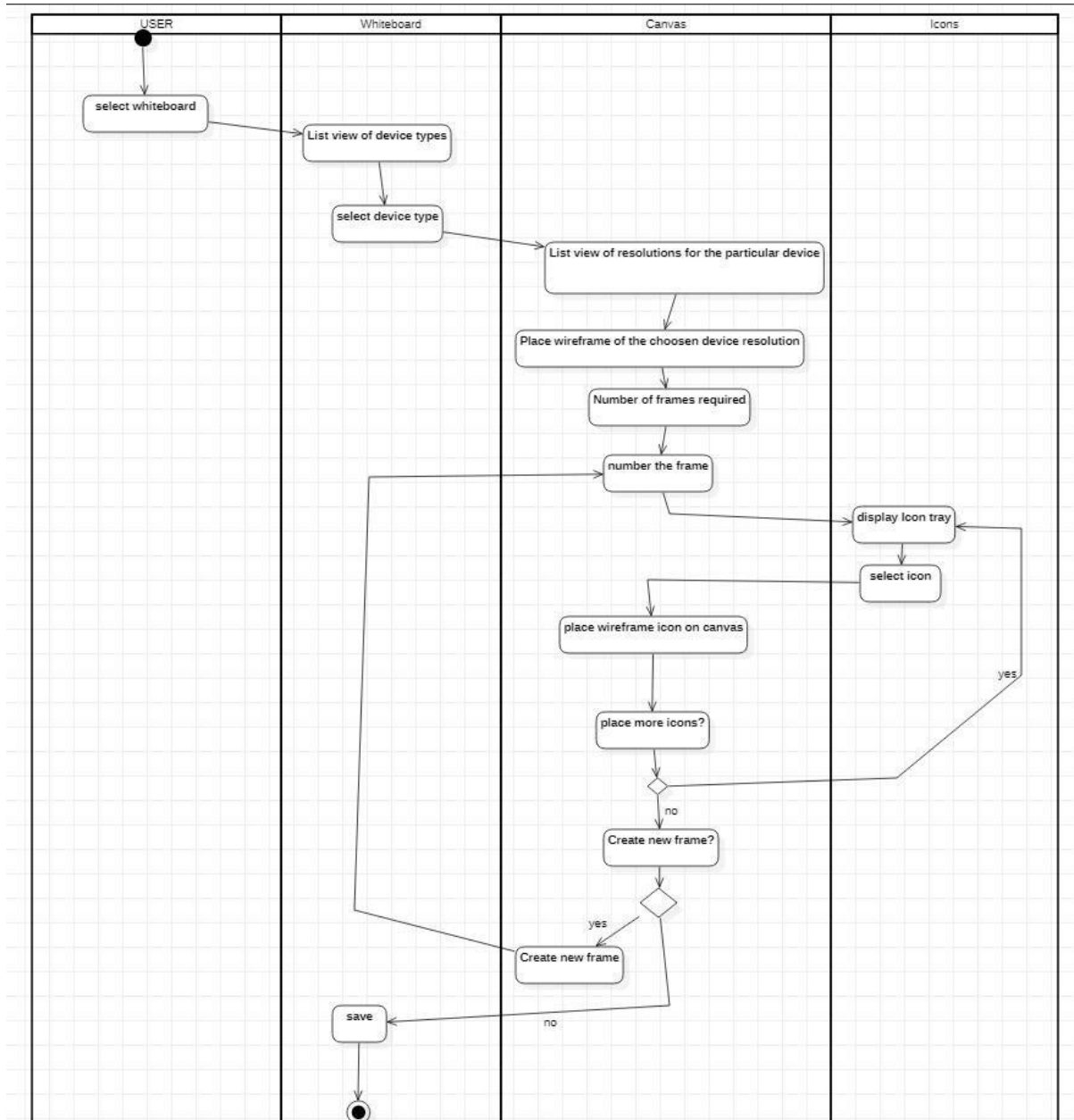


Figure 4.1.5.1

Icon's wireframe is placed inside the frames which are in the whiteboard. These icons are comprised of wireframes, images, colour boxes, and fonts. Frames are linked using icons

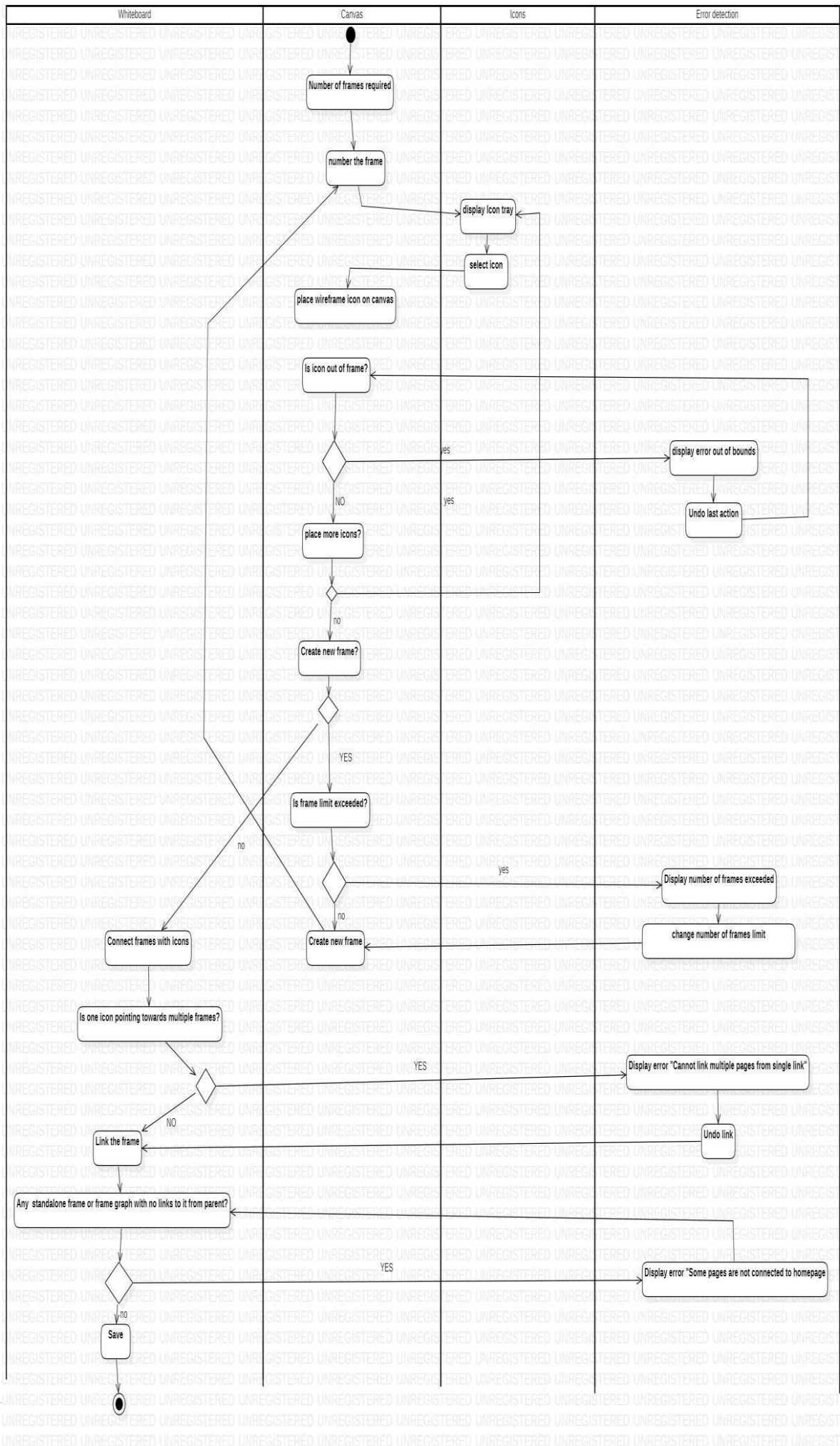


Figure 4.1.5.2

Icons when placed out of borders of frame, when frame limit is exceeded, when a single icon links multiple frame or when any frame is left out of linking triggers an error response from system.

4.1.6 Class Diagram

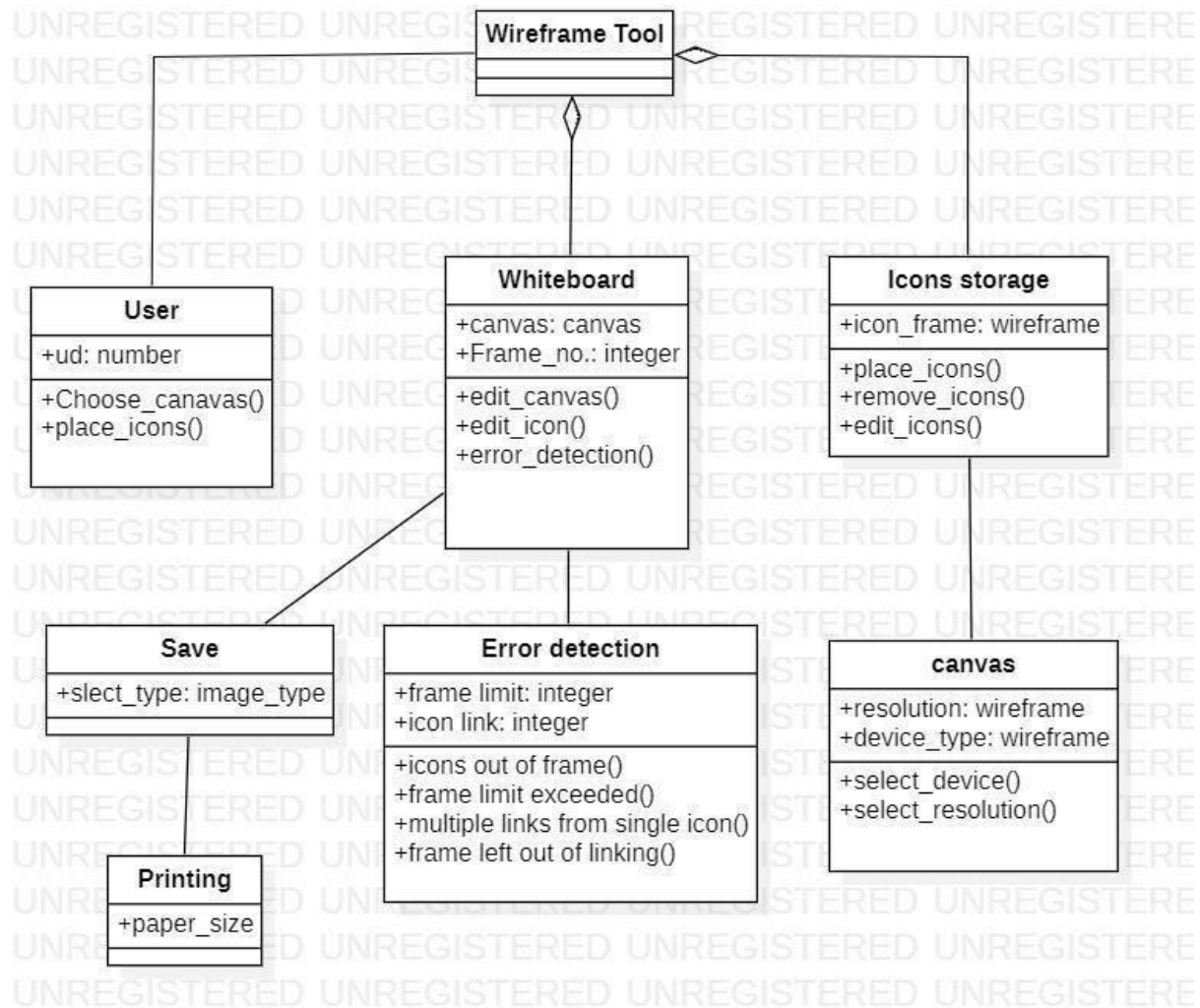


Figure 4.1.6

4.1.7 Use Case

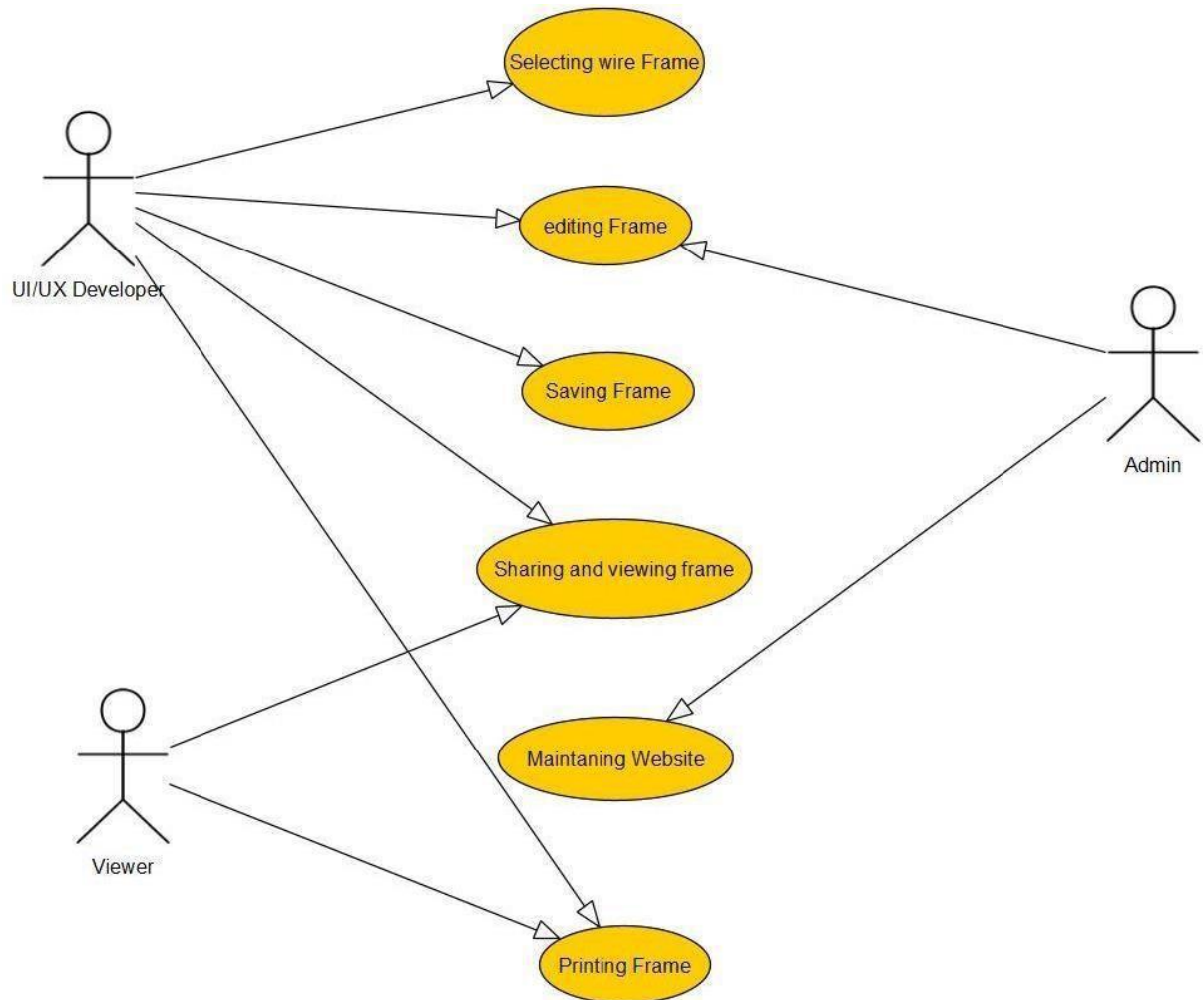


Figure 4.1.7

4.2 Codes and Standards

We have tried to comply and aim to comply with the following codes and standards

HTML5	https://www.w3schools.com/html/html5_syntax.asp
JavaScript	https://developer.wordpress.org/coding-standards/wordpress-coding-standards/javascript/
508 Standard	This is the standard for accessibility if Websites https://www.soswebdesign.com/gallery/webstandards.cfm
W3C Standards for web design and applications	https://www.w3.org/standards/

Table 4.2

4.3 Constraints, Alternatives & Tradeoffs

4.3.1 Work Breakdown Structure

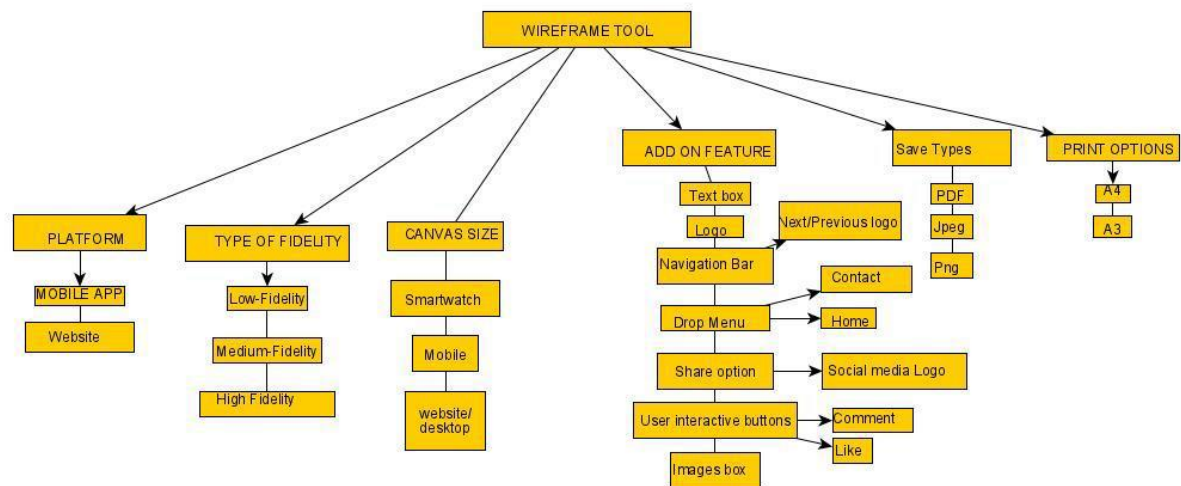


Figure 4.3

4.3.2 Constraints

Table of Design Constraints

ID	Origin	Shall Requirement
1	Project Description Document	The image quality and size of the exported wireframe SHALL be high definition.
2	Project Description Document	The icons of the wireframes SHALL be diagrammatically user friendly and uncomplicated.
3	Project Description Document	The system SHALL provide the font styles which are supported by most web browsers.
4	Project Description Document	The system SHALL not access the local storage for importing any files other than the image format (e.g. jpg, png, jpeg, etc.) .
5	Project Description Document	The system SHALL allow the user to access the website from different types of desktops, operating system or web browsers.
6	Project Description Document	The system shall provide clear zoom in/out capability on the wireframes
7	Project Description Document	the system SHALL not malfunction when the user switches between the frames.
8	Project Description Document	The system shall not restrict the user from changing the loacation of save.
9	Project Description Document	The system SHALL allow the user to add as many frames as he wants
10	Project Description Document	The system SHALL not restrict the content of the Wireframe.

Table 4.3

4.3.3 Trade off

UI/UX Developers need all types of fidelity wireframes prior to their project. The one which is presented to other development teams and shareholders are usually the high fidelity ones.

But to get the high fidelity one, it should be initiated by basic low fidelity and mid fidelity ones. Our project aims to provide that features to generate medium fidelity wireframes

5. Schedule, Tasks and Milestones

5.1 Gantt Chart

5.1.1. Process

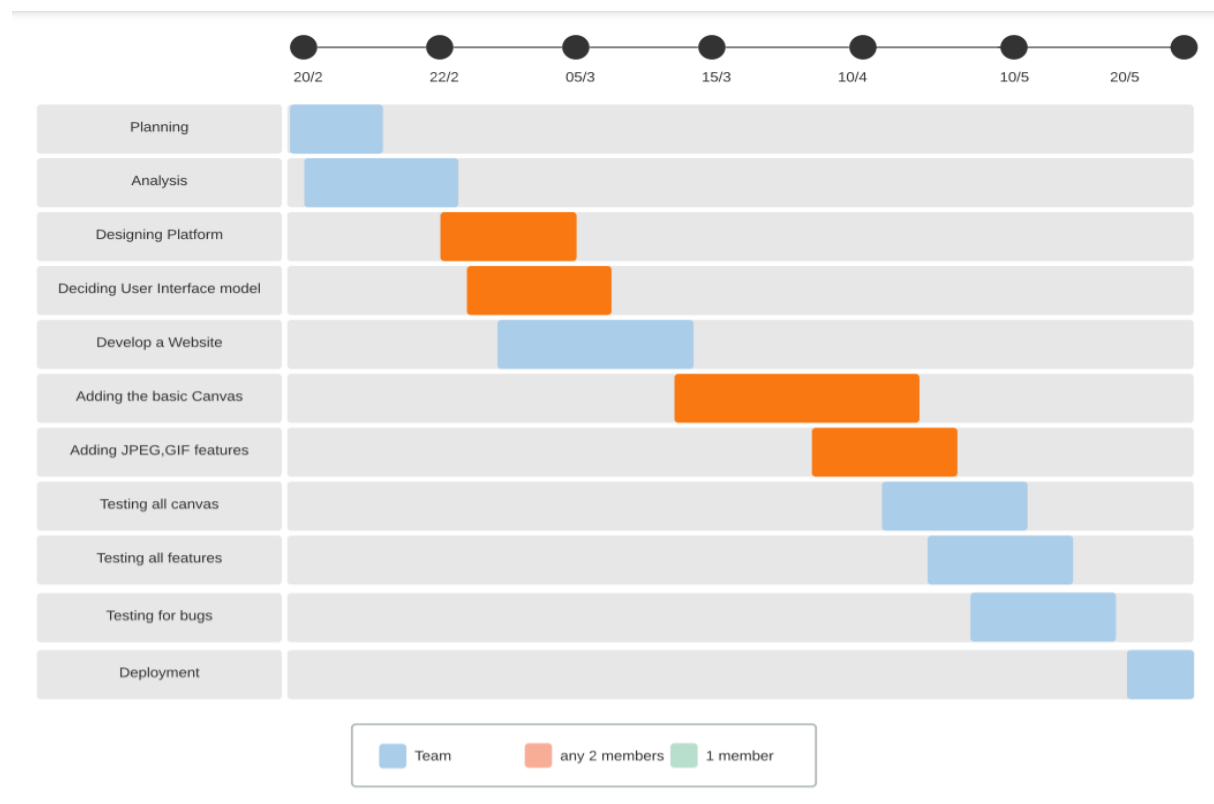


Figure 5.1.1

5.1.2 Product

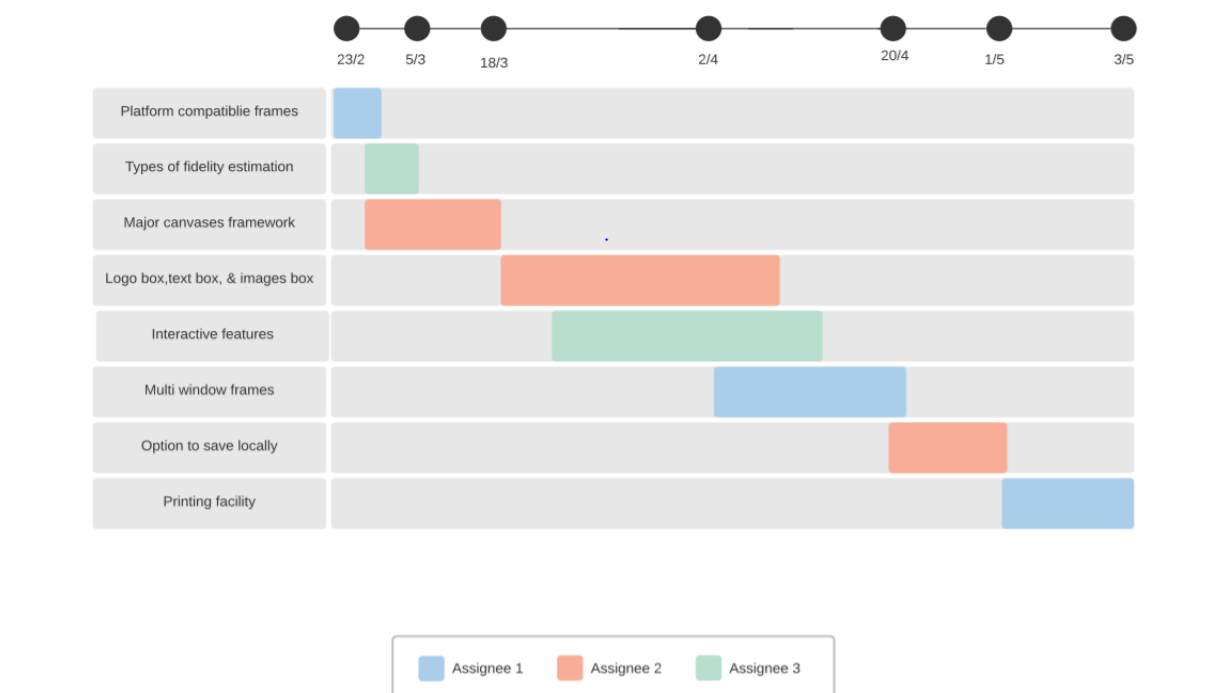


Figure 5.1.2

5.2 Activity Network

5.2.1. Process

TASK	LABEL	PREDECESSOR	STAFF	ESTIMATED TIME
Planning	A	-	3	2 hours
Analysis	B	A	3	5 hours
Designing platform	C	A,B	2	3 hours
Deciding user interface model	D	A,B,C	2	4 hours
Develop a Website	E	A,B,C,D	3	7 hours
Adding the basic canvas	F	A,B,C,D,E	2	4 hours
Adding JPEG,GIF features	G	A,B,C,D,E	2	2 hours
Testing all canvas	H	A,B,C,D,E	3	3 hours
Testing all features	I	A,B,C,D,E,F,G	3	2 hours
Testing for bugs	J	A,B,C,D,E,F,G	3	4 hours
Deployment	K	A,B,C,D,E,F,G,H,I,J	3	1 hour

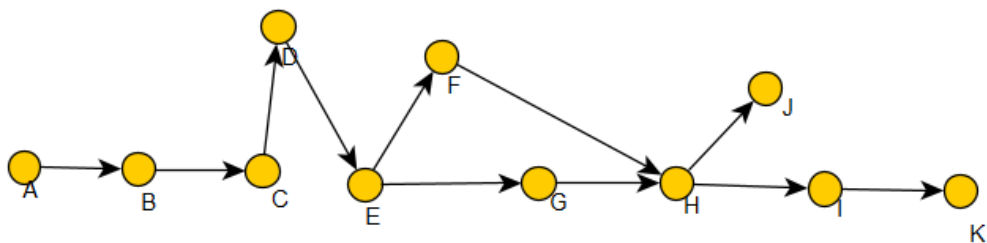


Figure 5.2.1

5.2.2 Product

Activity Table				
	Label	Predecessor	Staff Required	Estimation Duration
Platform Frames	A	.	2	4 hours
Fidelity Type	B	A	1	4 hours
Canvas Frame	C	A	2	3 hours
Major features	D	B,C	3	12 hours
Interactive features	E	A,B,C,D	3	4 hours
Multiple Window	F	A,B,C,D	3	6 hours
Local save	G	A,B,C,D,E,F	3	4 hours
Printing	H	A,B,C,D,E,F,G	1	3 hours

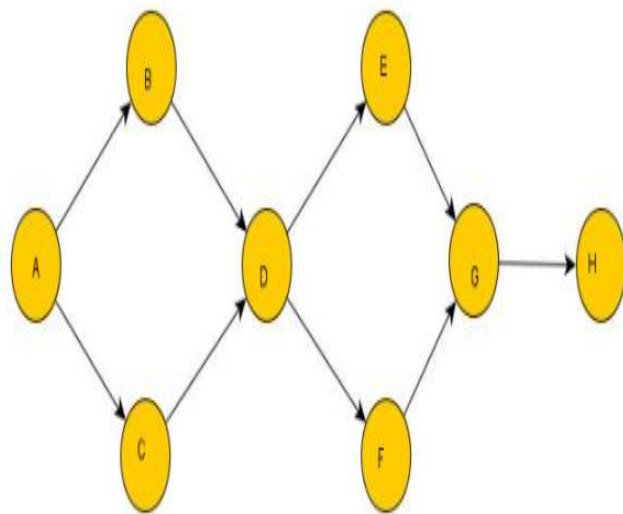


Figure 5.2.2

5.3 Timeline

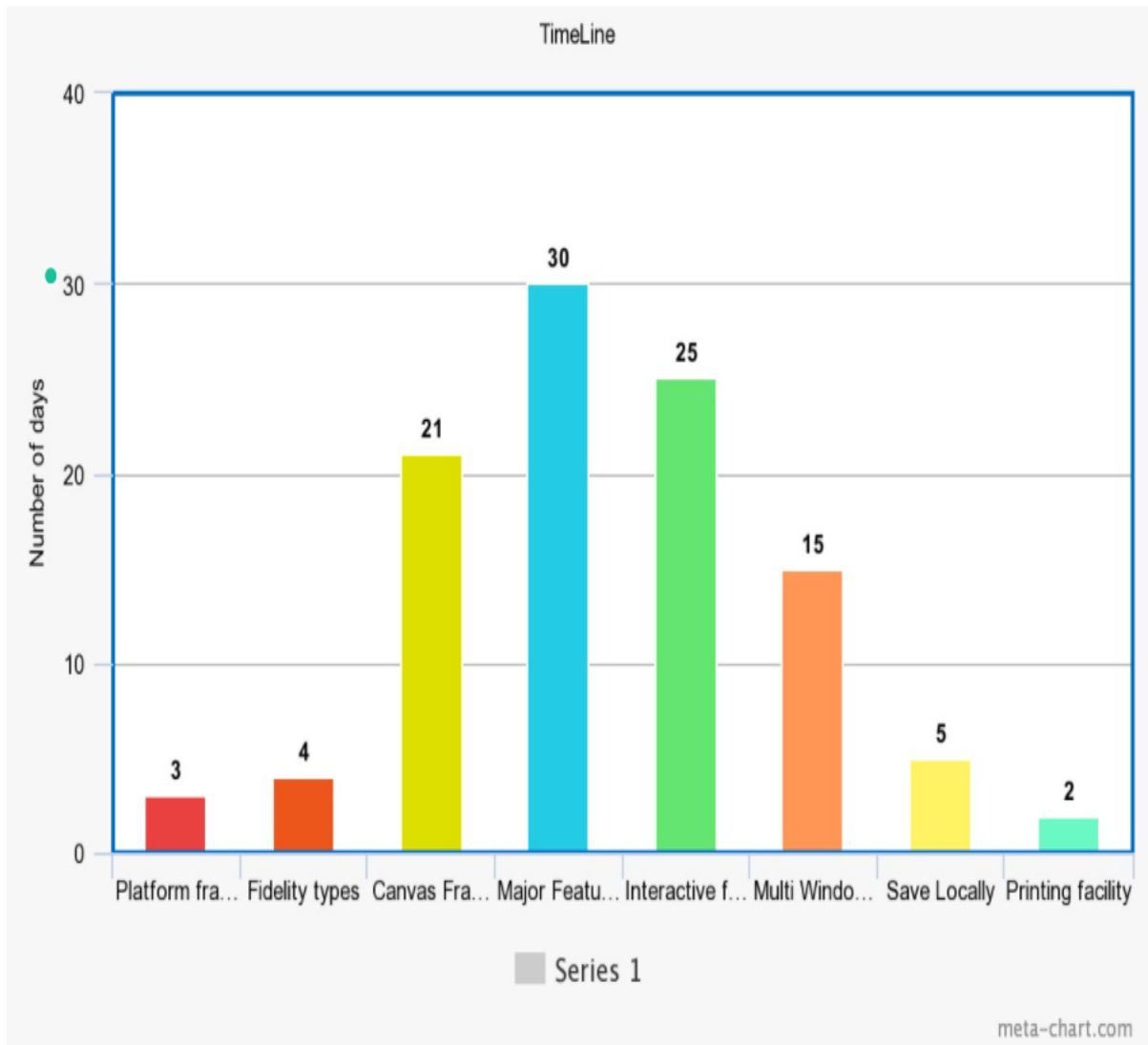


Figure 5.3.1

6. Project Demonstration

Blank Canvas

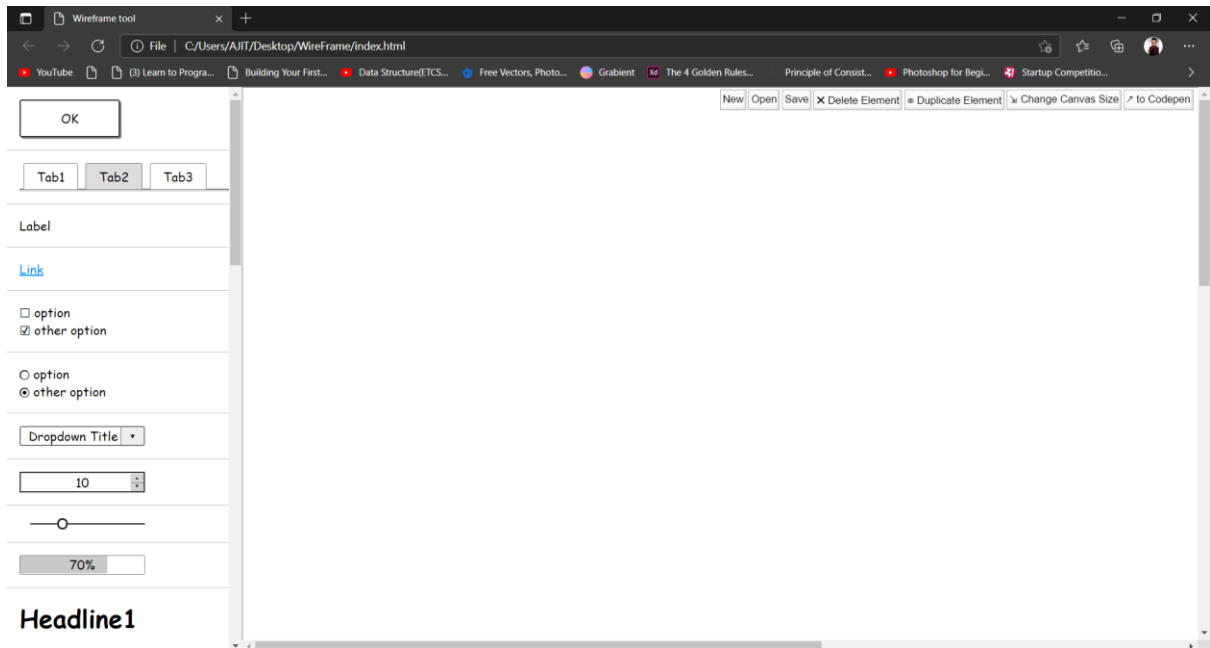


Figure 6.1

Side Bar



Figure 6.2

Icon Bar

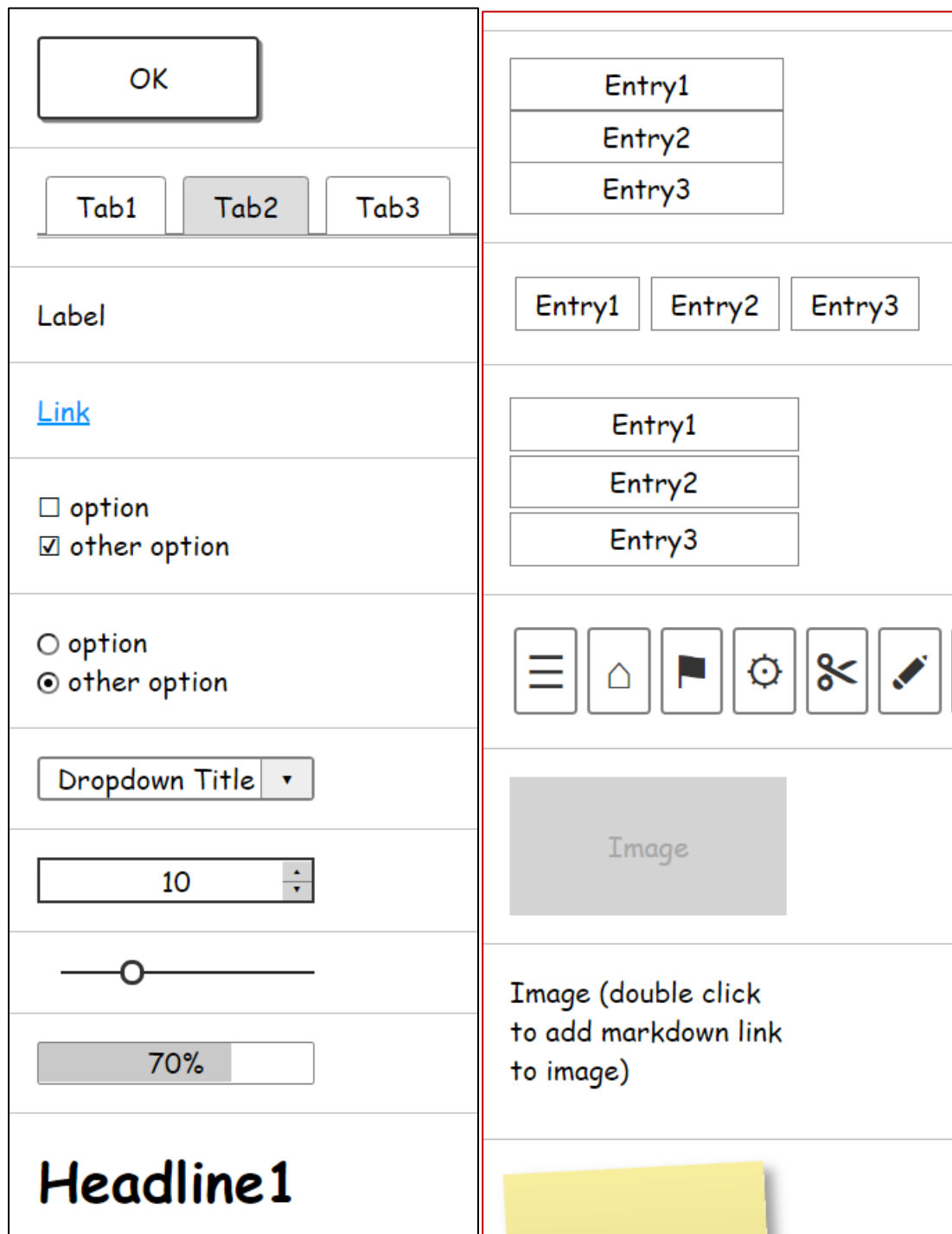


Figure 6.3

Elements dragged and dropped

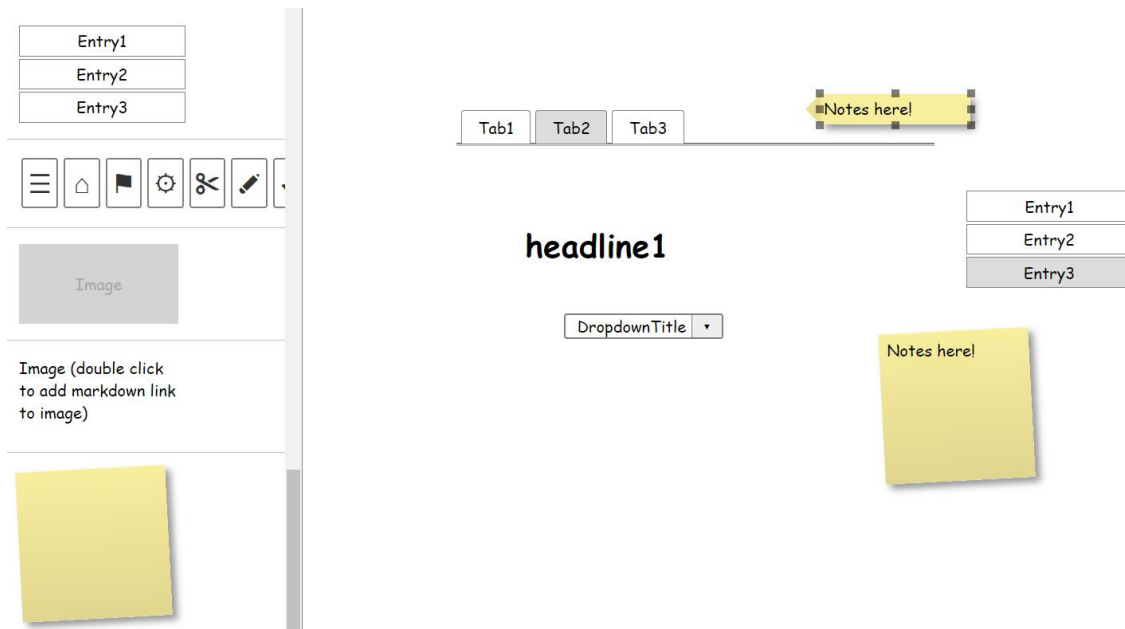


Figure 6.4

Sample window

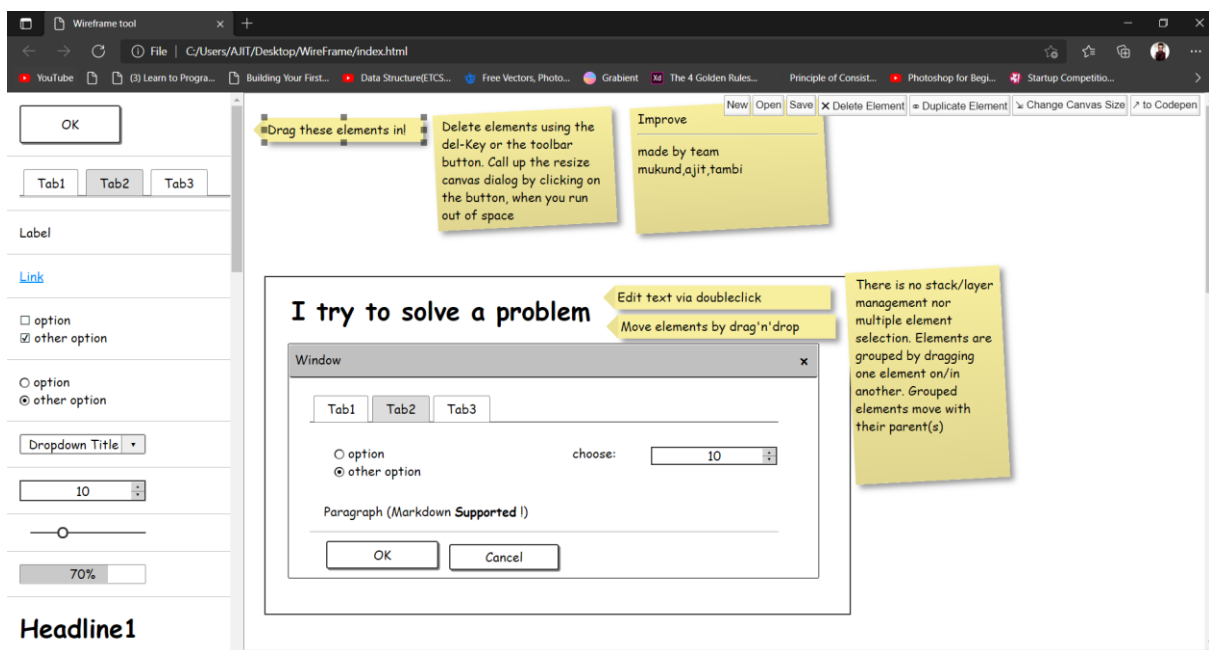


Figure 6.5

7. Cost Analysis / Result & Discussion (as applicable)

The past 3 months have been fulfilling and all our hard work resulted into what we call the WireFrame Tool. The outcome of the project – WireFrame Tool, is a tool that will be useful to a spectrum of users, UI/UX designers, students, teachers and many more that can use our tool to create a spectrum of websites and other useful application GUIs that will help to create a sample of the expected GUI that will be a part of the final application. Thus our tool helps cut down cost and time in the following ways –

- Helps save time as the user can make a sample GUI to show to the client easily instead of having to code the complete thing hence get the changes and once approved can actually make the real GUI.
- It helps saves money because the client can get a mock GUI at minimal charges instead of having to pay for the entire code and if impressed the client can go on to get the entire application made

We have successfully been able to implement the code of webpage WireFrame to a satisfactory extent. Using the tool you can perform the following functions –

- Make Webpage
- Adjust canvas size
- Add OK button and tables
- Edit all buttons
- Add notes for better presentation
- Drag and Drop various icons
- Save the Wireframe
- Delete an element added

We look forward to adding the following features as we proceed further –

- WireFrame of Android Phones
- WireFrame of iphones
- WireFrame of smart watches

We intend to turn this project into something useful. We have made a rudimentary frontend as we are new to the entire process and are still on a learning curve.