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Principles of User Interface Design

November 2021

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Group Member Responsibilities

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Chapter 2

Functionality Requirements

2.1 For all users

- This Project is a web editor platform where users can create files with the extension they want and write whatever they they want in it.
- Users can login or sign up if not member. This way, they can store their work in cloud .Thus,they can reach their work everywhere.
- Users are free to create whatever file type they want. They can create a java file and write code if they wish. Or they can create a text document and write an article.

2.2 Guest Users

- Guest users can create files.After the create file they can put something in it.If they want to have their files local storage they can download their work.
- Guest users can upload their files from their local storages.Thus,they can edit their files.
- Guest users can change the file name if they want.

2.3 Member Users

- In addition to the guest user functionality member users can store their work in cloud and they can access their work from anywhere with an internet connection.

Chapter 3

User Analysis

3.1 Know Your User

- There are two types of users called guest user and member user
- There is no language restrictions for users
- There is no gender distribution
- A novice user can use the site (starting the computer, opening the browser, entering the site and opening a code window) to write documents. Beyond that, it requires experience according to the user's purpose and field (e.g. java knowledge to write code)
- It has a multi-cultural structure. There is no clear distinction.
- Consists of users who can use computers and connect to the internet.
- There is no relation between users. There are differences between what they can do according to the user profile(Ie. Saving project).

3.1.1 Guest Users

- Mainly the age range is 15-50.
- Anyone can be a guest user. There is no restriction. The website is open to everyone.
-
- The purpose of using this website in general:

  - Put thoughts into writing
  - Storing texts digitally
  - Reducing paper usage,
  - Not having to carry the weight that increases as the number of physically written pages increases.
  - To be able to access their articles and documents quickly and systematically

- Education level: high school, undergraduate, graduate, master, PhD, PhD student(assistant)
- Motivation: Saving Time, save the world, health protection
- Guest user type is used by almost every website like jsFiddle, codePen.
- In addition to the computer experience as novice user, it is enough to know writing and reading to be able to use website

3.1.2 Member Users

- Mainly the age range is 15-50.
- Anyone can become a member, the only condition is to have an e-mail of their own.
- In addition to the guest user's purposes for using the site, the member can save their work to the cloud and access their work from anywhere with an internet connection.
- Education level: high school, undergraduate, graduate, master, PhD, PhD student(assistant)
- Motivation: Accessibility, Saving Time, save the world, health protection
- Member user type is a common concept in website environments. For instance, google documents, Microsoft 365, LinkedIn

Chapter 4

Task Analysis

4.1 General User Task Analysis

4.1.1 Goal: Create Document

Subtasks

1. Open website
2. Click to the create icon on the side bar
3. Write your file name with extension type
4. Click create button

Questions

- Where is the task performed?

  Can be anywhere where the internet is accessible. Generally, home, café .office or library.

- What is the environment like? Noisy, dirty, dangerous?

  Might be a little quiet.

- How often is the task performed?

  As long as the user wants

- What are its time or resource constrains?

  About 30 seconds.

- How is the task learned?

  By trying.

- What can go wrong? (Exceptions. Errors)

  User can create document with wrong name or with wrong extension format.

4.1.2 Goal: Search Document

Subtasks

1. Open website
2. Click to the search button
3. Write your keywords

Questions

- Where is the task performed?

  Can be anywhere where the internet is accessible. Generally, home, café .office or library.

- What is the environment like? Noisy, dirty, dangerous?

  Might be a little quiet.

- How often is the task performed?

  As long as the user wants

- What are its time or resource constrains?

  About 30 seconds.

- How is the task learned?

  By trying.

- What can go wrong? (Exceptions. Errors)

  User can make spelling mistake.

4.1.3 Goal: Delete Document

Subtasks

1. Open website

2. Click to the document that you want to delete
3. When clicked, the trash icon will appear to the right of the file name. Click to the trash icon
4. Confirm delete

Questions

- Where is the task performed?

  Can be anywhere where the internet is accessible. Generally, home, café .office or library.

- What is the environment like? Noisy, dirty, dangerous?

  Might be a little quiet.

- How often is the task performed?

  As long as the user wants.

- What are its time or resource constrains?

  About 30 seconds.

- How is the task learned?

  By trying.

- What can go wrong? (Exceptions. Errors)

  User can delete wrong file/document.

4.1.4 Goal: Rename Document

Subtasks

1. Open website
2. Click to the document that you want the rename
3. When clicked, The pencil icon will appear to the right of the file name. Click to the pencil icon
4. Write new document name
5. Click to the rename button

Questions

- Where is the task performed?

  Can be anywhere where the internet is accessible. Generally, home, café .office or library.

- What is the environment like? Noisy, dirty, dangerous?

  Might be a little quiet.

- How often is the task performed?

  As long as the user wants.

- What are its time or resource constrains?

  About 30 seconds.

- How is the task learned?

  By trying.

- What can go wrong? (Exceptions. Errors)

  User can make spelling mistake.

4.1.5 Goal: Switch Dark Mode

Subtasks

1. Open website
2. Click to the dark mode icon

Questions

- Where is the task performed?

  Can be anywhere where the internet is accessible. Generally, home, café .office or library.

- What is the environment like? Noisy, dirty, dangerous?

  Might be a little quiet.

- How often is the task performed?

  As long as the user wants.

- What are its time or resource constrains?

  About 30 seconds.

- How is the task learned?

  By trying.

- What can go wrong? (Exceptions. Errors)

  There could be internet connection problem

4.1.6 Goal: Download Document

Subtasks

1. Open website
2. Open the document that you want to download
3. Click to the download button on the top of the page

Questions

- Where is the task performed?

  Can be anywhere where the internet is accessible. Generally, home, café .office or library.

- What is the environment like? Noisy, dirty, dangerous?

  Might be a little quiet.

- How often is the task performed?

  As long as the user wants.

- What are its time or resource constrains?

  About 30 seconds.

- How is the task learned?

  By trying.

- What can go wrong? (Exceptions. Errors)

  There could be internet connection problem. User can choose wrong document.

4.1.7 Goal: Upload Document

Subtasks

1. Open website

2. Click to upload button
3. Choose the document that you want to upload
4. Click to the ok button

Questions

- Where is the task performed?

  Can be anywhere where the internet is accessible. Generally, home, café .office or library.

- What is the environment like? Noisy, dirty, dangerous?

  Might be a little quiet.

- How often is the task performed?

  As long as the user wants.

- What are its time or resource constrains?

  About 30 seconds.

- How is the task learned?

  By trying.

- What can go wrong? (Exceptions. Errors)

  There could be internet connection problem. User can choose wrong document. User can try to upload more than one document at once.

4.1.8 Goal: Save Document

Subtasks

1. Open website
2. Click to document that you want to edit
3. Type your writing
4. Click to the save changes button

Questions

- Where is the task performed?

  Can be anywhere where the internet is accessible. Generally, home, café .office or library.

- What is the environment like? Noisy, dirty, dangerous?

  Might be a little quiet.

- How often is the task performed?

  As long as the user wants.

- What are its time or resource constrains?

  About 30 seconds.

- How is the task learned?

  By trying.

- What can go wrong? (Exceptions. Errors)

  User can click to the button by mistake

4.2 Guest User Task Analysis

4.2.1 Goal: Signup

Subtasks

1. Open website
2. Click to the profile icon
3. Click to the sign up link
4. Fill the related inputs
5. Click to the sign up button

Preconditions Must know: email address, name surname,

Questions

- Where is the task performed?

  Can be anywhere where the internet is accessible. Generally, home, café .office or library.

- What is the environment like? Noisy, dirty, dangerous?

  Might be a little quiet.

- How often is the task performed?

  As long as the user wants.

- What are its time or resource constrains?

  About 30 seconds.

- How is the task learned?

  By trying.

- What can go wrong? (Exceptions. Errors)

  wrong email address can be entered

  invalid password can be entered

  passwords may not match

4.3 Member User Task Analysis

4.3.1 Goal: Login

Subtasks

1. Open website
2. Click to the profile icon
3. Type email and password
4. Click to the log in button

Preconditions Must know: email address, password

Questions

- Where is the task performed?

  Can be anywhere where the internet is accessible. Generally, home, café .office or library.

- What is the environment like? Noisy, dirty, dangerous?

  Might be a little quiet.

- How often is the task performed?

  As long as the user wants.

- What are its time or resource constrains?

  About 30 seconds.

- How is the task learned?

  By trying.

- What can go wrong? (Exceptions. Errors)

  wrong email address can be entered

  wrong password can be entered

4.3.2 Goal: Change Password

Subtasks

1. Open website
2. Click to the profile icon
3. Type email and password
4. Click to the log in button
5. Click to the profile icon again
6. Click to the change password filed
7. Type your current password
8. Type your new password and write it again

Preconditions Must know: email address, password

Questions

- Where is the task performed?

  Can be anywhere where the internet is accessible. Generally, home, café .office or library.

- What is the environment like? Noisy, dirty, dangerous?

  Might be a little quiet.

- How often is the task performed?

  As long as the user wants.

- What are its time or resource constrains?

  About 30 seconds.

- How is the task learned?

  By trying.

- What can go wrong? (Exceptions. Errors)

  wrong email address can be entered

  wrong password can be entered

  invalid password can be entered

  passwords may not match

4.3.3 Goal: Forgot Password

Subtasks

1. Open website
2. Click to the profile icon
3. Click to the forgot password field
4. Type your membership email address
5. Click to the send button

Preconditions Must know: email address

Questions

- Where is the task performed?

  Can be anywhere where the internet is accessible. Generally, home, café .office or library.

- What is the environment like? Noisy, dirty, dangerous?

  Might be a little quiet.

- How often is the task performed?

  As long as the user wants.

- What are its time or resource constrains?

  About 30 seconds.

- How is the task learned?

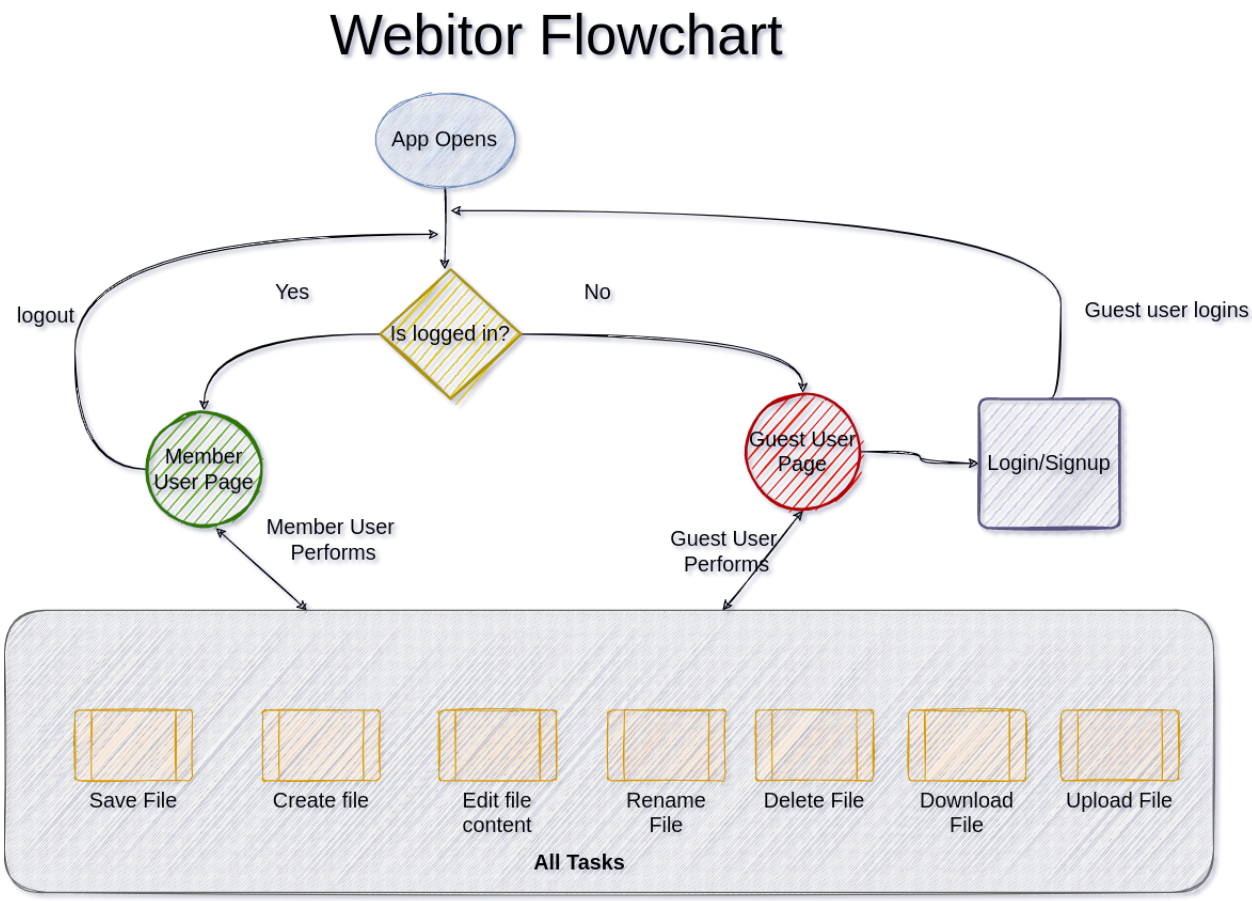
  By trying.

- What can go wrong? (Exceptions. Errors)

  Wrong email address can be entered .

Chapter 5

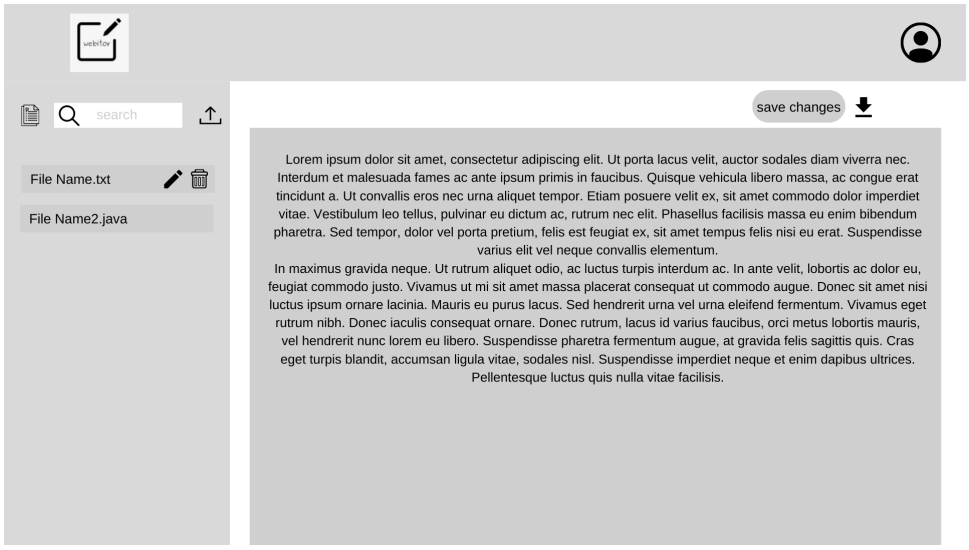
Flowchart

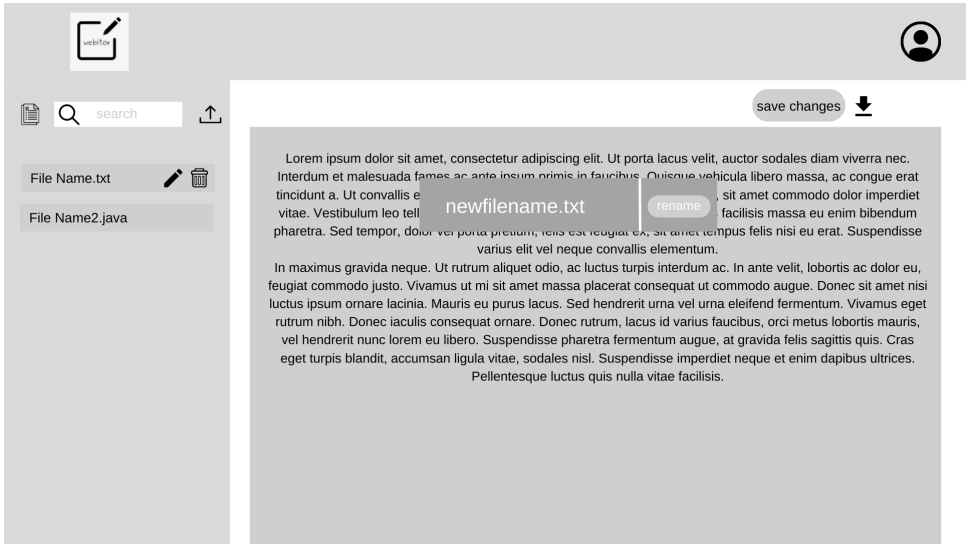


Chapter 6

Prototypes(Low and High Fidelity)

6.1 Prototypes High Fidelity




search
File Name.txt
File Name2.java
save changes
newfilename.txt
rename
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut porta lacus velit, auctor sodales diam viverra nec. Interdum et malesuada fames ac ante ipsum primis in faucibus. Quisque vehicula libero massa, ac congue erat tincidunt a. Ut convallis eros nec urna aliquet tempor. Etiam posuere velit ex, sit amet commodo dolor imperdiet vitae. Vestibulum leo tellus, pulvinar eu dictum ac, rutrum nec elit. Phasellus facilisis massa eu enim bibendum pharetra. Sed tempor, dolor vel porta pretium, felis est feugiat ex, sit amet tempus felis nisi eu erat. Suspendisse varius elit vel neque convallis elementum.
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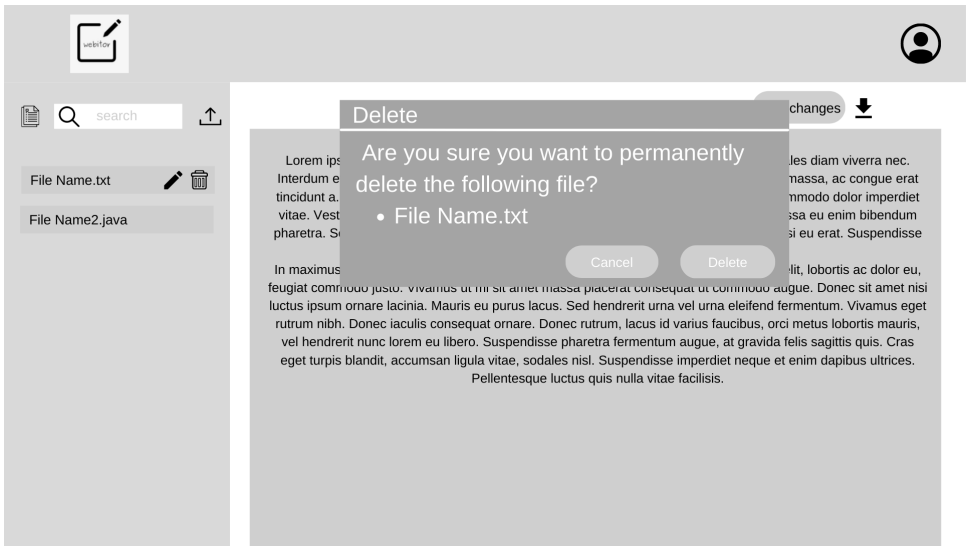
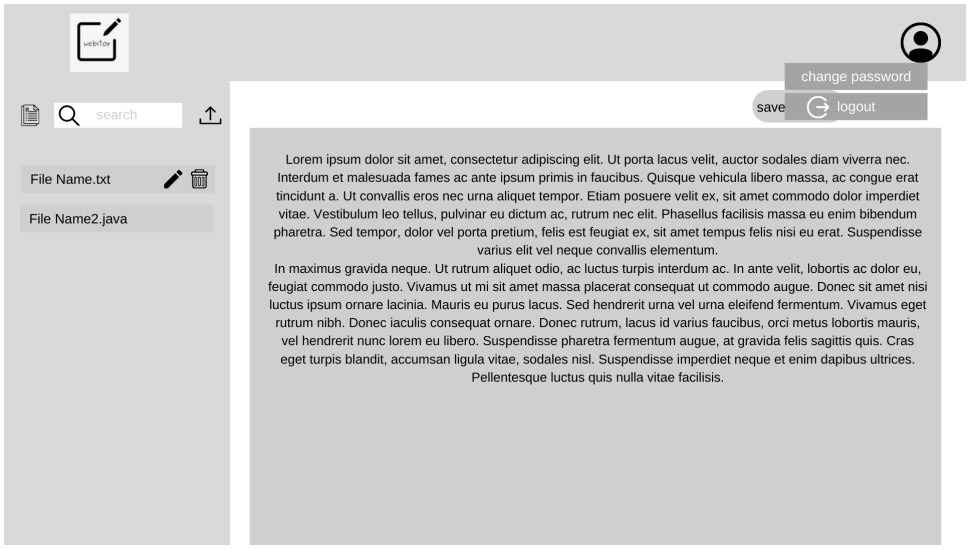

search
File Name.txt
File Name2.java
Delete
Are you sure you want to permanently delete the following file?
• File Name.txt
Cancel
Delete


search
File Name.txt
File Name2.java
change password
logout
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut porta lacus velit, auctor sodales diam viverra nec. Interdum et malesuada fames ac ante ipsum primis in faucibus. Quisque vehicula libero massa, ac congue erat tincidunt a. Ut convallis eros nec urna aliquet tempor. Etiam posuere velit ex, sit amet commodo dolor imperdiet vitae. Vestibulum leo tellus, pulvinar eu dictum ac, rutrum nec elit. Phasellus facilisis massa eu enim bibendum pharetra. Sed tempor, dolor vel porta pretium, felis est feugiat ex, sit amet tempus felis nisi eu erat. Suspendisse varius elit vel neque convallis elementum.
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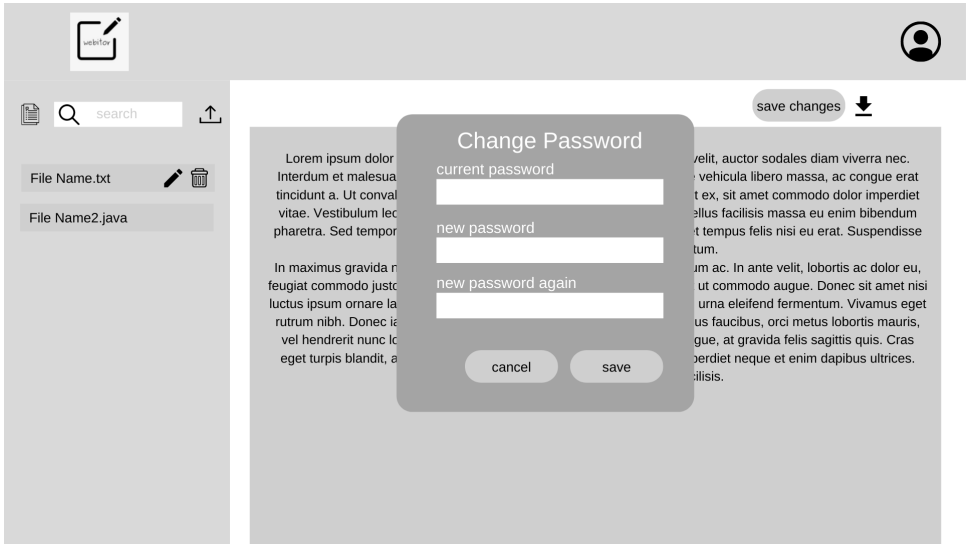
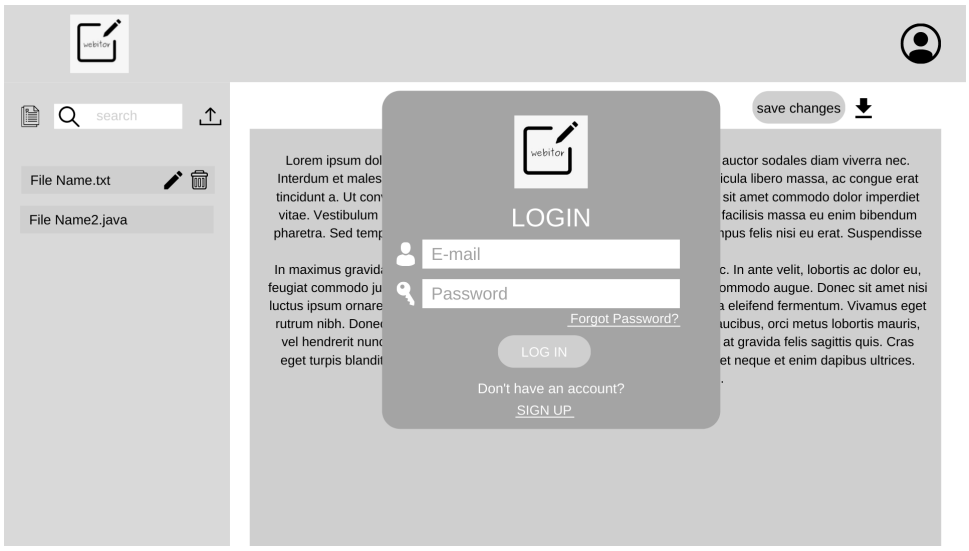
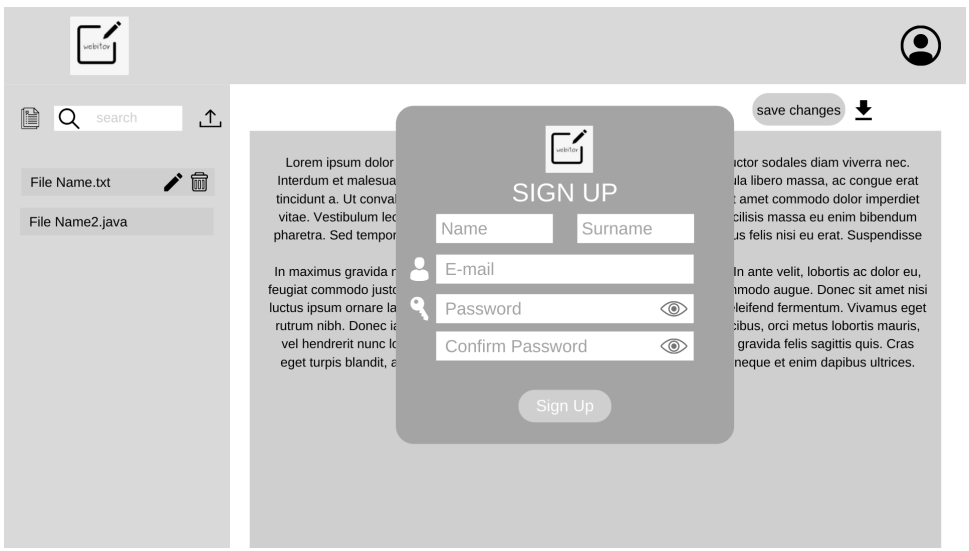
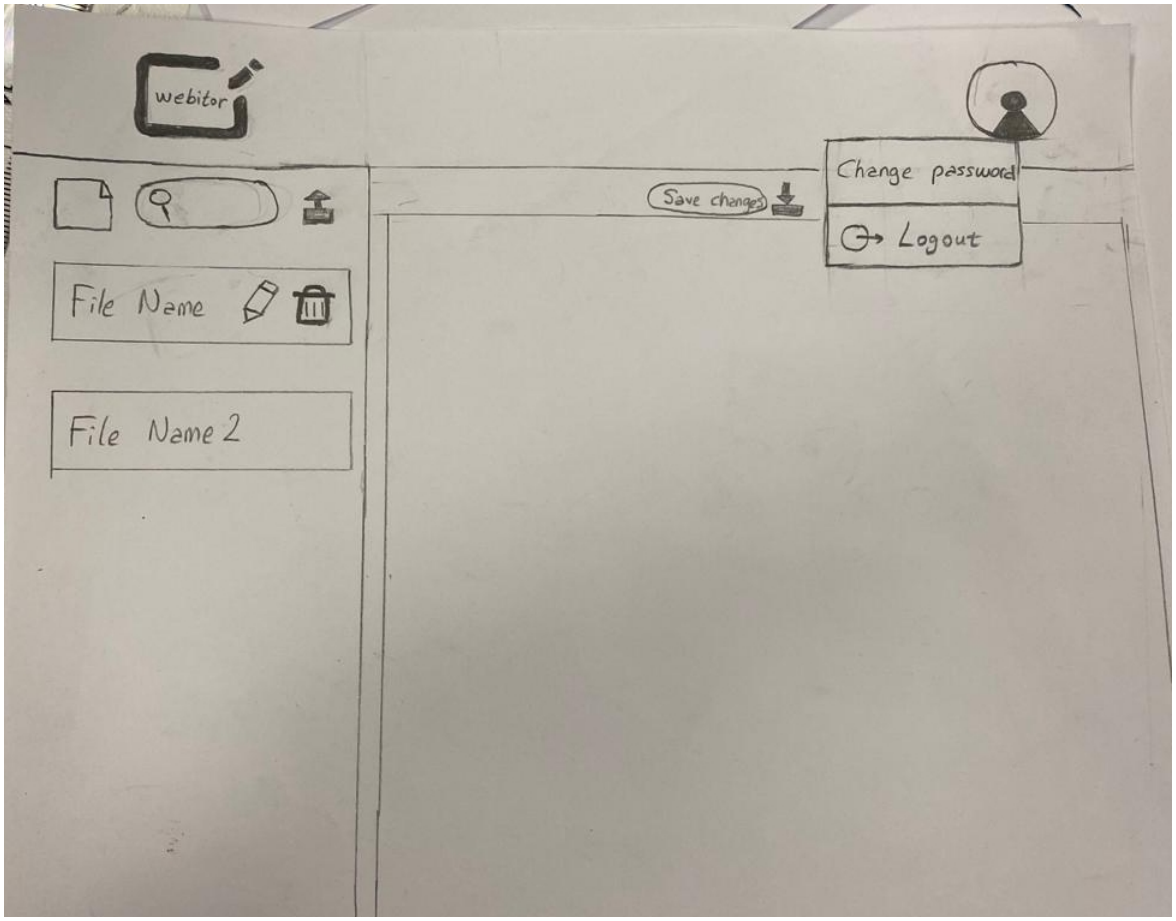


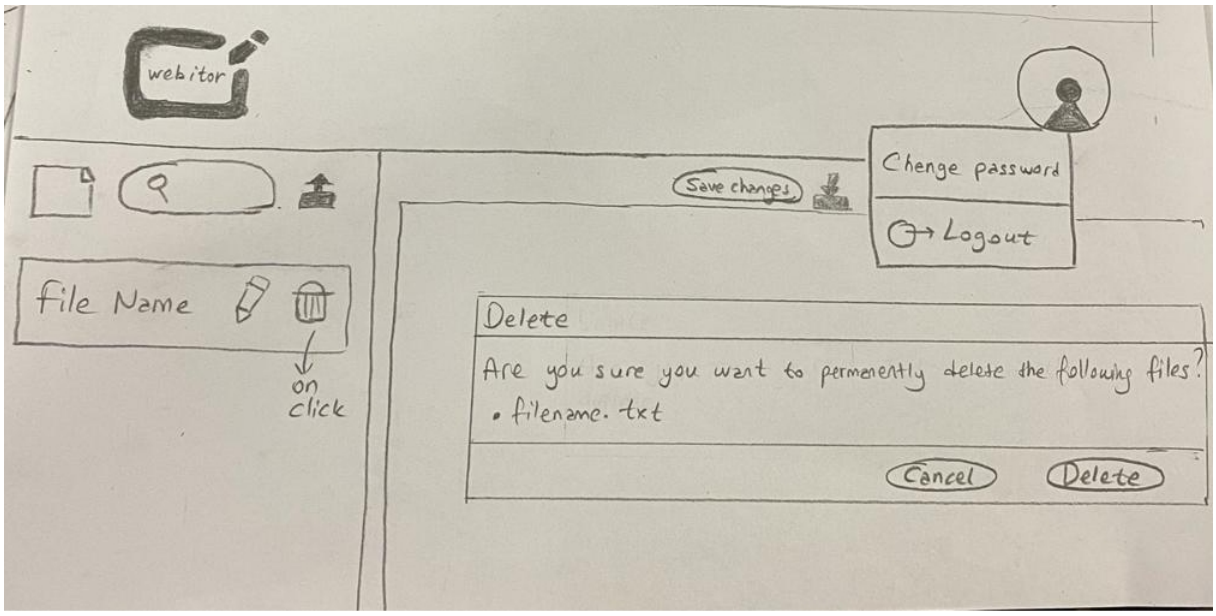


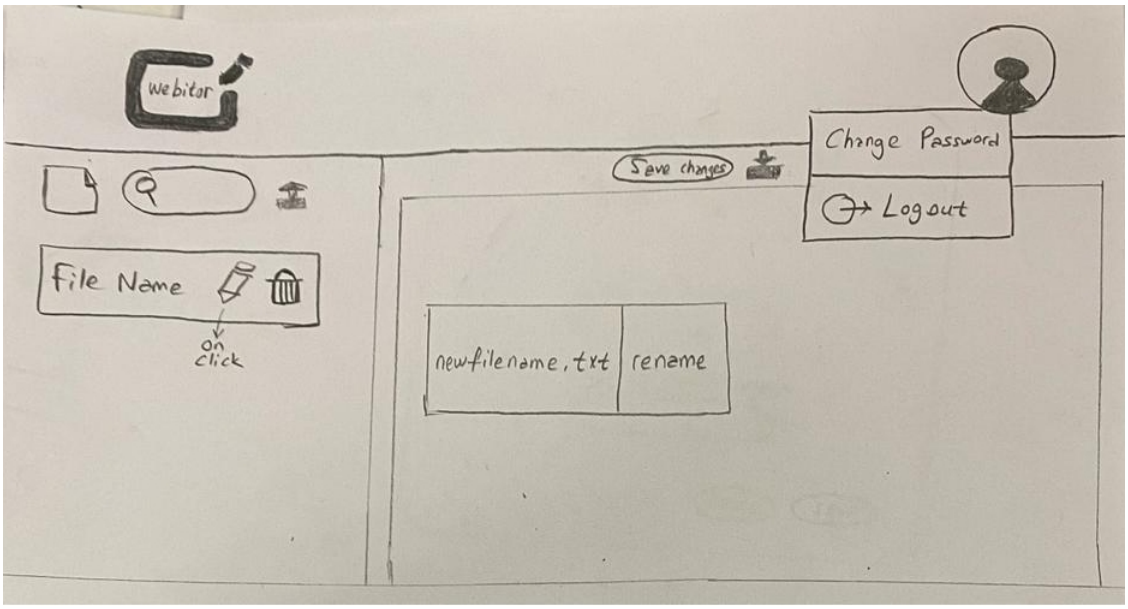


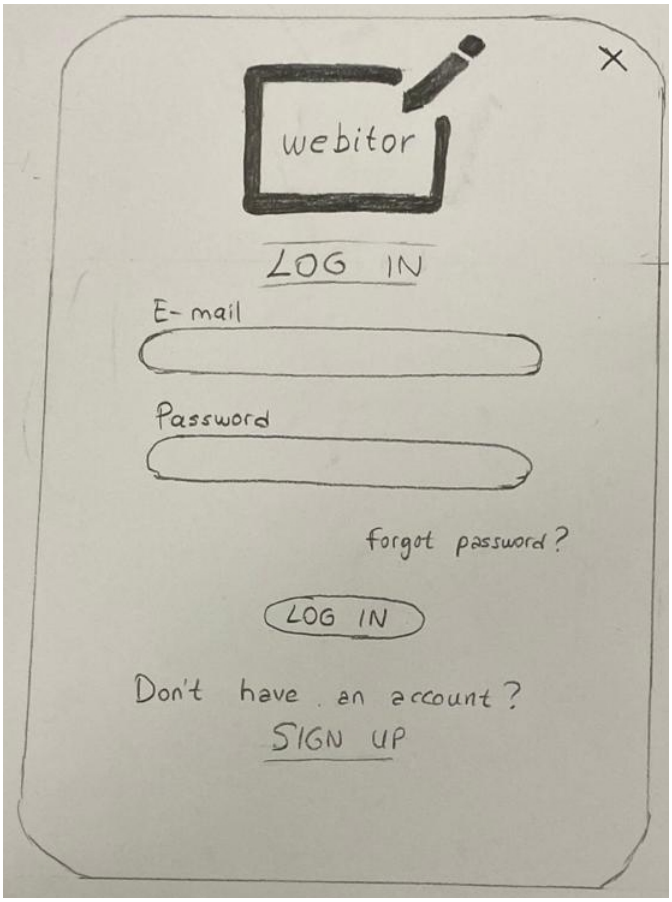
Live Presentation

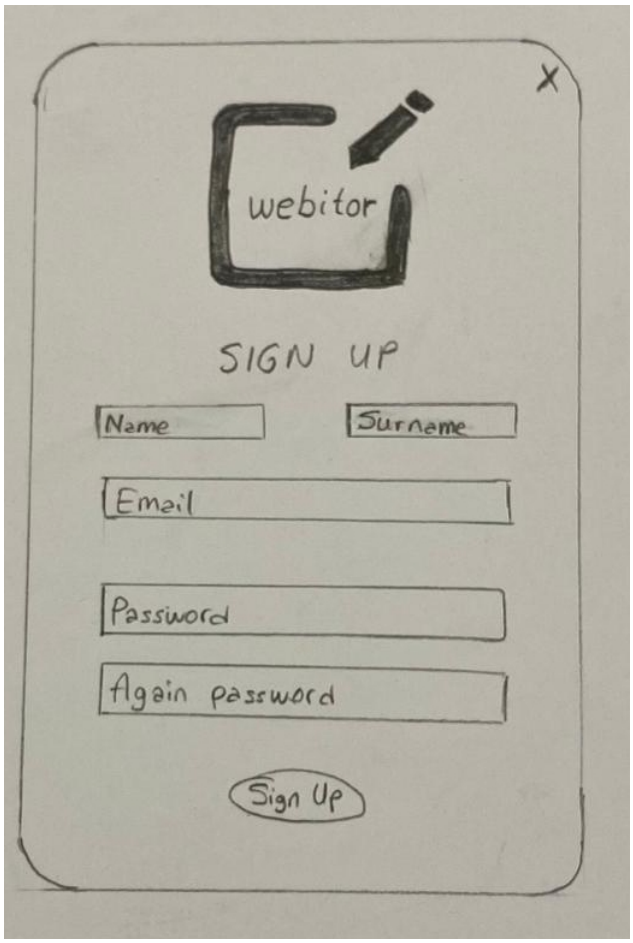
6.2 Prototypes Low Fidelity)

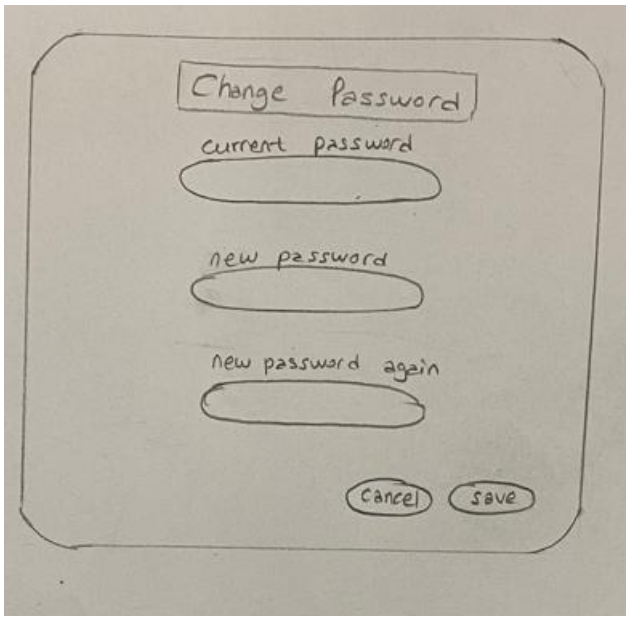





webitor
Change Password
Save changes
Logout
File Name
on click
newfilename.txt
rename


webitor
LOG IN
E-mail
Password
forgot password?
LOG IN
Don't have an account?
SIGN UP


webitor
SIGN UP
Name
Surname
Email
Password
Again password
Sign Up


Change Password
current password
new password
new password again
cancel
save

Chapter 7

Predictive Evaluation

Predictive Evaluation of the main operations of Webitor are listed below:

1. Login

   - M [decide to logout]
   - P [point profile button]
   - BB [click profile button](dropdown windows opens)
   - P [point logout button]
   - BB [click logout button]

   Total: M + 2xP + Bx4 = 3.80 sec. **Note:** Cursor will be ready to write email when modal has been opened. So no need to point and mouse click.

2. Logout

   - M [decide to logout]
   - P [point profile button]
   - BB [click profile button](dropdown windows opens)
   - P [point logout button]
   - BB [click logout button]

   Total: M + 2xP + Bx4 = 3.80 sec.

3. Create New File

   - M [decide to create file]
   - P [point create file button]
   - BB [click create file button]
   - H [mouse to keyboard]
   - M [decide filename]
   - Kx12 [type filename with extension(assumed user create will this file "filename.txt")]
   - H [keyboard to mouse]
   - P [point to approve filename button]
   - BB [click to approve filename button]

   Total: Mx2 + Px2 + Kx12 + Bx4 + Hx2 = 9.16 sec

4. Download file(file that user is currently editing, 'this' file)

   - M [decide to this download file]
   - P [point download this file button]
   - BB [click download this file button]

   Total: M + P + Bx2 = 2.50 sec.

5. Upload file

   - M [decide to upload file]
   - P [point upload file button]
   - BB [click upload file button]
   - P [point file to select(it is assumed that the file is exist in opened directory]
   - BBBB [Double click to select file]
   - P [point approve selected file button]
   - BB [click approve selected file button]

Total: M + Px3 + Bx8 = 5.30 sec.

6. Rename file(file that user is currently editing, 'this' file)
    - M [decide to rename this file]
    - P [point rename this file button]
    - BB [click rename this file button]
    - M [decide new filename]
    - H [mouse to keyboard]
    - Kx12 [type new filename with extension(assumed user will be update filename as "filename.txt")]
    - H [keyboard to mouse]
    - P [point update name button]
    - BB [click update name button]

    Total: Mx2 + Px2 + Bx4 + Hx2 + Kx12 = 9.16 sec.

7. Save file
    - M [decide to save this file]
    - P [point save this file button]
    - BB [click save this file button]

    Total: M + P + Bx2 = 2.50 sec.

Chapter 8

Usability Inspection

We came together as team members and linked all the pages of our wire-frame works, which we had previously done with the division of labor, on Pencil application, and created realistic interfaces. Later, one of our teammates experienced this interface design objectively. As a result of this experience, we made some changes in our design:

1. Firstly, we had designed login operations in separate login page. Then we decided to make it only pop-up, not a separate page in order to reduce our KLM usage.
2. - At first, we had thought that it would be good to have a setting page. Then we decided to do it with a hamburger menu in order to reduce separate pages and KLM usage as well.
3. In our first design, there was only one mode, than we've considered adding dark mode.
4. In order to reduce the workload, we designed the "Log out" function in the hamburger menu that contains settings.

Chapter 9

Usability Testing

9.1 Test Participants

Participant is one our friend who is in another user interface design project. Male and 21 years old.

Tasks:

1. Login / sign up
2. Create new document
3. Edit documents
4. Upload documents
5. Rename documents
6. Save document
7. Logout

We determined the participant the tasks to be completed. We took care to choose the tasks for daily use. We asked him to take steps to fulfill these tasks in our design, and we tested our design on them. First, we showed them our design one by one and asked them to produce the tasks mentioned in the table above. After the tasks were completed, interview questions started. These questions were asked in a semi-structured way; It is about visual design, page navigation, actuality and general evaluation.

9.2 User Feedback

9.2.1 Positive Feedbacks

- He compared the design of our site to other professional sites related to the purpose of our site and commented that our site is also very professional.
- "Is the size of the buttons, icons and texts in the interface design sufficient?"

  He stated that he liked the fonts because the page layout was generally compatible with each other and formed a unity. The user found the texts legible, but suggested that flexibility could be added, perhaps for users with eye problems, such as enlarging the text further.
- "Does the interface design relax or strain the eye?"

  He stated that our user design does not strain the eyes and the fact that everything is easily accessible also indicates the effect on his eyes.
- "What are the elements of interface design that comfort the eyes? Page Layout, Typographic Harmony... "

  The user who found our design simple and minimalist explained that this is an element that increases the legibility. He liked the page layout and found the font sizes good in terms of typographic harmony.
- "Are user interfaces useful?"

  Our interface design was found very useful.
- "Ease of use of the site's interface? Did you find what you were looking for on the site easily?"

  The user mentioned that he could easily find the functions he was looking for on the site."

9.2.2 Negative Feedbacks

- "Is the visual arrangement created in the interface design, the ratio and proportion of visual elements to each other successful? How did you find the visual design? "
  par Although the user user found the visual design generally successful, he did not find it

proportional to have a little are to write something. He suggested that this area should take up bigger space.

- ”Is the size of the buttons, icons and texts in the interface design sufficient?”

  Although the user generally says ’I found it sufficient, I have no difficulty seeing it’, he returned that if the “delete document” is a little larger, it may be more interesting.