



**Daffodil**  
*International*  
**University**

## **Assignment On** **Software Planning & Management**

**Course Title : Software Project-I**  
**Course Code : CSE136**

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## **SDLC**

**Software Name :** Chrome Web Browser .

**Job of Application(tofayel-3053) :** Browsing Web Pages And Running Web Application .

**Job of Application (Utsha-3552):** Browser Extension and Application.

**Job of Application (sobuj-3575) :** Google Chrome browser is an open source program for accessing the World Wide Web and running Web-based applications.

**Job of Application (Minhajul-3557):** Google Chrome is a cross-platform web browser developed by Google. It was first released in 2008 for Microsoft Windows, and was later ported to Linux, macOS, iOS, and Android where it is the default browser built into the OS. The browser is also the main component of Chrome OS, where it serves as the platform for web applications.

**Which Problem Solving Digitally (tofayel--3053):** We solve complexity of online surfing and we will give online security via our browser .

**Which Problem Solving Digitally(Utsha-3552) :** It supports video conference apps. It makes a virtual background and can be added to google slides.

**Which Problem Solving Digitally(Minhajul-3557):** The Chrome Web Store lets you publish free or paid apps where Google Chrome users can easily find them. This FAQ answers many common questions about the Chrome Web Store. If you don't find your answer here, check the extension hosting changes FAQs, the general extension FAQs, or the chromium-apps group.

**Which Problem solving Digitally (sobuj-3575) :**

The problems with Chrome software are:

- \* Running the Chrome software takes up a lot of space in memory.

- \* This fix often works when Chrome runs slowly. Sometimes, the program consumes too much RAM causing it to slow to a crawl. A restart frees up memory.

- \* Extensions are often the culprit when a glitch occurs.

# problem solving with digitally :

- \* It takes less space in memory to arrange that.

- \* Chrome software works much slower, Work should be done at a faster pace.

- \* Personal identities should be more difficult.

- \* The personal identities of all people should be collected in a more difficult

way.

**Application Features(tofayel-3053)** : V8 JIT compiler , Fully Support all web Framework , Support web assembly , High performance streaming and casting ability .

**Application Features(Utsha-3552)** : The Browser by Google, Overview, Google address bar, Password check, Sync, Dark mode, Tabs, Articles for you, Extensions ,Incognito Mode, Chrome Calendar Extension.

**Mission (tofayel-3053):** One Web browser can handle Every Web Application .

**Mission(sobuj-3575):**. A mission statement should explain to stakeholders why they should support the organization by making clear what important role or purpose the organization plays in society. The firm continues to serve its mission through various strategic actions, including offering its Internet browser Google Chrome to the online community, providing free email via its Email service, and making books available online for browsing.

**Mission (Utsha-3552):** Our web browser has the smarts and speed that you need to do, create and explore online.

**Vision(tofayel-3053)** : Our vision is a secure browser that people stay safe in online .

**Vision(sobuj-3575)** :Good business leaders create a vision, articulate the vision, passionately own the vision, and relentlessly drive it to completion

**Vision(Utsha-3552)** : Our application vision is to provide proper and tight security so that our users can access our application seamlessly .

**Features, Mission, Vision(Minhajul-3557):** Google LLC's (formerly Google, Inc.) mission statement and vision statement reflect the powerful position of the company in the global market. Founded in 1998, the company follows its corporate mission and corporate vision, leading to its current position as one of

the most valuable brands in the world. Even after its reorganization leading to the company being a subsidiary of Alphabet, Inc., such brand value remains a major strength, as shown in the SWOT Analysis of Google LLC. The company's mission statement defines the strategies of the business, such as the development of new products. In a similar way, the company's vision statement pushes the organization to achieve new heights, such as through rapid innovation. The success of Google is directly connected to business efforts to fulfill its corporate mission and corporate vision. Such fulfillment supports the company's growth in the computer technology (software and hardware), cloud computing, consumer electronics, and digital content distribution industries.

**Requirement Analysis(tofayel-3053) :** In this analysis we focus on user needs and Functionality of software .

**Functional Requirement (tofayel-3053):**

- 1/ password manager .
- 2/ Incognito tab and multiple tab
- 3/Download manager
- 4/ Bookmarks .
- 5/ Extension Manager .
- 6/ Multiple User .
- 7/ Developers tools
- 8/Backup and Restore system .
- 9/History Manager .

**Non-Functional Requirement(tofayel-3053) :**

- 1/ Anti cookie hijacking .
- 2/Anonymous data transfer .
- 3/ Good casting quality Without Buffer .
- 4/ Highly Scalable browsing experience
- 5/ Password Encryption

**Requirements Analysis(sobuj-3575) :** Requirements Analysis is critical to the success or failure of a systems or software project. The requirements should be documented, actionable, measurable, testable, traceable, related to identified business needs or opportunities, and defined to a level of detail sufficient for system design.

requirement analysis of that software:

- \* The requirements of all software are many.
- \* With the help of chrome software, we can get the things we need on the internet in a very short time.
- \* With the Chrome software we can do a lot of things together on the Internet.

**Requirements Analysis(Minhajul-3557):** Think of requirements analysis as a statement of the problem. This is in contrast with design, which is a statement of the proposed solution.

The distinction is not always crystal clear, of course. For instance, a requirements analysis may contain a screenshot as a way of illustrating what needs to be done; the design may also contain a screenshot, illustrating how the task should be implemented.

Another distinction, perhaps, is that the primary audience of a requirements analysis is the user or customer: so it should be written in language comprehensible to them, stating the problem in ways they can understand (and, if it is a formal business process, sign off.) In contrast, the design specification's primary audience are programmers who turn that design into working code.

When you work as a one-man band, you need to wear the appropriate hat. You wear your analyst's hat when you interview your user or customer and prepare the requirements statement. You wear your system architect's hat when you turn that into a design specification.

**Requirement Analysis(Utsha-3552):** Requirements analysis focuses on the tasks that determine the needs or conditions to meet the new or altered product or project, taking account of the possibly conflicting requirements of the various stakeholders, analyzing, documenting, validating and managing software or system requirements.

**Function requirement (sobuj-3575):** are features that allow the system to function as it was intended. Put another way, if the functional requirements are not met, the system will not work. Functional requirements are product features and focus on user requirements.

Functional Requirements:

- \* Google Chrome is gaining many new users by the day, making it one of the most popular web browsers in the world.
- \* Google Chrome is currently battling it out with Internet Explorer and Mozilla Firefox for top spots and depending on the day either of them can be in the lead.
- \* Google Chrome is a very secure web browser that periodically retrieves updates for phishing and malware.

### **Functional Requirement (Minhajul-3557):**

- Ø Authentication of a user when he/she tries to log into the system.
- Ø System shutdown in the case of a cyber attack.
- Ø Verification email is sent to the user whenever he/she registers for the first time on some software system.

**Functional Requirement (Utsha-3552):** Functional requirements are product features or functions that developers must implement to enable users to accomplish their tasks. So, it's important to make them clear both for the development team and the stakeholders. Generally, functional requirements describe system behavior under specific conditions.

- Password save for further log in .
- History manager
- Setting bookmarks as user choose .
- Zooming system of window .
- Multiple themes

### **Non-functional Requirement :(sobuj -3575):**

A non-functional requirement is a specification that describes the system's operation capabilities and constraints that enhance its functionality..

- \* The list of them also varies depending on the source
- \* Heavy back-end processes may take up to 10 seconds to deliver and render the page
- \* Consider a central notification solution.
- Consider opening a workflow task in a central system for tracking and follow-up purposes.

### **Non-Functional Requirement (Minhajul-3557) :**

- Ø Emails should be sent with a latency of no greater than 12 hours.
- Ø Each request should be processed within 10 seconds.
- Ø The site should load in 3 seconds when the number of simultaneous users are > 10000

**Non-Functional Requirement (Utsha-3552) :** A non-functional requirement is a specification that describes the system's operation capabilities and constraints that enhance its functionality. These may be speed, security, reliability, ability, portability, certification, scalability, efficiency, open source etc.

- Easy to use
- available in different languages.
- High download speed
- data security
- Highest workloads.
- Fast errors checking

### **Requirement Engineering :**

#### **Requirements Elicitation(tofayel-3053):**

- 1/User needs a Search bar with multiple search engines .
- 2/A home page for visualizing bookmarks , Most visited sites and recently visited sites .
- 3/Settings Menu Bar change system preferences .
- 4/Adding bookmark option on title bar .
- 5/Site Reload option .
- 6/Page back and forth option .
- 7/ Websites system access permission .

**Engineering process of that software(sobuj-3575):** Release engineers define best practices for using our tools in order to make sure projects are released using consistent and repeatable methodologies. Our best practices cover all elements of the release process. Examples include compiler flags, formats for build identification tags, and required steps during a build. Making sure that our

tools behave correctly by default and are adequately documented makes it easy for teams to stay focused on features and users, rather than spending time reinventing the wheel (poorly) when it comes to releasing software.

- \* A natural inclination towards writing code can lead to implementation beginning before the requirements analysis is complete, potentially resulting in code changes to meet actual requirements once they are known.

- \* Technical personnel and end-users may have different vocabularies. Consequently, they may wrongly believe they are in perfect agreement until the finished product is supplied.

- \* Engineers and developers may try to make the requirements fit an existing system or model, rather than develop a system specific to the needs of the client.

## **Requirement Engineering (Minhajul-3557) :**

**Requirement Elicitation(Minhajul-3557):** In 1997, Sommerville and Sawyer suggested a set of guidelines for requirements elicitation, to address concerns such as those identified by Christel and Kang:

Assess the business and technical feasibility for the proposed system

Identify the people who will help specify requirements and understand their organizational bias

Define the technical environment (e.g., computing architecture, operating system, telecommunications needs) into which the system or product will be placed

Identify "domain constraints" (i.e., characteristics of the business environment specific to the application domain) that limit the functionality or performance of the system or product to be built

Define one or more requirements elicitation methods (e.g., interviews, focus groups, team meetings)

Solicit participation from many people so that requirements are defined from different points of view; be sure to identify the rationale for each requirement that is recorded

Identify ambiguous requirements as candidates for prototyping

Create usage scenarios or use cases to help customers/users better identify key requirements.



## **Requirement Engineering (Utsha-3552)**

**Requirement Elicitation(Utsha-3552):** Requirements elicitation is the practice of researching and discovering the requirements of a system from users, customers, and other stakeholders.

- Multiple tab
- Multiple bookmarks
- Incognito Mode
- Searching bar
- Reload option
- Shortcut and remove option
- Different themes
- Rating our software
- Feedback message

**Requirements specification(tofayel-3053) :** For high speed browsing you need native machine language. We use c and c++ language to develop this software . We need fastests javascript compiling speed ,.so we use V8 compiler for this browser

**Requirements specification(sobuj-3575) :**Google Chrome will run on computers equipped with a Pentium 4 processor or higher, which encompasses most machines manufactured since 2001. The computer must have approximately 100MB of free hard drive space and 128MB of RAM. The oldest version of Windows supported by Chrome is Windows XP with Service Pack 2 installed.

**Requirements specification(Minhajul-3557)** :To use each software, you have to learn a high-level language.But no powerful language has been used since then.So it can be said that this software will be available for everyone to use.

**Requirements specification(Utsha-3552)** : Google Chrome will run on computers equipped with a Pentium 4 processor or higher, which encompasses most machines manufactured since 2001.The computer must have approximately 100MB of free hard drive space and 128MB of RAM. The oldest version of Windows supported by Chrome is Windows XP with Service Pack 2 installed.

**Requirements verification and validation(tofayel-3053):** In every validation or verification software fulfill every scope of smooth using .We test every part of software . we tes security and every feature of software .This software fulfills our customers' needs . In QA testing it has no bugs and is very fast . it passes in every testing .

**Requirements verification and validation (Utsha-3552):** Our application is tested by qualified QA enginners .So,there are no bugs in our software .Users can easily use it without any troubles . We fulfill every recruitment validation and varification .

**Requirements verification and validation (Minhajul-3557):**Our software is highly verifiable software.As long as there is no problem with our software, an employee always takes care of the software.All types of websites, starting with

Google, allow the use of this software.

**Planning Management(tofayel-3053)** :In this section we decide first 1 week make our design ,next week we make a prototype and in 9 months we develop it, after a few days we test it . On 2021 1 february we launch it .

**Planning Management(Utsha-3552)** : Our project manager 24/7 hour monitoring the software . And create documentation on how the software changes and modifies.

**Planning Management(Minhajul-3557)** : Chrome Browser Cloud Management gives IT admins the advantage of powerful and flexible management capabilities both in the cloud and on premises, at no additional cost.

**Feasibility study(tofayel-3053)**: We trace the market and people need a good web browser . Every web browser needs all javascript framework .So our browser fulfills all requirements . Our browser is completely free .Easy to use user interface .More secure web browser so it is feasible in the market . Our browser works fast so it will favourite out customers . our browser 100% Works in every website and Cross platform

**Feasibility study (sobuj-3575):**

I agree with my team members because they work with the chrome software. Google Chrome is the basis of Google's Chrome operating system that ships on specific hardware from Google's manufacturing partners. The user interface has a minimalist design resembling the Google Chrome browser. Chrome is aimed at users who spend most of their computer time on the Web, the only applications on the devices are a browser incorporating a media player and a file manager.

**Feasibility study (Utsha-3552):** A feasibility study is an analysis that takes all of

a project's relevant factors into account including economic, technical, legal, and scheduling considerations to ascertain the likelihood of completing the project successfully. In our software our team always reviews and analyzes all data . It fulfills all basic requirements and preliminary analysis. We conduct market surveys and perform market research .To balance financial projection we always make a balance sheet for monitoring .

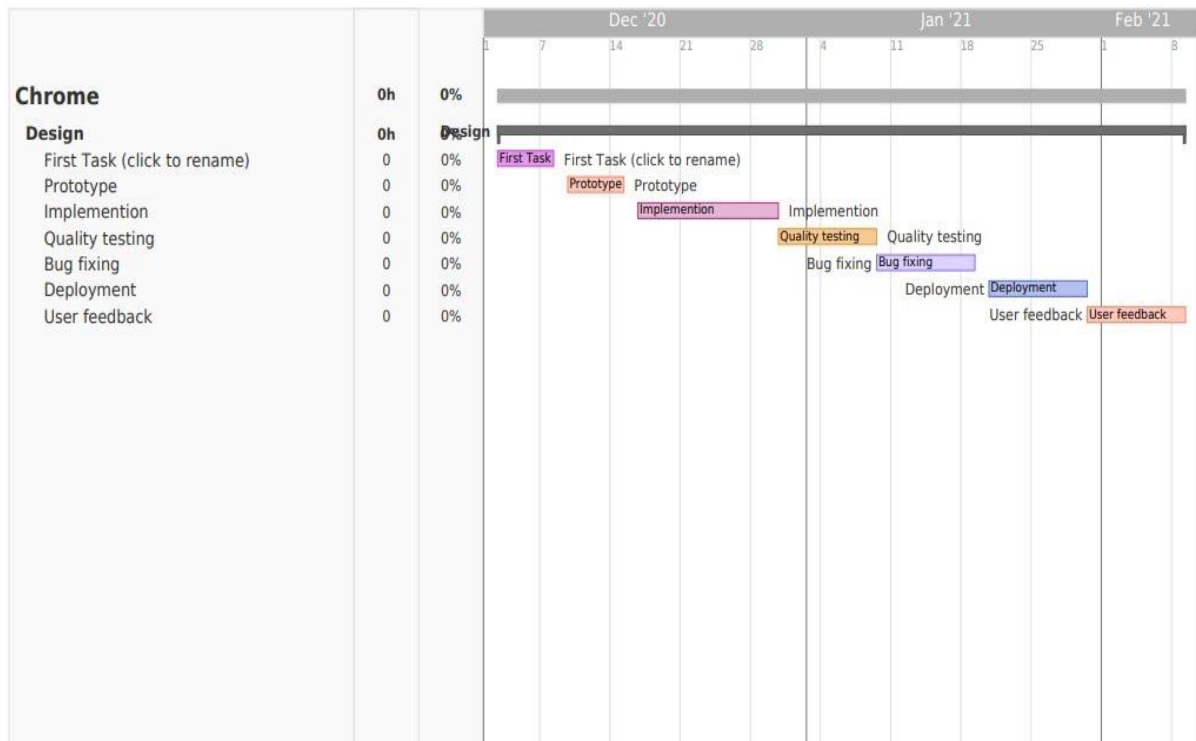
**Feasibility study (Minhajul-3557):** I do a feasibility study with the software, if my team has to Plan for making the software.

Ø This includes evaluating all of the hardware, software, and other technical assets you have at your disposal and whether or not they meet the requirements of your new project.

Ø It's a complete nonstarter if your project doesn't meet the legal threshold for completion, which includes anything from data protection laws to building requirements.

Ø There is no sense in sinking time, money, and energy into a project that isn't likely to produce quality results for your team or your stakeholders.

Ø It's important that you establish a realistic project schedule for project completion, otherwise, you'll find yourself dropping the ball on deadlines and quality for your deliverables.



## Gantt Chart

**Risk Analysis (tofayel-3053):** Using c,c++ code Our Development Cost and time will be lengthy . Risk of the software is not working properly in low configure devices .Need extra ram to run it . Sometimes it gives memory garbage bugs . We have experienced developers so we can easily handle this project .

### **Risk Analysis (sobuj-3575) :**

Here are 8 of the most common project risks that could threaten your project timeline, with some helpful advice to managing each and every one of them.

\*Scope Risks. Cost Risks. Time Risks. Technology Risks. Resource Risks. Communication Risks. Procurement Risks. Miscellaneous Risks.

**Risk Analysis (Minhajul-3557) :** I'm not sure there are any but I suppose I could try and come up with some. These are really only issues if Google had malicious intentions. To be clear, I don't think Google has any such malicious intentions. A lot of these are risks with installing any application on your computer.

- Google gets access not just to your search history, but also your browser history
- They could serve annoying ads via Chrome
- They could use Chrome to spy on computer usage habits

So, this is the risk of Google Chrome.

**Risk Analysis (Utsha-3552) :** Risk analysis involves examining how our project

outcomes and objectives might change due to the impact of the risk event. Once the risks are identified, we are analysed to identify the qualitative and quantitative impact of the risk on our project so that our team took appropriate steps to mitigate them .

**Software Life cycle Model (tofayel-3053) :** Spiral Model , In this Software we develop step after step. We update this software on a regular basis . So we selected the Spiral model.

**Software life cycle (Minhajul-3557):**

The incremental model is a project separate model. It is essentially a series of waterfall cycles. The requirements are divided into groups at the start of the project. I will follow the life cycle model of Facebook software development. Modification to the incremental model allows development cycles to overlap. After that subsequent cycle may begin before the previous cycle is complete.

**Software Life cycle Model (Utsha-3552):** Our software follows the ‘Spiral model’ for software development life cycle model . Spiral model is one of the most important Software Development Life Cycle models, which provides support for Risk Handling of our software development. That’s why we follow ‘The Spiral Model’ for our software .

**Software Life cycle Model (Minhajul-35527):** The app runtime and event page are responsible for managing the app lifecycle. The app runtime manages app installation, controls the event page, and can shutdown the app at any time. The event page listens out for events from the app runtime and manages what gets launched and how.

**Ability of planning(tofayel-3053)** : By dining this project I gain a planning ability to develop a software .

**Ability of Planning (Minhajul-3557):** Chrome initially used the Weskit rendering engine to display web pages. In 2013, they forked the Web Core component to create their own layout engine Blink. Based on Weskit, Blink only uses Weskit's "Web Core" components, while substituting other components, such as its own multi-process architecture, in place of Weskit's native implementation. Chrome is internally tested with unit testing, automated testing of scripted user actions, fuzz testing, as well as Webkit layout tests (99% of which Chrome is claimed to have passed), and against commonly accessed websites inside . Google created Gears for Chrome, which added features for web developers typically relating to the building of web applications, including offline support.

1. The planning phase: the early stages of defining the project and its goals
2. The scoping phase: the time when most people think about scoping. This is where you try to list out the work that needs to be done given the project goals, and estimate how much time will be required to do them.
3. The execution phase: when you are actually implementing the project.

**Ability of planning(Minhajul-3557)** : As much as I have contributed to the completion of this Google Chrome software, so have my team members.

These are my contributions to this task:I have given this software a lot of time.I took help from my classmates.If there is one topic that seems important, I have



discussed it with the team members.Finally able to upload at the right time.

And secondly, I don't think my planning ability for any software is fully developed yet.Because it takes a lot of hard work to create a software.There is a lot of code to know.You have to come up with a perfect idea of what the software will look like.

So I think I haven't been able to plan yet.

**Ability of planning (Utsha-3552) :** In this project work,as a group member I gain the ability of developing software . As well as in future I can use this experience to create a new software or application.

**Future Scope(tofayel-3053 ):**This Software has very good future scope . In this current market place people do not have good browsers .So this software will help people so much . My thinking says it has good software scope .

**Future scope(sobuj-3575):**

Google today will begin rolling out several updates to its Chrome web browser, with the goal of increasing user productivity and making the browsing experience faster. Specifically, Google is making Chrome's tabs and its newer tab groups easier and quicker to use. Under the hood, it promises improvements that will deliver up to 10% faster page loads and will reduce the impact of having idle background tabs. Android's version of Chrome, if you start typing a page in the address bar, you'll see a suggestion to switch to that tab if it's already open. Android users will also gain simplified URL sharing to make it easier to copy links

and share to other devices or send links through other apps.

\*\*In addition, they'll be able to print the page or even generate a QR code to scan or download.

\*\* In the Chrome Beta channel, Google is also introducing tab throttling which gives more resources to the tabs you're currently using by taking the resources back from tabs that have been in the background for a long time. This change should bring improvements across loading speed, battery and memory saving.

**Future Scope (Utsha-3552) :** Our software Google chrome is a great operating system. In our software ,ChromeBox and ChromeBook are beautifully minimalist, wonderfully sleek, secure, and almost unbelievably trouble free. So, It is a bit faster than contemporary any web browser .

**Future Scope (Minhajul-3557) :** Yes, Google chrome has the future scope. Google wants to push the web forward. It is in their interest to enable and empower the open web to keep people engaged. If people just use some apps and services like Facebook for everything, gradually Google's business will die.

Hence, Google will always be on the lookout for new and powerful features for the web.

The best tool at their hands for this is Chrome. It is the most popular browser on the web. With this power, they can control the future of the web, if not influence it.

Now that major browsers like Edge have started using the open source version of Chrome called Chromium to build their own browsers, what happens on Chrome has bigger implications for the whole web.

**Software Goals (Utsha-3552):** Google Chrome browser is an open source program for accessing the World Wide Web and running Web-based applications. The Google Chrome Web browser is based on the open source Chromium project. The main goal of our application is to retention aur users and provide better services in future .

**Team leader contribution (tofayel-3053):** I handle this project with my team members . They are very serious about this project . They try their best for this project . Every team member Works very hard .