



**Virtual University**

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# CARE SEEKERS

## GROUP ID: S2302148F7

### SOFTWARE REQUIREMENTS SPECIFICATION

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Revision History

Date (dd/mm/yyyy)	Version	Description	Author
09/07/2023	1.0	The purpose of this Software Requirements Specification (SRS) document is to outline the Scope, Functional and non-functional requirements, Use Case Diagram, Usage Scenarios, Adopted Methodology and Work Plan of the Web-Based Support Worker Community Platform. The platform aims to provide a user-friendly online environment for care seekers to find support workers for various services.	Ali Bilal BC180404460

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**SRS Document****Scope of Project**

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The Web-Based Support Worker Community Platform will allow care seekers to post job requests and connect with support workers who have registered on the platform. The platform will support services such as elder care, sick care, baby care, cooking, personal care, animal care, gym instruction, and domestic assistance.

## Functional and Non-Functional Requirements

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### Functional Requirements

#### 1. Support Worker Registration

- Support workers must provide their complete biodata, including personal information and relevant qualifications.
- Support workers should upload a profile picture.
- Support workers need to specify their hourly rate for the services they provide.
- Support workers must provide details of their relevant experience.
- Support workers must provide at least two references for verification purposes.

#### 2. Categorized Workers

The platform will include categories for different types of support workers, such as baby care, cooking, personal care, etc. These categories will help care seekers to find the relevant support worker for their needs.

#### 3. Job Posting for Care Seekers

- Care seekers can post job requests indicating the type of service they require.
- Care seekers must provide detailed information about the required service, including specific tasks and any special requirements.
- Care seekers need to provide their address for the support worker's reference.
- Care seekers should specify their estimated hourly budget for the service.
- Care seekers must indicate the preferred time for the service.

#### 4. Home Page Design

- The home page must have a header that includes menus for easy navigation, such as "Post Job," "Find Worker," "Testimonials," and "About."
- The upper part of the home page should display visually appealing images representing all the services offered on the platform.
- The center of the home page must feature a section titled "Meet Our Care and Support Workers." This section will display pictures and brief information about the registered support workers.

#### 5. Messaging Service

- The platform should provide a messaging service that enables communication between care seekers and support workers.
- Support workers should be able to respond to job postings through the messaging service.
- Care seekers and support workers should be able to finalize job terms and accept the job through the messaging service.

#### 6. Hourly Rate Charging

Support workers will charge care seekers on an hourly basis for the services they provide.

### **Non-Functional Requirements**

#### 1. Usability

- The platform should have a user-friendly interface, making it easy for both care seekers and support workers to navigate and interact with the system.
- The registration process should be intuitive and straightforward.
- The messaging service should be accessible and easy to use for seamless communication between users.

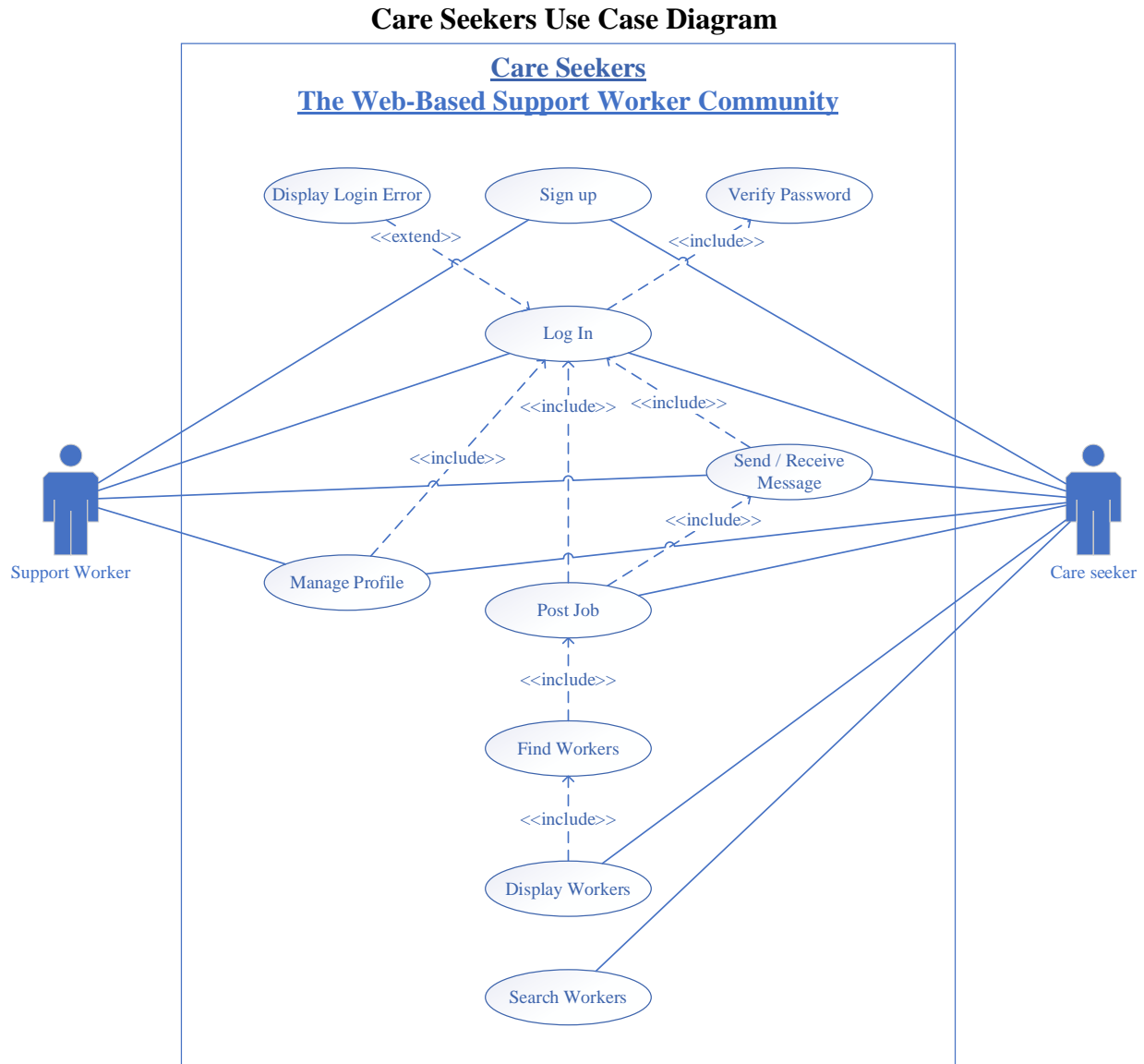
#### 2. Performance

- The platform should be able to handle a large number of users simultaneously without significant performance degradation.
- The response time for job postings, support worker registrations, and messaging service interactions should be fast and efficient.

#### 3. Security

- The platform should implement appropriate security measures to protect user data and ensure privacy.
- Support worker registration information and care seeker job postings should be securely stored and accessible only to authorized users.
- The messaging service should provide end-to-end encryption to protect the confidentiality of conversations between users.

## Use Case Diagram



### Actor Descriptions:

- **Support Worker:** Individuals who offer support services and register on the platform.
  - Support worker can sign up.
  - Support worker can also login after sign up.
  - Support worker can respond through a messaging service after job is posted.
- **Care Seeker:** Individuals who are seeking support services and post job requests on the platform.
  - Care seeker can sign up.



- Care seeker can login after signing up.
- Care seeker can search support worker.
- Care seeker can send and receive message.
- Care seeker can post a job.
- Support worker will be display as pre requirement job for care seeker.

**Use Case Descriptions:**

- **Sign Up:** Care Seeker can sign up for the platform by providing their personal information, preferences, requirements, and payment details. On top of that Support Worker can register on the platform by providing more details and qualifications
- **Login:** Care Seeker or Support Worker can log in to their existing account on the platform.
- **Display Login Error:** This will show that then password or email you enter is incorrect.
- **Manage Profile:** Support worker and care seeker can manage their profile as they desire.
- **Send or Receive Message:** Care Seeker or Support Worker can send messages or receive messages to each other through the Messaging system.
- **Post Job:** Care Seeker can post a job request on the platform, specifying the required service, details, and other relevant information.
- **Find Workers:** The platform itself finds suitable support workers based on the job requirements.
- **Display Workers:** The platform itself displays a list of available support workers to the Care Seeker.
- **Search Workers:** Care Seeker can search through the online community of support workers based on specific criteria.

## Usage Scenarios

### Support worker Usage Scenarios

#### Sign up

Use Case Title	Sign up
Use Case ID	UC001
Actor(s)	Anonymous user
Description	Anonymous user wants to register himself as support worker.
Pre-Conditions	Anonymous user must have an internet connection.
Task Sequence	Exception
<ul style="list-style-type: none"> <li>The user will go to the web site link and open the main page through typing the URL of this web application.</li> <li>The user will click on “Register” button for the purpose of registration and then user will give the information required in text fields and check boxes.</li> <li>The application will validate the user information and then register the user with given information.</li> </ul>	<ul style="list-style-type: none"> <li>Database Exception.</li> <li>Network exception.</li> <li>Empty Field Exception</li> </ul>
Post Conditions	User has registered successfully as support worker.
Alternative Path	User has cancelled the registration process.
Author (s)	BC180404460

#### Login

Use Case Title	Login
Use Case ID	UC002
Actor(s)	Support Worker
Description	Support worker want to login as a support worker.
Pre-Conditions	Anonymous user must have an internet connection.
Task Sequence	Exception
<ul style="list-style-type: none"> <li>Anonymous user will open the web application, provide login credentials and click on login button.</li> <li>User information will be validated and he will have protected area access while unauthorized access will be denied.</li> </ul>	<ul style="list-style-type: none"> <li>Database Exception.</li> <li>Network exception.</li> <li>Empty Field Exception</li> </ul>
Post Conditions	Support worker has logged in successfully as Support Worker.
Alternative Path	Support worker has cancelled login process.
Author (s)	BC180404460

**Manage Profile**

Use Case Title		Manage Profile
Use Case ID	UC003	
Actor(s)	Support Worker	
Description	Support Worker wants to manage their profile info.	
Pre-Conditions	<ul style="list-style-type: none"> <li>Support Worker must be logged in.</li> <li>Support Worker must have an internet connection.</li> </ul>	
Task Sequence		Exception
<ul style="list-style-type: none"> <li>Support Worker will log in to the web application through valid login credentials.</li> <li>Support Worker will click on profile button and their information will be displayed.</li> <li>Support Worker can click on edit button to update his profile information.</li> </ul>		<ul style="list-style-type: none"> <li>Database Exception.</li> <li>Network exception.</li> </ul>
Post Conditions	Support Worker has managed his profile successfully.	
Alternative Path	Support Worker has cancelled process.	
Author (s)	BC180404460	

**Send or Receive Message**

Use Case Title		Send or Receive Message
Use Case ID	UC004	
Actor(s)	Support Worker	
Description	Support Worker want to respond support worker posted job through a messaging service.	
Pre-Conditions	<ul style="list-style-type: none"> <li>Support Worker must be logged in.</li> <li>Support Worker must have an internet connection.</li> </ul>	
Task Sequence		Exception
<ul style="list-style-type: none"> <li>Support Worker will log in to the web application through valid login credentials.</li> <li>Support Worker will click on “Posted job” button and the posted job will be displayed.</li> <li>Support Worker can click on Message button on any posted job to respond through a messaging service</li> </ul>		<ul style="list-style-type: none"> <li>Database Exception.</li> <li>Network exception.</li> <li>Empty Field Exception</li> </ul>
Post Conditions	Support Worker has responded through a messaging service successfully.	
Alternative Path	Support Worker has cancelled message.	
Author (s)	BC180404460	

## Care Seeker Usage Scenarios

## Sign up

Use Case Title	Sign up
Use Case ID	UC005
Actor(s)	Anonymous user
Description	Anonymous user wants to register himself as Care Seeker.
Pre-Conditions	Anonymous user must have an internet connection.
Task Sequence	Exception
<ul style="list-style-type: none"> <li>The user will go to the web site link and open the main page through typing the URL of this web application.</li> <li>The user will click on “Register” button for the purpose of registration and then user will give the information required in text fields and check boxes.</li> <li>The application will validate the user information and then register the user with given information.</li> </ul>	<ul style="list-style-type: none"> <li>Database Exception.</li> <li>Network exception.</li> <li>Empty Field Exception</li> </ul>
Post Conditions	User has registered successfully as Care Seeker.
Alternative Path	User has cancelled the registration process.
Author (s)	BC180404460

## Login

Use Case Title	Login
Use Case ID	UC006
Actor(s)	Care Seeker
Description	Care Seeker want to login as a Care Seeker.
Pre-Conditions	Anonymous user must have an internet connection.
Task Sequence	Exception
<ul style="list-style-type: none"> <li>Anonymous user will open the web application, provide login credentials and click on login button.</li> <li>User information will be validated and he will have protected area access while unauthorized access will be denied.</li> </ul>	<ul style="list-style-type: none"> <li>Database Exception.</li> <li>Network exception.</li> <li>Empty Field Exception</li> </ul>
Post Conditions	Care Seeker has logged in successfully as Care Seeker.
Alternative Path	Care Seeker has cancelled login process.
Author (s)	BC180404460

## Manage Profile

Use Case Title	Manage Profile	
Use Case ID	UC007	
Actor(s)	Care Seeker	
Description	Care Seeker wants to manage their profile info.	
Pre-Conditions	<ul style="list-style-type: none"> <li>Care Seeker must be logged in.</li> <li>Care Seeker must have an internet connection.</li> </ul>	
Task Sequence		Exception
<ul style="list-style-type: none"> <li>Care Seeker will log in to the web application through valid login credentials.</li> <li>Care Seeker will click on profile button and their information will be displayed.</li> <li>Care Seeker can click on edit button to update his profile information.</li> </ul>		<ul style="list-style-type: none"> <li>Database Exception.</li> <li>Network exception.</li> </ul>
Post Conditions	Care Seeker has managed his profile successfully.	
Alternative Path	Care Seeker has cancelled process.	
Author (s)	BC180404460	

## Send or Receive Message

Use Case Title	Send or Receive Message	
Use Case ID	UC008	
Actor(s)	Care Seeker	
Description	Care Seeker want to send or replay to support worker message through a messaging service.	
Pre-Conditions	<ul style="list-style-type: none"> <li>Care Seeker must be logged in.</li> <li>Care Seeker must have an internet connection.</li> </ul>	
Task Sequence		Exception
<ul style="list-style-type: none"> <li>Care Seeker will log in to the web application through valid login credentials.</li> <li>Care Seeker will click on “Inbox” button and the Message will be displayed.</li> <li>Care seeker can click on any Message button Then sent a reply to support worker.</li> <li>Care seeker can also send message by opening on support worker profile then clicking in message button.</li> </ul>		<ul style="list-style-type: none"> <li>Database Exception.</li> <li>Network exception.</li> <li>Empty Field Exception</li> </ul>
Post Conditions	Care Seeker has sent or replay through a messaging service successfully.	
Alternative Path	Care Seeker has cancelled message.	
Author (s)	BC180404460	

**Post Job**

Use Case Title	Post Job	
<b>Use Case ID</b>	UC009	
<b>Actor(s)</b>	Care Seeker	
<b>Description</b>	Care Seeker wants to post a job.	
<b>Pre-Conditions</b>	<ul style="list-style-type: none"> <li>Care Seeker must be logged in.</li> <li>Care Seeker must have an internet connection.</li> </ul>	
<b>Task Sequence</b>		<b>Exception</b>
<ul style="list-style-type: none"> <li>Care seeker will log in to the web application through valid login credentials.</li> <li>Care seeker will click on “Add Job” button in a menu on homepage for the purpose of posting a job and then user will give the information required in text fields and check boxes.</li> <li>The application will validate the user information and then post a job with given information.</li> </ul>		<ul style="list-style-type: none"> <li>Database Exception.</li> <li>Network exception.</li> <li>Empty Field Exception</li> </ul>
<b>Post Conditions</b>	Care Seeker has posted a job successfully.	
<b>Alternative Path</b>	Care Seeker has cancelled process.	
<b>Author (s)</b>	BC180404460	

**Display Workers**

Use Case Title		Display Workers
Use Case ID	UC010	
Actor(s)	Support Care	
Description	Support care want to see available support work after posted a job.	
Pre-Conditions	<ul style="list-style-type: none"> <li>Support Worker must be logged in.</li> <li>Support Worker must have an internet connection.</li> </ul>	
Task Sequence		Exception
<ul style="list-style-type: none"> <li>Care seeker will log in to the web application through valid login credentials.</li> <li>Care seeker will click on “Add Job” button in a menu on homepage for the purpose of posting a job and then user will give the information required in text fields and check boxes.</li> <li>The application will validate the user information and then post a job with given information.</li> <li>Now care seeker has to click on “Display Worker” button in order to see list of support worker available pre job requirement.</li> </ul>		<ul style="list-style-type: none"> <li>Database Exception.</li> <li>Network exception.</li> </ul>
Post Conditions	Support Worker has managed his profile successfully.	
Alternative Path	Support Worker has cancelled process.	
Author (s)	BC180404460	

**Search Workers**

Use Case Title		Search Workers
Use Case ID	UC011	
Actor(s)	Care Seeker	
Description	Care Seeker wants to find support workers.	
Pre-Conditions	<ul style="list-style-type: none"> <li>Care Seeker must have an internet connection.</li> </ul>	
Task Sequence		Exception
<ul style="list-style-type: none"> <li>Care seeker will click on “Find Worker” button in a menu on homepage for the purpose of finding a support worker and then user will give the information required in text fields and check boxes.</li> <li>The application will validate the user information and then show list of support worker.</li> </ul>		<ul style="list-style-type: none"> <li>Database Exception.</li> <li>Network exception.</li> <li>Empty Field Exception</li> </ul>
Post Conditions	Care Seeker has found list of support worker successfully.	
Alternative Path	Care Seeker has cancelled search process.	
Author (s)	BC180404460	

## Adopted Methodology

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### Adopted Methodology

Software development methodology or system development methodology in software engineering is a framework that is used to structure, plan, and control the process of developing an information system. A wide variety of such frameworks have evolved over the decades each having its own strength and weaknesses. One development methodology may not necessarily be suitable for use by all projects. Each available methodology is best suited to specific kind of projects, based on various technical, organizational, project and team considerations. These frameworks are often bound to some kind of organization, which further develops, supports the use and promotes the methodology. The methodology is often documented in some kind of formal documentation. According to Elliott, the Systems development life cycle (SDLC) can be considered to be the oldest formalized methodology for building information systems. The main idea of the SDLC has been “to pursue the development of information system in a very deliberate, structured and methodical way, requiring each phase of the life cycle from inception of the idea to delivery of the final system, to be carried out in rigidly and sequentially”.

There are different process models exist by using which we can model our project. Some well-known standard process models are given below as:

- Build-and-fix model
- Water fall model
- Prototyping model
- Incremental model
- Spiral model

We have studied different methodologies that can be adopted during SDLC. After analysis the different methodologies we found only one methodology which is fit of our project is VU Model. According to the project requirements, we have selected Modified VU Process Model, because this model fulfills our software development requirements.

VU process Model is proposed software engineering process by Virtual University of Pakistan which is the combination of Waterfall Model and Spiral Model in software development.



**VU Process Model:**

We choose VU Process model which is combination of the Waterfall and Spiral models. As a study project our activities will be sequential in nature (waterfall), and we analyze each phase with regard to the end product. So it will become an un-sequential iteration. As spiral model is combination of waterfall plus risk analysis. As we know from the above illustration that waterfall model has the benefit of linearity and well documentation. But beside that it has a drawback that delivered product may not meet client's requirement and error (Risk) depicted after delivery will difficult to resolve in cost effective and timely manner.

VU Process model depicts the linear nature of waterfall and iterative risk analysis of spiral. We analyze each phase activity with the end product. VU Process model will help us in identification of risk at the time as it omits. So resolution of that risk will be much easy at that point, while if it is detected at later stage then the resolution will become much more painful and costly (time& budget). Also, documentation makes the maintenance of product after its delivery easy. So, by combining the spiral & waterfall we get the benefits of waterfall and risk sensitivity of the spiral.

Waterfall model permits to perform activities in sequence. As each activity cascades into next and feeds information so that the output of one activity becomes input to the next so that the next activity should proceed. And our activities like requirement gathering, planning, developing are sequential and this model supports linear (sequential) activities. It suggests a systematic, sequential approach to software development that begins at the system level and progresses through the analysis, design, coding, testing, and maintenance.

The Waterfall Model is a documentation-driven model. It therefore generates complete and comprehensive documentation and hence makes the maintenance task much easier. Documentation helps to keep track to risk. Because we are proceeding from one phase to the next in a purely sequential manner waterfall is best suited us. When the requirements are fully completed, we proceed to design.

But it is impossible for any non-trivial project to get one phase of a software product's lifecycle perfect, before moving on to the next phases and learning from them.

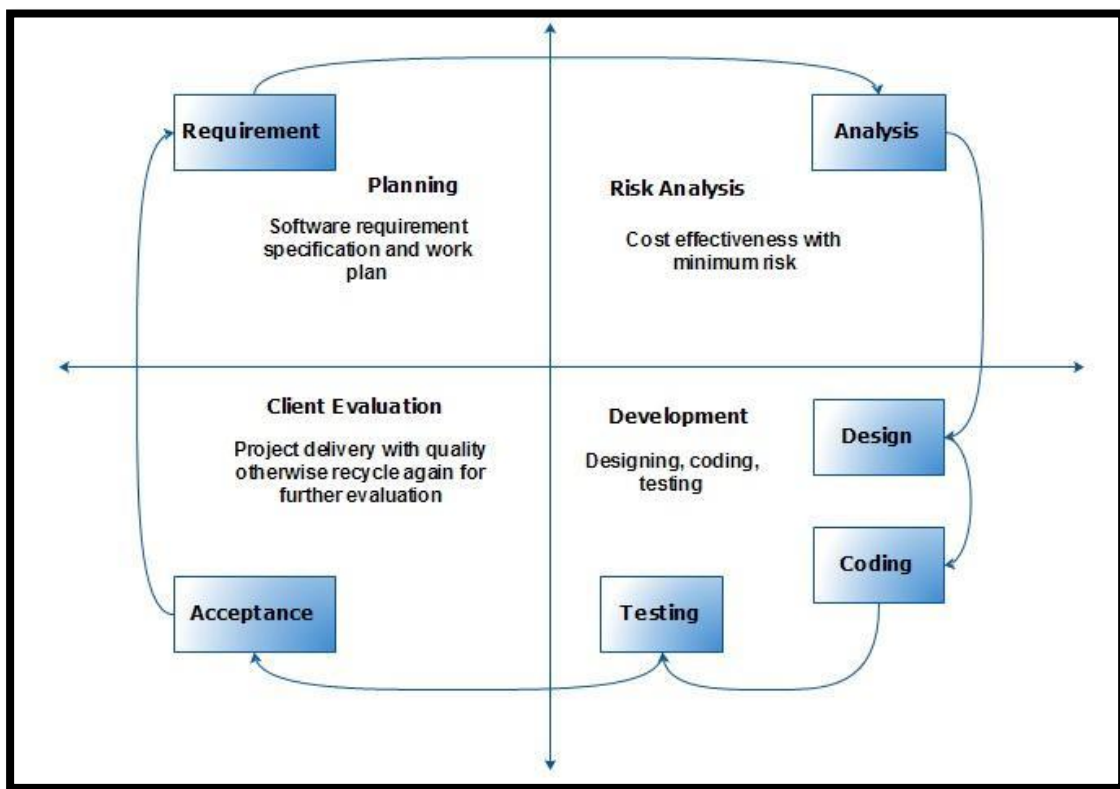
We got the solution by combining the Waterfall and Spiral. Waterfall model gives us the linear nature and a combination with Spiral model we get the advantages of revisiting the previous phase with iterative nature of Spiral model and risk analysis too.

As the main strength of the Spiral Model comes from the fact that it is very sensitive to the risk, combining the both Waterfall and Spiral we will able to get the linear nature of waterfall

and risk sensitive nature of Spiral model. Spiral model helps to perform risk analysis at any stage.

So as conclusion we can say that VU Process model is best suited to our requirements and product development. VU Process model is fully documented and iterative to resolve the risk as it occurs during the product development life cycle. We will forward step by step in phases and analyze. If an error depicts in the subsequent phase, we resolve that in next iteration.

Following Diagram shows the stages of VU process Model.



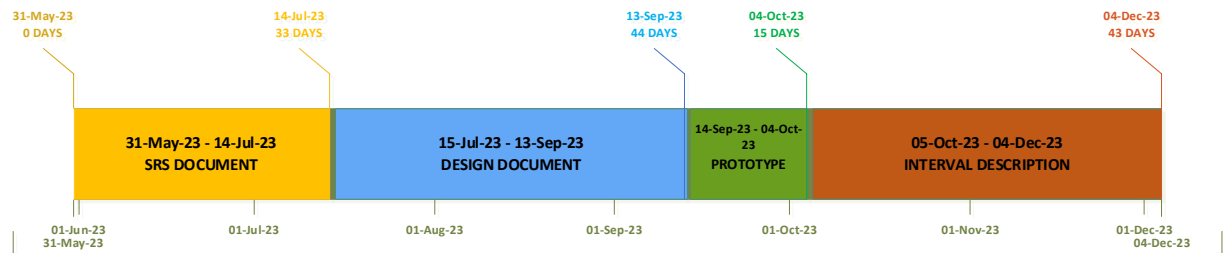
**Reasons for choosing VU process model:**

- Waterfall model permits to perform activities in sequence. As Each activity cascades into next and feeds information. So that the output of one activity becomes input to the next so that the next activity should proceed. And our activities like requirement gathering, planning, developing are sequential and this model supports linear (sequential) activities.
- It suggests a systematic, sequential approach to software development that begins at the system level and progresses through the analysis, design, coding, testing, and maintenance.
- The Waterfall Model is a documentation-driven model. It therefore generates complete and comprehensive documentation and hence makes the maintenance task much easier. Documentation helps to keep track to risk.
- Because we are proceeding from one phase to the next in a purely sequential manner waterfall is best suited us. When the requirements are fully completed, we proceed to design.
- But it is impossible for any non-trivial project to get one phase of a software product's lifecycle perfect, before moving on to the next phases and learning from them.
- We got the solution by combining the Waterfall and Spiral. Waterfall model gives us the linear nature and a combination with Spiral model we get the advantages of revisiting the previous phase with iterative nature of Spiral model and risk analysis too.
- As the main strength of the Spiral Model comes from the fact that it is very sensitive to the risk. Combining the both Waterfall and Spiral we will able to get the linear nature of waterfall and risk sensitive nature of Spiral model.
- So as conclusion we can say that VU Process model is best suited to our requirements and product development. VU Process model is fully documented and iterative to resolve the risk as it occurs during the product development life cycle. We will forward step by step in phases and analyze. If an error depicts in the subsequent phase, we resolve that in next iteration.

# Work Plan

## Work Plan

I have created a Gantt chart that depicts all the phases in the project along the time duration within which each phase has to be completed.



## Gantt chart:

Gantt charts are useful tools for planning and scheduling projects. They allow you to assess how long a project should take, determine the resources needed, and lay out the order in which tasks need to be carried out. They are useful in managing the dependencies between tasks.

When a project is under way, Gantt charts are useful for monitoring its progress. You can immediately see what should have been achieved at a point in time, and can therefore take remedial action to bring the project back on course. This can be essential for the successful and profitable implementation of the project. We plan our work and make a Gantt chart for that.

