**Title:** Requirement Development

**Objective(s):**

In this lab, students will learn to identify the various requirement development activities namely, gathering, analysis, specification and verification for the given scenarios

**Tools, Equipment and Materials:**

1. [Hardware: Personal Computer with Internet access]
2. [Software: Text Editing Software]

**Instructions:**

**Part (A) – Test of understanding on UML Theory Concepts**

1. Requirement engineering is the discipline concerned with establishing and managing requirements. It produces a specification of what a system should do.
2. The purpose of requirement engineering is to provide a clear definition of requirement of the systems. This phase is important because if the customer requirements are not clearly understood, the ambiguity can affect the subsequent phase of the development.
3. As to avoid such issues, requirement has to be gathered using the right gathering techniques, to be analyzed effectively, specified clearly and verified thoroughly.
4. All activities are collectively termed as requirement development activities.

* Identify the requirement development activities associated with each of the following scenarios:

1. Charles is crafting an online survey questionnaire to request user feedback on the desired features of the application to be developed.
2. Mark is preparing a formal document which includes all of the desired features identified by the survey.
3. Stephen identified an incomplete requirement statement.
4. Lionel is identifying all security related requirement and separating them from the performance related requirements.
5. Clare a team member is sent to client to observe the business case and collect typical user requirements.
6. Leo is team member is working on requirement and ensuring that requirement collected should not be vague and unclear.
7. Philip is conducting a facilitated meeting with the stakeholder to capture the requirements.
8. Jerome a team member is distributing questionnaires to stack holder for gathering user requirements.

|  |  |
| --- | --- |
| **Scenario** | **Requirement Development Activities** |
| a. Charles is crafting an online survey questionnaire to request user feedback on the desired features of the application to be developed. | -Identifying the target audience: This will target the current audiences and users.  -Defining the survey objectives: Charles will need to define the goals of the survey as what information he will needed to inform the team.  -Analyze the survey questions: Charles will analyze the data that is collected from the survey from audiences. |
| b. Mark is preparing a formal document which includes all of the desired features identified by the survey. | -Creating a requirements document: Mark will create a ‘requirements document’ that includes all of the clearly identified features and any flowcharts, graphics and diagrams to explain and illustrate the requirements.  -Defining the requirements: Mark will need to clearly-define the requirements for every feature, functionality and performance. |
| c. Stephen identified an incomplete requirement statement. | -Identifying the incomplete requirement: Stephen will need to review any requirement(s) that is incomplete / unclear.    -Gathering additional data: Additional information is really useful. Stephen will need to gather more information needed to complete the incomplete requirement. |
| d. Lionel is identifying all security related requirement and separating them from the performance related requirements. | -Identifying security-related requirements: Lionel will need to identify and separate every security requirements like authentication, access controls. etc, from performance requirements  -Defining the security requirements: Lionel will need to clearly-define the requirements based on their importance and potential impact of an application, taking into account factors like regulatory compliance and data sensitivity.  -Reviewing the requirements document: Lionel will need to review the requirements document to identify requirements that pertain to security. |
| e. Clare a team member is sent to client to observe the business case and collect typical user requirements. | -Observe the business case: Clare will need to observe the client’s business operations and procedures to understand the context in which the application will be used in the real-world and identify any specific requirements.  -Planning the visit: Clare will need to plan the visit to the client of the another company.  -Documenting the requirements: Clare will need to document the requirements gathered during the company visit, include any functionality, user interface and performance criteria. |
| f. Leo is team member is working on requirement and ensuring that requirement collected should not be vague and unclear. | -Reviewing the requirements: Leo will need to review any requirements document to identify any requirement(s) that is vague and unclear.  -Validating the requirements: Leo will need to validate the requirements to ensure they are clear, accurate and complete so the stakeholders will review clearly. |
| **Scenario** | **Requirement Development Activities** |
| g. Philip is conducting a facilitated meeting with the stakeholder to capture the requirements. | -Planning and facilitating a meeting: Philip will need to plan and facilitating the meeting by coordinating with stakeholders have an opportunity to voice their requirements and preparing any necessary materials to keep every discussion on track. |
| h. Jerome a team member is distributing questionnaires to stack holder for gathering user requirements. | -Identifying the target audience: Jerome will need to determine which stakeholder will be targeted with the questionnaire, such as current users etc.  -Developing survey questions: Jerome will need to create a set of questions that will gather the information from the stakeholders. These questions should be easy to understand.  -Distributing the survey: Jerome will need to test the survey with the small group of people to identify any issues or ambiguities in the questions that make appropriate adjustments. |

- End -