MIT-WPU

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CS233: Software Engineering and Testing

Cyber Security and Forensics

S.Y. Semester III

2022-23

Assignment List

Assignment No.	Contents	Workload in Hrs	
		Theory	Lab
1	Prepare/Write the software requirement document(SRS) for given problem statement.		02
2	Perform the Structured Systems Analysis and Design (SSAD)- Draw the DFD MODEL (Level 0, Level 1 and Level 2). Choose an open source tool for the same.		02
3	Object Oriented Analysis and design using UML diagrams: Use case, Class Diagram, Object diagram.		02
4	Object Oriented Analysis and design using UML diagrams: Activity diagram, Sequence Diagram.		02
5	Object Oriented Analysis and design using UML diagrams: Timing diagram, Communication diagram, state machine diagram		02
6	Draw Gantt Chart for software project management.		02
7	Choose an appropriate testing tool and implement for black box. automation testing.		04
8	Study any DevOps tool for project management.		04

SRS

Write Software Requirement Specification (SRS)

for Library Management System (LMS).

SRS

- **Aim:**

  The aim of SRS is to specify the software product in details. In other words, it contains all necessary and important information that the product team should be aware of in order to create the software.

- **Problem Statement:**

  The purpose of the Library Management system is to allow for storing details of a large number of books, magazines, Journals, thesis and allow for add, search, borrow, return facilities separately to administrator/Librarian, staff and students. Different privileges are given to different types of users.

SRS

Objective:

- To understand different sections of Software Requirement Specification (SRS).
- To understand functional requirements of the system
- To understand performance requirements of the system
- To apply design constraints and appropriate validation on the system

SRS

Software Requirements Specification (SRS Document)

- A software requirements specification (SRS) is a document that describes what the software will do and how it will be expected to perform. It also describes the functionality the product needs to fulfill all stakeholders (business, users) needs.

SRS

An SRS can be simply summarized into 4Ds:

- **Define** your product's purpose.
- **Describe** what you're building.
- **Detail** the requirements.
- **Deliver** it for approval.

A good SRS document will define everything from how software will interact when embedded in hardware to the expectations when connected to other software.

SRSs

- A **software requirements specification (SRS)** includes in-depth descriptions of the software that will be developed.
- A **system requirements specification (SyRS)** collects information on the requirements for a system.

- “Software” and “system” are sometimes used interchangeably as SRS. But, a software requirement specification provides greater detail than a system requirements specification.

Effective SRS document

Steps to follow to write an effective SRS document:

- **1. Define the Purpose With an Outline (Or Use an SRS Template)**
  - Create an outline for your software requirements specification.
- **2. Define your Product's Purpose**
  - Intended Audience and Intended Use
  - Product Scope
- **3. Describe What You Will Build**
  - Describe who will use the product and how. Understanding the user of the product and their needs is a critical part of the process.
  - Assumptions and Dependencies
- **4. Detail Your Specific Requirements**
  - Functional requirements are essential to your product because, as they state, they provide some sort of functionality.
  - External interface requirements are specific types of functional requirements. These are especially important when working with embedded systems.
- **5. Deliver for Approval**
  - After completing the SRS, you'll need to get it approved by key stakeholders. This will require everyone to review the latest version of the document.

SRS document

Students to use following template-

URL for IEEE editable SRS template:

- https://web.cs.dal.ca/~hawkey/3130/srs_template-ieee.doc