

# Documentation Template for Final Projects

The following table identifies the minimal core set of software development and identifies the activities that produce them.

Document Deliverables	Description	Activities
<b>Software Project Management Plan (SPMP)</b>	Description of the software approach and associated milestones	Process implementation
<b>Software requirements specification (SRS)</b>	Description of expected software features, constraints, interfaces and other attributes	System requirements analysis Software requirements analysis
<b>Software Design Description (SDD)</b>	Description of how the software will meet the requirements. Also describes the rationale of design decisions taken.	System architectural design Software architectural design Software detailed design
<b>Software Test Documentation (STD)</b>	Description of the plan and specifications to verify and validate the software and the results.	System qualification testing Software qualification testing

IEEE terms and abbreviations have been used throughout; this provides exposure to the professional terminology for students, and also reduces ambiguity.

## Purpose of each document

### Document Summary of Purpose

**SPMP:** To document the agreed deliverables and dates.

**SRS:** To document the agreed requirements with the project supervisor; to provide the basis for design; to provide the basis for system test.

**SDD:** To document the design and design decisions in order to provide the basis for implementation and unit test

**STD:** To document how the software will be tested, and record the results.

### Contents of the Documentation Set.

The following four pages identify the contents of each document. **The contents are not a rigid definition, but a guide as to the most pertinent features of each document.** These should be tailored to reflect the emphasis of each project. Documentation produced during implementation is not covered; these results are usually in the form of executable code, user documentation, and an implementation work of the student. The specifications for, and results of, unit testing are also regarded as being part of the implementation.

## **Software Project Management Plan (SPMP)**

Cover Page

Table of Contents

### **1 INTRODUCTION**

1.1 Project Overview

1.2 Project Deliverables

### **2 PROJECT ORGANIZATION**

2.1 Software Process Model

2.2 Roles and Responsibilities

2.3 Tools and Techniques

### **3 PROJECT MANAGEMENT PLAN**

3.1 Tasks

3.1.n Task-*n*

3.1.n.1 Description

3.1.n.2 Deliverables and Milestones

3.1.n.3 Resources Needed

3.1.n.4 Dependencies and Constraints

3.1.n.5 Risks and Contingencies

3.2 Assignments

3.3 Timetable

### **4 ADDITIONAL MATERIAL**

Students are encouraged to use open source project management tools for this deliverable. One example being Project Libre (<http://www.projectlibre.org/>)

Relevant IEEE standards: IEEE-1058 [8], IEEE-1540 [9]

# **Software Requirements Specifications (SRS)**

Cover Page

Table of Contents

1 INTRODUCTION

1.1 Product Overview

2 SPECIFIC REQUIREMENTS

2.1 External Interface Requirements

2.1.1 User Interfaces

2.1.2 Hardware Interfaces

2.1.3 Software Interfaces

2.1.4 Communications Protocols

2.2 Software Product Features

2.3 Software System Attributes

2.3.1 Reliability

2.3.2 Availability

2.3.3 Security

2.3.4 Maintainability

2.3.5 Portability

2.3.6 Performance

2.4 Database Requirements

3 ADDITIONAL MATERIAL

Relevant IEEE standards: IEEE-830 [4]

# **Software Design Description (SDD)**

Cover Page

Table of Contents

## **1 INTRODUCTION**

1.1 Design Overview

1.2 Requirements Traceability Matrix

## **2 SYSTEM ARCHITECTURAL DESIGN**

2.1 Chosen System Architecture

2.2 Discussion of Alternative Designs

2.3 System Interface Description

## **3 DETAILED DESCRIPTION OF COMPONENTS**

3.*n* Component-*n*

## **4 USER INTERFACE DESIGN**

4.1 Description of the User Interface

4.1.1 Screen Images

4.1.2 Objects and Actions

## **5 ADDITIONAL MATERIAL**

Relevant IEEE standards: IEEE-1016 [7]

# **Software Test Documentation (STD)**

Cover Page

Table of Contents

1 INTRODUCTION

1.1 System Overview

1.2 Test Approach

2 TEST PLAN

2.1 Features to be Tested

2.2 Features not to be Tested

2.3 Testing Tools and Environment

3 TEST CASES

3.*n* Case-*n*

3.*n*.1 Purpose

3.*n*.2 Inputs

3.*n*.3 Expected Outputs & Pass/Fail criteria

3.*n*.4 Test Procedure

4 ADDITIONAL MATERIAL (including appendix A)

APPENDIX A. TEST LOGS

A.*n* Log for test *n*

A.*n*.1 Test Results

A.*n*.2 Incident Report