**Software Project Management Plan**

***for***

**Web-Based Assignment Submission System**

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***Issued For*: St. Francis Higher Secondary School**

**Abstract**

This project is aimed at downloading and uploading online assignments for students; with each assignment having information about the instructions, description, deadline, and submission details. The main goal of this project is to design and implement online assignment submission. The most obvious advantage offered by online assignment submission is that it offers faster transmission of assignments than using the traditional way by using the online system. Save the time and cost for teachers by enabling them to put up a fast response for students as well as increasing the quality of the feedback provided to students is our ultimate purpose.

**Version-Release**

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| **Version** | **Release** | **Author** | **Changes** |
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**References**

* [IEEE 828] IEEE Standard for Software Configuration Management Plans, ANSI/IEEE Std. 828-199.
* [IEEE 1058] IEEE Standard for Software Project Management ANSI/IEEE Std.1058.1-1987
* [IEEE 1074] IEEE Standard for Developing Software Life Cycle Processes, ANSI/IEEE Std.
* [Bruegge-Dutoit 97] Bernd Bruegge, Allan Dutoit: Model-Based Software Engineering: A Project-Oriented Approach,

**Shorthand Notations**

**OASS** - Online Assignment Submission System

**SFS -** St. Francis School

**1.Overview**

This section of the document is the introduction to St. Francis Higher Secondary School’s proposal to complete the software development portion of the Web-Based Online Assignment Submission System project(“the project”). It will describe the purpose of the project and the objectives that are to be accomplished, the assumptions and constraints that underlie the effort, the deliverables that will be produced by the project, and the summary of the project schedule and budget.

**1.1 Project Summary**

**1.1.1 The Client Organization**

St. Francis Higher Secondary School is an educational institute located in Pithampur Dist. Dhar Madhya Pradesh. Nearly, 3000 students are studying here from Class Nursery to Class 12th . Previously all the assignments are submitted manually by the students but in the wake of COVID-19 all the educational work has been setup to online and all students submit their assignments on WhatsApp group created by their respective subject teachers.

**1.1.2 Purpose, Scope, and Objectives**

The purpose of the project is to analyse the requirement of, design, implement, and maintain the software for both the administrator and users.

This web-based app is intended to solve the client’s tedious job of assignment submission. This system will provide a user interface to both the students and teachers at the client’s organization.

This system will keep track of all the assignments and as well as assigned and submission date and is intended to generate the report of students who submitted the assignments in Excel file.

All the activities directly related to the purpose are considered to be in scope. All activities that are not directly related are considered out of the scope.

The objectives of the project are as follows:

* Complete the project by the project due date.
* Provide all the deliverables to the client by the project due date.
* Fulfil all the requirements, as in the SRS, of the software deliverable.

**1.1.3 Assumptions and Constraints**

The project will be planned with the following assumptions:

* this project is a component of larger project(web app of an organization)
* It will deliver the software component of the larger project.
* This system needs a web server on which the system is being run and other computers via the Internet.
* A well-organized document is required at the end of this project in order to explain the functioning of the project.

**1.1.4 Schedule and Budget Summary**

The project has the following high-level schedule:

* Delivery of the baseline project: 21 December 2020
  + SRS - 21 December 2020
  + SDD - 21 December 2020
* Software Product ready for operation: 28 February 2021

**Budget**

Since this is a web app and so budget is 0.

**2. Project Deliverables**

The following items will be produced by the OASS System:

* A **Software Project Management Plan** defining the technical and managerial processes necessary for the development and delivery of the OASS system (this document).
* An **Agreement** between client and developers, representing a contract between the client and the developers of what is going to be delivered.
* A **Requirements Analysis Document** describing the functional and global requirements of the system as well as 4 models - the use case model, the object model, the functional model and the dynamic model. This document is created in interaction with the application domain experts.
* A **System Design Document** describing the design goals, tradeoffs made between design goals, the high level decomposition of the system, concurrency identification, hardware/software platforms, data management, global resource handling, software control implementation and boundary conditions. This document forms the basis of the object design. This document is read by the analyst as well as the object designer.
* An **Object Design Document** is which is composed of two documents. The first document is an updated RAD. The code related data will be in the form of JavaDoc output from the code from each team.
* A **Test Manual** describing the unit and system tests performed on the OSS system before delivery along with expected and actual results. This document is used by the developers and maintainers.
* **Source code** for all subsystems of the OASS System.

All the items listed in this subsection are the deliverables requested by the client prior to the completion of the project.

* Software program
* Software Documentation
  + Installation Documentation
  + End-user Documentation
  + Future update documentation
* Installation of the software program and associated functionalities.
* Software Training
* Project Documentation
  + Software Requirement Specification
  + Software Design Specification
  + Software Project Management Plan

**3. Project Organization**

#### **2.1.1 Project Planning**

Project planning includes description of project tasks, activities and functions, dependencies, resource requirements and a detailed schedule. This activity results in the software project management plan for the OASS System. Another output of the planning phase is the project agreement, which is issued after the design activity is completed.

#### **2.1.2 Requirements Analysis**

The requirements analysis activity takes the problem statement and reviews it in terms of consistency, completeness and feasibility. During this activity, a set of models of the proposed system is determined by interacting with the clients resulting in the requirements model. The main part of the requirements model are four models: the use case model describing the complete functionality of the system, the object model, the functional model and the dynamic model.

#### **2.1.3 System Design**

The purpose of the system design activity is to devise a system architecture that maps the analysis model to the chosen target environment. The major part of the system design phase is the design of subsystems, that is, the decomposition of the system with respect to the chosen target platform. The system design activity also refines the use cases from the analysis model and describes in terms of interaction diagrams how the objects interact in each specific use case.

#### **2.1.4 Analysis Review**

Review of software project management plan, requirements analysis and design. The meetings will take place on Dec 28 and Dec 30 from 9:00 - 10:20 in SFS School. The Analysis Review consists of a set of presentations given by the author of the PAID project.

#### **2.1.5 Client Project Review**

This will consist of a review of project plan, requirements analysis and design decisions. The client liaison will be present at the meeting. The meeting will take place on Jan 5 from 9:00-10:20 in SFS School. The Client Project Review presentation slides will be made available to the client.

#### **2.1.6 Functional Prototype Demonstration**

This activity involves successful execution of a functional prototype of the OASS System using stubs. The functional prototype of the OASS system will be presented during the internal review on January 5, 2021.

#### **2.1.7 Object Design Phase**

The object design phase specifies the fully typed API for each subsystem. New classes are added to the analysis object model if necessitated by the system architecture. Attributes and methods for each object are fully typed. Each team will submit the API by posting it on CVS. This ensures that other teams have access to APIs and can configure their code to be consistent with the other subsystems.

#### **2.1.8 System Integration Prototype Demonstration**

This activity involves the demonstration of a fully functional system prototype based on the subsystem decomposition. Each subsystem is represented by its service. All service operations can be called by other subsystems using remote method invocation. The implementation of the services can be stubbed out. The prototype will consist of an implementation of all the scenarios being demonstrated.

#### **2.1.9 Implementation**

The focus of this activity is on coding the individual objects described in the object design document.

#### **2.1.10 Unit Testing**

During unit testing, test suites are designed and executed for objects or collections of objects in each subsystem. Unit testing enables the individual subsystems to be tested independent from the status of the other subsystems. The result of this activity is part of the test manual that describes how to operate the test suite and how to interpret the test results. The test cases are a part of the Test Manual.

#### **2.1.11 System Integration**

During this activity an integration strategy is devised that specifies the order in which the subsystems of the OASS system are integrated and tested with respect to the use cases defined in the analysis model. The system integration strategy and the subsystem tests are described in the Test Manual.

#### **2.1.12 System Testing**

**Structural Testing:** This activity tests the major data paths in the complete OASS System.

**Functional Testing:** Tests the major functionality (use cases) with the complete OASS System. The basis for the functional testing activity is the test manual which is revised according to the results of the system testing phase.

**Alpha-test (Client Acceptance Test):** The system is tested to make sure it passes the client acceptance criteria as defined in the project agreement. The test schedule is posted as a part of the overall project schedule.

#### **2.1.13 Manual Integration**

During this activity, the project deliverables are revised. As a result, a complete set of documents consisting of the software project management plan, requirements analysis document, software design document, test manual and source code is made available on the project home page.

**2.1.14 Client Presentation**

At the Client Presentation, a slide presentation and software demonstration will be given in the Auditorium at St. Francis School. The software developed during the project will be demonstrated for the client acceptance test. The clients will attend the client acceptance test in person or via video conference. The demonstration will have different presenters for each of the scenarios being supported.