IS 244 – Systems Analysis and Design

Assignment 1 – Project Planning

# Important Dates

* Due: February 20, 2022

# Overview

The purpose of this assignment is to introduce you and have you practice the tools and techniques for project planning. This assignment covers the functions that project managers use the most, including project activity plan and control.

# Case Background

As the head of information systems at Taibah University, you have been assigned the task of developing a new student registration system. The university wants to use a web-based 3-tier system to replace its legacy system that was developed based on mainframe technology. The new system will allow students to register for courses and view report cards online. Professors will be able to access the system to sign up courses that they wish to teach as well as to record student grades. In January 2021, project organizations were formed to develop the new system. In this assignment, we’ll focus on a small project team that was assigned to design and implement the new system.

The starting date of the project was set on 26/1/2021. The project was roughly divided into five task categories:

* **Initiating Tasks:** This category consists of necessary tasks to start the project including: initial meeting with project sponsor, research similar projects, draft project requirements, develop a project charter.
* **Planning tasks:** This category includes all planning tasks: develop WBS (work breakdown structure), determine task relationships, estimate task duration, assign resources, enter cost information, review Gantt and PERT charts, and review plan with stakeholders.
* **Executing tasks:** This category includes tasks in a typical software development cycle: analysis, design and implementation.
* **Controlling tasks:** This category includes the following tasks: status reports, enter actual project performance, review reports, and “adjust plan, if needed”. The task “Status reports” is specified as a recurring task (i.e., a status report meeting would be held every Wednesday with duration of 1 hour).
* **Closing tasks:** The following tasks are involved in this category: prepare final project report, present the report to stakeholders, and prepare lessons learned.

Table 1 provides a description of the 30 tasks that were initially specified in the project’s scope definition stage.

Table 1 – Work Breakdown Structure (WBS)

|  |  |  |  |
| --- | --- | --- | --- |
| **#** | **Tasks** | **#** | **Tasks (Cont’d)** |
| 1 | Start Project | 16 | Review plan with stakeholders |
| 2 | Initiating tasks | 17 | Executing tasks |
| 3 | Initial meeting with project sponsor | 18 | Analysis tasks |
| 4 | Research similar projects | 19 | Design tasks |
| 5 | Draft project requirements | 20 | Implementation tasks |
| 6 | Review with sponsor and other stakeholders | 21 | Controlling tasks |
| 7 | Develop project charter | 22 | Status reports |
| 8 | Charter signed | 23 | Enter actuals |
| 9 | Planning tasks | 24 | Review reports |
| 10 | Develop WBS | 25 | Adjust plan, if needed |
| 11 | Estimate task duration | 26 | Closing tasks |
| 12 | Assign resources | 27 | Prepare final project report |
| 13 | Determine task relationships | 28 | Present final project to stakeholders |
| 14 | Enter cost information | 29 | Prepare lessons learned |
| 15 | Review Gantt and PERT chart information | 30 | End Project |
| **Note:** Task 22 (Status Reports) will later be changed to a recurring task. | | | |

Based on the scope definition and the WBS, Table 2 shows task duration estimates, and precedence relationships among the tasks (logic table). The unit of duration is number of days.

Table 2 – Logic Table with Task Duration Estimates

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **#** | **Task** | **Duration** | **Predecessors** | **Resource Name** |
| 1 | Start Project | 0d | - |  |
| 2 | Initiating tasks | - | 1 |  |
| 3 | Initial meeting with project sponsor | 1d | 1 | Patricia Manning |
| 4 | Research similar projects | 5d | 3 | Steve Anderson |
| 5 | Draft project requirements | 3d | 4 | Steve Anderson |
| 6 | Review with sponsor and other stakeholders | 1d | 5 | Patricia Manning |
| 7 | Develop project charter | 1d | 6 | Steve Anderson |
| 8 | Charter signed | 0d | 7 |  |
| 9 | Planning tasks | - | 8 |  |
| 10 | Develop WBS | 5d | 8 | Steve Anderson |
| 11 | Estimate task duration | 5d | 10 | Steve Anderson |
| 12 | Assign resources | 4d | 10 | Patricia Manning |
| 13 | Determine task relationships | 2d | 10 | David Aaker |
| 14 | Enter cost information | 3d | 10 | Patricia Manning |
| 15 | Review Gantt and PERT chart information | 1d | 13 | Steve Anderson |
| 16 | Review plan with stakeholders | 1d | 11,12,13,15 | Patricia Manning |
| 17 | Executing tasks | - | 16 |  |
| 18 | Analysis tasks | 20d | 16 | Steve Anderson |
| 19 | Design tasks | 30d | 18 | David Aaker |
| 20 | Implementation tasks | 20d | 19 | Isabel Newman |
| 21 | Controlling tasks | - | 8 |  |
| 22 | Status reports | - | 8 |  |
| 41 | Enter actuals | 60d | 8 | Isabel Newman |
| 42 | Review reports | 60d | 8 | Patricia Manning |
| 43 | Adjust plan, if needed | 1d | 8 | Steve Anderson |
| 44 | Closing tasks | - | 20 |  |
| 45 | Prepare final project report | 3d | 20 | Steve Anderson |
| 46 | Present final project to stakeholders | 1d | 45 | Patricia Manning |
| 47 | Prepare lessons learned | 2d | 46 | Isabel Newman |
| 48 | End Project | 0d | 47 |  |
| **Note:** Task 22 (Status Reports) is entered in MS Project as a recurring task. | | | |  |

There are four members in the team: Patricia Manning, the project manager; Steve Anderson, the systems analyst; David Aaker, the database analyst; and Isabel Newman, an intern.

Table 3 – Pay Rate of Project Team Members

|  |  |
| --- | --- |
| **Role** | **Resource Name** |
| Project Manager | Patricia Manning |
| Systems Analyst | Steve Anderson |
| Database Analyst | David Aaker |
| Intern | Isabel Newman |

## Task 1-1. Project Scope Management

Enter the tasks in MS Project as specified in Table 1. Set the project start date as 23/1/2022. Specify the following tasks in the task list as summary tasks: task 2 (initiating tasks), task 9 (planning tasks), task 17 (executing tasks), task 21 (controlling tasks), and task 26 (closing tasks). Specify/identify the following tasks in the task list as milestones (duration equals zero): task 1 (start project), task 8 (charter signed), task 30 (end project). Specify task 22 (status report) as a recurring task - every Wednesday with duration of 1 hour.

## Task 1-2. Project Time Management

Enter duration estimate for each task as specified in Table 2. Then link the tasks according to the precedence relationships among the tasks. Enter the resources according to Table 2.

# Submission Instructions

Congratulations, you are almost done with the assignment. The final step is to submit it.

**Submission instructions:**

* (1) MS Project file(s), and (2) a PPT file with demonstrations in what you did during the assignment and how you did it (print screens to the tables at the end and the Gantt chart ). Submit all your file through the **blackboard** system, **Assignment** link, **before** February 20, 2022.