Practicals

Appendix [2305 BAIT3153 Assignment Spec](https://docs.google.com/document/d/1DlfZTNXE-OMg2uu06Z1BD3PJe3g2mt4KayBqSyHgbL4/edit?usp=sharing)

# Practical 1 (Week 1- 3)

1. Analyze the scenario of your selected organization.
   1. Are there any problems in the current business process(es) that should be solved? Does the current process(es) add value to the business? Does the current process(es) help the organization achieve its business needs or the stakeholders’ valid desires?
2. Perform project initialisation activities
   1. Identify the goals and expected objectives of the project.

Note: Goals are high-level, general statements about the aims of the project, while objectives are detailed statements about what the project should accomplish (refer to appendix 2.1)

* 1. Establish stakeholders requirements
  2. Form project team
  3. Prepare communication plan
  4. Define project scope (create a work breakdown structure) and exclusions

# Practical 2 (Week 3-4)

**Project Planning**

This is focused on the activities in project planning and estimation, which includes defining activities, sequencing activities, estimating activity resources, estimating, durations, and developing the schedule.

1. Identify a suitable software process model as well as the required activities for this project.
2. Using Microsoft Project,
   1. Enter the project information with the appropriate start and/or finish date.
   2. Set the base calendar for the project with the appropriate workdays and working hours. Also include exceptions such as public holidays, etc.
   3. Prepare a *Gantt chart (Microsoft Project)* with the task ID, task name, and duration.
   4. Allocate project major tasks: Tasks and subtasks must include the estimated durations, concurrency, and task dependencies information.
   5. Adjust the time scale, establish deadlines and milestones.

# Practical 3 (Week 5-6)

**Resource Management**

1. Determine the **resources** (e.g. labor, equipment, materials, expenses, etc.) required for the various tasks or subtasks.
2. Skill and experience play a significant part in determining the time taken and the quality of the final product. Identify the project roles and responsibilities.
3. As part of the human resources management and selection process, create a weighted scoring model to evaluate candidates for project team member positions.
4. Assume that you have acquired your project team.
   1. Set a resource calendar for each team member: a team member may only be available for certain days and working hours each week.
   2. Allocate the roles/individual team members to the project’s tasks or subtasks.
5. Resource scheduling depends on the work schedule (or project calendar), tasks dependency (predecessor) and manpower. If there is any *resource overallocation*, apply *resource leveling* in the Gantt chart and revise your project plan accordingly.
6. Identify the reports that may be generated by Microsoft Project that will help you communicate information about the project to the different stakeholders.

# Practical 4 (Week 7-8)

As you work on the following parts, reflect on their importance of project control and monitoring in a software development project.

1. For risk projection, prepare a **risk log**

(includes impact value, category, probability, risk mitigation, monitoring and management actions)

* Identify possible challenges / problems for your project scenario.
* Suggest and justify some corrective actions to handle the identified challenges / problems.

\*Note: each team member is required to prepare ONE(1) Risk log (refer Tut 5 Q4b)

1. Requirement change management

* Identify changes to the scope of your project that the customer requires.

1. Revise the project plan (Gantt Chart) to address the identified problems or requirement changes.

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# Practical 5 (Week 9-10)

For software process improvement, you have to consider what aspects of the process need to improve which are related to the project goals.

1. Identify ONE (1) important goal for improving the software process of the project.

The **Goal Question Metric (GQM) specification** should include the following details:

* Identify ONE(1) goal related to the project
* Formulate at least ONE (1) question to assess the suggested goal.
* Identify and explain TWO (2) appropriate software metrics for each question.

\*Note: each group is required to prepare TWO(2) GQM specifications.

# Practical 6 (Week 11-12)

1. Explain the tasks that you have undertaken for your project. (Contribution for Responsibility)
2. Provide justification for your choices and action taken for your project.
3. Oral presentation (individual)