# COMP6204 Software Project Management and Secure Development- Coursework

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| **Assignment:** | Software project initiation and planning | **Lecturer**: | ra3@ecs | **Weighting**: | 30% |
| **Deadline**: | 12/12/2024, **16:00** | **Feedback**: | 30/01/2025 | **Effort**: | 45 hours per person |

## I. Objective

This assignment is group coursework. The group allocation will appear on the course website. We expect each team member to contribute equally to the project work. A Mark Distribution Form is provided to record each member's contribution, which should be signed by all members and submitted as the first page of your report. If you face any issues within your group that you cannot manage, please let me know as soon as possible.

The goal of this CW is to practice project management planning for the provided case study using the software and tools of your choice. The aim is to apply the PMI approach to project management, conducting the project initiation and planning phases as outlined below. Using various techniques and tools covered in the lectures, you will generate a planning report and the necessary outputs for the given case study. You should be able to apply the knowledge you gain from this exercise to managing actual projects. Below is a detailed procedure to accomplish this assignment.

## II. The Case Study

Your case study is about producing a software system to support the academic peer review process. Peer review is the independent assessment of research papers by experts in your field. The purpose of peer review is to evaluate the paper's quality and suitability for publication. Peer review is vitally important to uphold the high standards of scholarly communications and maintain the quality of individual journals. It is also a crucial support for the researchers who authored the papers. A software system can considerably improve the efficiency of this multi-stage and time-consuming process. The following section describes the review process. Treat this description as the foundation for planning a project to develop such a software system.

## II. An Overview of the peer review process

The peer review process is a vital component of academic research and publishing. It serves as a quality control mechanism to ensure that scholarly articles meet rigorous standards of accuracy, validity, and significance. For researchers, navigating the peer review process can be both daunting and crucial for their professional growth. Here we provide a step-by-step guide to help you better understand and navigate the peer review process.

> **Step 1:** Submission – The first step in the peer review process begins with the submission of a research manuscript to a scholarly journal. Researchers should carefully select a journal that aligns with the scope and focus of their study. It is essential to review the journal's guidelines for authors and formatting requirements to ensure compliance. Once the manuscript is ready, it can be submitted through the journal's online submission system.

**Step 2:** Editorial Assessment – After the manuscript is submitted, the editor-in-chief or the handling editor of the journal performs an initial assessment. This assessment involves evaluating the manuscript's fit with the journal's scope, overall quality, and adherence to formatting guidelines. If the manuscript meets these criteria, it proceeds to the next step. However, if the manuscript is deemed unsuitable for publication, it may be rejected at this stage, and the researcher will receive a notification of rejection.

**Step 3:** Peer Review Assignment – If the manuscript passes the initial assessment, the editor assigns it to a group of experts in the field for peer review, usually two to three reviewers. These experts, often referred to as reviewers or referees, are typically researchers or scholars with expertise in the subject matter. The identities of the reviewers are kept anonymous to the authors and vice versa to ensure impartiality and minimise bias. Reviewers are selected based on their knowledge, experience, and availability to provide valuable feedback on the manuscript.

**Step 4:** Peer Review – During the peer review process, reviewers thoroughly evaluate the manuscript's content, methodology, originality, and significance. They assess the strengths and weaknesses of the study, identify any errors or gaps in the research, and provide constructive feedback to improve the manuscript. Reviewers may also suggest revisions, additional experiments, or further analysis if necessary. The review process is typically conducted within a specific timeframe, which varies depending on the journal's policies.

**Step 5:** Decision – Once the peer review is complete, the reviewers submit their reports to the editor. Based on the feedback received, the editor decides regarding the manuscript. The decision can fall into several categories, including:

1. Acceptance: The manuscript is accepted for publication without any major revisions.
2. Minor revisions: The manuscript requires minor revisions and improvements before final acceptance.
3. Major revisions: The manuscript requires significant revisions and further review before a final decision can be made.
4. Rejection: The manuscript is not suitable for publication in the journal.

**Step 6:** Revision and Resubmission – If the manuscript requires revisions, the researcher is notified and provided with the reviewers' comments. Researchers should carefully address each comment, revise the manuscript accordingly, and provide a detailed response to the editor explaining the changes made. The revised manuscript, along with the response letter, is then resubmitted to the journal.

**Step 7:** Final Decision and Publication – Upon receiving the revised manuscript, the editor re-evaluates it along with the responses and revisions. Depending on the extent of revisions, the manuscript may be sent back to the reviewers for further evaluation. The final decision is made by the editor, considering the reviewers' recommendations and the revised manuscript. If accepted, the manuscript goes through the publication process, including copyediting, typesetting, and proofreading, before it is officially published in the journal.

**Step 8:** Post-Publication – Once the article is published, researchers should be notified and provided with a link to the final version. They can promote their work through various channels, such as social Google Scholar with other researchers. As it is crucial to engage with the scientific community, respond to queries and comments, and build on the research through further studies or collaborations.

## III. Your tasks

### Project Report

In this project, you must use a ***predictive*** approach. The early stages of the project management process, specifically the initiation and planning phases, are the focus of your tasks. Concerning the required sub-process/outcomes, the following table provides a list of sub-processes and outcomes you must complete. You should form your team and start working on this project promptly. In your report, you should aim to provide a clear structure, including a title page showing your team information, a content page, and sections and subsections representing the required outputs, as indicated by the table below. For the budget and duration, you can assume that the project is defined as being completed in ***one calendar year*** and has a ***budget of £200,000***. You should consider only the human resource budget for completing identified activities. You are not required to take electricity, building, and physical equipment costs, such as chairs, tables, computers, networks, hardware, and software, into consideration in your planning. The University provides all these items.

**Table 1. Tasks List**

| Phase | Tasks |
|---|---|
| **1. Initiation** | |
| | **Defining Team Organization & Responsibility Assignment Matrix** |
| | Create the Project Charter and Assumption Log |
| | **Identifying project stakeholders and creating a Stakeholder Register** |
| **2. Planning** | |
| | **Develop a Project Management Plan** – Should include the following sections |
| | **Plan and define project scope** (Out-of-scope statements can be included, describe the deliverables)<br>**Collect requirements and produce the requirement document** – Identify functional and non-functional requirements for your system. Produce each requirement in a separate numbered sentence. Requirements should be grouped by some method (e.g., by stakeholder, subsystem, development iteration, etc.). |

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| | **Create Work Breakdown Structures (WBS**) - The WBS should include all tasks needed to meet the scope of your project. You should provide a clear structure for tasks, subtasks, and work packages. |
| | **Create the Activity List and Sequencing of Activities** – Present your project schedule in AON with critical path analysis. |
| | **Estimate activity durations, develop schedule baseline and milestone list** - Based on your WBS, estimate the duration of each task in Gantt chart format. Document the method used to create your estimates. |
| | **Produce Resource Assignments & Responsibility Assignment Matrices** – Determine how many of each type of resource is needed to perform each task.<br>**Produce Resource Breakdown Structure & Resource Histogram**. |
| | **Produce Risk Register** – Show a risk analysis for your project, including at least eight risks. Include impact analysis (prevention, detection, & mitigation) and prioritization (based on impact assessment). |
| | **Produce cost baseline** – This should include cost estimates for tasks and their resources, cost budgeting for the whole project.<br>**Cost Control** – define processes. |
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## IV. Relevant Learning Outcomes (LOs)

1. Acquire experience in working in groups and recognise interpersonal dynamics in a small team.
2. Apply project management concepts to a given case study.
3. Evaluate and critically reflect on different dimensions of project management with an emphasis on the initiation and planning phases.
4. Demonstrate knowledge and understanding of the above aspects by producing good quality documentation.

## V. Marking Scheme

| *Criteria* | *Description* | *LOs* | *Total* |
|---|---|---|---|
| Team organisation, stakeholders, and project charter | Clear project purpose or justification, measurable project objectives, clear assumptions, and constraints, realistic assignment matrix, accurate set of stakeholders | 1,2,3 | 10 |
| Project management plan, project scope, and requirements | Effective project plan, clearly identifying aims, deliverables, scope, schedule, cost, and human resources.<br><br>Accurate and comprehensive list of requirements | 1,2,3 | 20 |

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| Work Breakdown Structures (WBS), Activity Lists and sequencing of activities, activity durations, schedule baseline and milestone list | Accurate WBS and Activity Lists, clear sequencing and good estimation of duration, effective milestones, effective use of diagrams and tools, provide multiple representation of the relevant aspects of the project at different level of details | 1,2,3 | 40 |
| Resource Assignments & Responsibility Assignment Matrices<br><br>Resource Breakdown Structure & Resource Histogram | Effective and balanced Resource Assignments, good alignment of the Resource breakdown structure & Resource Histogram with the WBS and Activities list. | 1,2,3 | 10 |
| Risk register<br><br>Cost baseline | Accurate risk identification and documentation<br><br>Good estimation of the costs and effective distribution of the budget | 1,2,3 | 10 |
| Presentation | Accurate diagrams & templates, good quality of English, layout, clarity of purpose, linking between templates and diagrams and the text of the report; readability and clarity of | 4 | 10 |

*Late submissions will be penalised at 10% per working day. No work can be accepted after feedback has been given. Please note the University Academic Responsibility and Conduct. The marking scheme is indicative, and all marks returned to students are for feedback purposes. These marks will be prior to moderation and before late penalties are applied.*