

# Software Quality and Measurement 400

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## Assignment One - Software Project Estimation

This assignment is to be done in groups of four to six students with a single entry handed in on both hard and soft copy. It is worth 25% of the final mark for this unit. A first draft is to be shown to the lecturer on or before the tutorials in the week starting 19th April with a short formal presentation (including a one page information sheet), covering your approach.

The assignment is to produce a template/checklist for the estimation of software projects. Note it is *NOT* to estimate or plan an actual project - it is to devise a tool for the estimation of any or all parts of a project. It is expected that this tool will be useful in the professional activities of graduates.

The work may be done in four stages:

(i) Discuss the work, consider ways of going about it and produce a list of members of the group with their roles and responsibilities. It is suggested that there be a team leader and a document coordinator plus researchers, writers and reviewers.

(ii) Review existing material, text books, standards. Design the structure of the tool (contents, layout, level of detail, etc).

(iii) Produce a first draft of the template to be demonstrated (i.e. in a form suitable for presentation to a tutorial) on 20th April or earlier (worth 5%).

(iv) Attending to feedback from (iii), produce a final copy of the tool. The group is to hand in one complete printed listing of the template/checklist plus a URL or a copy on CD-ROM or floppy disk. The lecturer may retain this copy. Each member of the group is to have their own personal copy.

The tool should be suitable for use with any development model (all life cycle phases, a prototype, or an increment to a system) and for any size project (it can be easily cut down for small projects). Its aim is to provide as much assistance as possible to the project planner. It should cover the following major activities:

- Determining clients needs (Feasibility, Systems analysis and Requirements Specification)
- Design of the solution (broad and detailed system design)
- Implementation of code and all other deliverables (including acquisition or reuse of externally produced components)
- Delivery of system (Integration of all parts, hardware, installation)
- plus the feedback from a Post implementation review

For each activity, there should be assistance with estimation of time and resources, identification of milestones, assessment of possible risks.