GUJARAT TECHNOLOGICAL UNIVERSITY

MASTERS IN COMPUTER APPLICATION (Integrated MCA)

Year – I (Semester – II) (W.E.F. JAN 2014)

Subject Name: Software Project-2 (SP-2)

Subject Code: (4420605)

Preamble

The main purpose of a software project is to enable students to apply their learning to develop software for different applications. This, in turn, will equip them to develop enough knowledge, skills and confidence to solve real-life problems, and, thereby, enhance their chances of getting good employment.

But it will be realized only when faculty members along with students put their sincere efforts. These guidelines are aimed at assisting faculty members and students to achieve the above-stated objectives.

Project Selection (Statement)

- Project statement for most of the students will be derived from the concepts either already learnt or being learnt in the current semester. However, there may be some students willing to take up projects in areas, which are out of course curriculum.
- Irrespective of the areas, from where project statements are derived, it should be ensured that the project definition is challenging. However, project scope should be time bound, measurable, and achievable.
- It is recommended that the project list is prepared by the faculty (students may choose a project outside the list based on his interest). It is also recommended that help from Industry may be sought in finding interesting industry problems.
- Project definition can be taken from either course subject, or real-life projects, or research-type of projects, or from any exciting area (e.g. Gaming, etc.)
- It should be ensured that project definitions are not repeated.
- It is strongly recommended that faculty guides should take ownership of the student projects being guided by them. This will help the next batch of students (or even same students) to extend and build on the previously done projects.
- The project should be able to test the student's ability to use the technology and the features of the language he/she studied during the semester even if the problem does not belong to the curriculum.

Project Execution

- Students should be better be trained and oriented to go through all stages of the software development life cycle (SDLC)
- During initial semesters, students need not follow the SDLC life cycle steps very formally. However, they should be encouraged to follow these steps even in an informal and in a preliminary manner.
- Project statement and scope should be written very clearly along with potential benefits (and the beneficiaries) right from the initial semesters.

- Students should be oriented to follow the concept of algorithmic approach right from the initial semesters.
- Coding standards should be followed meticulously. Clear justification of data structures used and approach taken is appreciated.
- Students should prepare test plan, test data and should go through testing of their software.

Project Monitoring

- Projects have a tendency to go through time overrun and cost overrun. Therefore, the project should be monitored frequently, regularly, and closely.
- Monitoring would be possible if the project plan is first prepared with clearly stated mile-stone events.
- Project activities should include SDLC life cycle stages, and the estimated time to complete a milestone activity will be prepared for each SDLC stage. Even if SDLC is not strictly followed, it is advised to record milestone events which represent critical points of the project development process.
- Monitoring would be done with respect to the project plan. Strategy and action-plan should be regularly prepared to cover any shortfall that is observed during monitoring of the project
- It is recommended that the project plan and monitoring is properly documented and the record is maintained.

Project Evaluation

- Project evaluation will be formally done as per the examination scheme started by GTU.
- Based on periodic monitoring, internal marks will be given out of 30 marks, based on the quality and quantity of work done at each stage of the SDLC by students.
- Each student team will be required to present the project for 10-15 minutes to external examiners. Examiners may ask for an explanation of the code and other aspects of the project. The recommended team site is 4.
- Additionally, projects can be voluntarily got evaluated by industry professionals to get a good feedback about the suitability of project definitions and utility value to industry.
- Such industry evaluations will improve the status of the students and their institutes in addition to enhancing employability of the students.