410448 & 410455: Project Work Book
(Guidelines and Log)
Fourth Year Computer Engineering

Year 2018 – 2019

Group/Project ID	:	
Team Members	:	
	:	
	:	
	:	
Project Title	:	
Project Guide	:	
	:	
Area of the Project	:	

Department of Computer Engineering,

MIT Academy of Engineering, Alandi(D)

General Instructions

1. Students should enter the correct information in the work book.
2. Get all entries verified by respective project guide. No changes are to be made without project guide permission.
3. Students should report to their respective guides as per the schedule and its log is to be maintained in the work book.
4. Follow all deadlines and submit all documents strictly as per prescribed formats.
5. The work book should be produced at the time of all discussions, presentations and examinations.
6. The work book must be submitted to project coordinator/ guide/ department /College after successful examination at the end of year.
7. All documents and reports are to be prepared in Latex only (All the formats specifications provided adheres to MS Word but consequently applicable to final project report published using Latex)
8. Submit hard as well as soft copy. Maintain one copy with each member.

Savitribai Phule Pune University, Pune
Computer Engineering

Program Educational Objectives

1. To prepare globally competent graduates having strong fundamentals, domain knowledge, updated with modern technology to provide the effective solutions for engineering problems.

2. To prepare the graduates to work as a committed professional with strong professional ethics and values, sense of responsibilities, understanding of legal, safety, health, societal, cultural and environmental issues.

3. To prepare committed and motivated graduates with research attitude, lifelong learning, investigative approach, and multidisciplinary thinking.

4. To prepare the graduates with strong managerial and communication skills to work effectively as individual as well as in teams.

Program Outcomes

Students are expected to know and be able –

1. To apply knowledge of mathematics, science, engineering fundamentals, problem solving skills, algorithmic analysis and mathematical modeling to the solution of complex engineering problems.

2. To analyze the problem by finding its domain and applying domain specific skills.

3. To understand the design issues of the product/software and develop effective solutions with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.

4. To find solutions of complex problems by conducting investigations applying suitable techniques.

5. To adapt the usage of modern tools and recent software.

6. To contribute towards the society by understanding the impact of Engineering on global aspect.

7. To understand environment issues and design a sustainable system.

8. To understand and follow professional ethics.

9. To function effectively as an individual and as member or leader in diverse teams and interdisciplinary settings.

10. To demonstrate effective communication at various levels.

11. To apply the knowledge of Computer Engineering for development of projects, and its finance and management.

12. To keep in touch with current technologies and inculcate the practice of lifelong learning.

About Project Work

The word project comes from the Latin word projectum from the Latin verb proicere, "to throw something forwards" which in turn comes from pro-, which denotes something that precedes the action of the next part of the word in time (paralleling the Greek πρό) and iacere, "to throw". The word "project" thus actually originally meant "something that comes before anything else happens".

<div align="right">(Curtsey Ref- http://en.wikipedia.org/)</div>

The Project is conceiving the idea and implementing it systematically by using the knowledge derived in the course of education mainly to innovate or facilitate. Work involves, study the feasibility of the project, planning project, studying existing systems, tools available to implement the project and state of art software testing procedures and technology with use of case tools.

Work involves, study the feasibility of the project, planning project, studying existing systems, tools available to implement the project and state of art software testing procedures and technology with use of case tools.

The group of Under Graduate students at Final Year students will undertake project over the academic year. Work involves study the feasibility of the project, planning project, studying existing systems, tools available to implement the project and state of art software testing procedures and technology with use of case tools, design is to be implemented into a working model (software or hardware or both) with necessary software interface as an executable package.

a. Objectives and Outcomes:

Objectives -

- To apply the knowledge for solving realistic problem
- To develop problem solving ability
- To Organize, sustain and report on a substantial piece of team work over a period of several months
- To Evaluate alternative approaches, and justify the use of selected tools and methods,
- To Reflect upon the experience gained and lessons learned,
- To Consider relevant social, ethical and legal issues,
- To find information for yourself from appropriate sources such as manuals, books, research journals and from other sources, and in turn increase analytical skills.
- To Work in TEAM and learn professionalism.

Outcomes -

- Students are expected to know and be able to -Solve real life problems by applying knowledge.
- Analyze alternative approaches, apply and use most appropriate one for feasible solution.
- Write precise reports and technical documents in a nutshell.
- Participate effectively in multi-disciplinary and heterogeneous teams exhibiting team work, Inter-personal relationships, conflict management and leadership quality.

b. Guidelines for Selection of Project Work:

Project is one of the significant contributory team works that has to be completed with distinct impression. It is really very difficult to explore the domain of interest / research/ thirst area/ society need. In Toto one cannot figuratively define best project but still there are certain parameters on which we can gauge the quality of project work done. It will be better suited to go for well-defined and relatively safe projects that provide scope for demonstrating proficiency with a low risk of failure especially at Under Graduate level.

General guidelines:

Identifying domain, feasibility and usability of work.

Project work is expected to involve a combination of sound background research (thorough study/ follow a line of investigation), and methodical implementation. Instead of fancied and driven behind the gaudy and ostentatious ideas, the utility has to be emphasized. It is also acceptable to identify the discrepancies/ flaws in the existing system and work accordingly to rectify or improve. It is irrational to select the IDE and the software/ tools before the idea is not yet finalized.

Understanding the way project will be materialized and progressed.

C. Guidelines for Project Evaluation:

Project work is to be evaluated by both Internal and External examiners jointly, unanimously agreeing the following parameters among many others.

1. Problem definition and scope of the project
2. Through Literature Survey
3. Appropriate Software Engineering approach
4. Exhaustive and Rational Requirement Analysis
5. Comprehensive Implementation- Design, platform, coding, documentation
6. Optimization considerations (Memory, time, Resources, Costing)
7. Thorough Testing of all modules and integration of modules
8. Project Presentation and Demonstration (User Interface, ease of use, usability)
9. Presentation of work in the form of Project Report(s)
10. Understanding individual capacity, Role & involvement in the project
11. Team Work (Distribution of work, intra-team communication and togetherness)
12. Participation in various contests, Publications and IPR
13. Documents /Manuals (Project Report, Quick reference, System, Installation guide)
14. Outcomes / Usability / commercial value /product conversion of Work

2. University Syllabus

Savitribai Phule Pune University
(Refer SPPU website for recent syllabus)

Term I

Teaching Scheme:

Tutorial: 2 Hours/Week Term Work Assessment: 50 Marks

Course Objectives:

- To develop problem solving abilities using mathematics;
- To apply algorithmic strategies while solving problems;
- To develop time and space efficient algorithms;
- To develop software engineering documents and testing plans
- To use algorithmic solutions using distributed, Embedded, concurrent and parallel environments.
- To encourage and expose students for participation in National/ International paper presentation activities.
- Exposure to Learning and knowledge access techniques using Conferences, Journal papers and participation in research activities.

Course Outcomes:

- To solve problem in projects;
- To develop SRS and other software engineering documents in the project report;
- To solve problems using multi-core, distributed, embedded, concurrent/Parallel environments;
- To write conference paper;
- To demonstrate presentation, communication and team-work skills.

Tools:

> Preferably 64-bit FOSS tools but if sponsoring company's requirement is non-open source platform then it must be latest and current version of non-obsolete tools. 64-bit i5/i7/Desktops/Mobiles, Latest SAN,3-tier architectures along with latest version of FOSS Operating systems like Fedora 21 or equivalent, LAMP tools, Web server, Applications servers, Database servers, MongoDB or latest open source Big DATA tools, FOSS Programming Tools like gcc,g++,Eclipse, Python, Java and other tools are as per the requirement of the SRS. The documentation tools like Open office, GIT, Latex, Latex-Presentation.

Activity Planning for Tutorial Sessions:

I. Selection of Project Option and Framing the Problem to solve as a Project for the group of 3 to 4 students.

- Option A: Industry Sponsored Project
- Option B: Project as an Entrepreneur
- Option C: Internal Project

II. Internal guide allocation for the BE Project: Assistant Professor/Associate

Professor/Professor as per AICTE norms in Computer Engineering having at least 5 years of full time approved experience can guide the BE Project without compromising on the quality of the work (ref. Note1). The Project laboratory of 4 project groups (3 to 4 students in one group) constituting one laboratory tutorial batch (2 hrs per week), be allocated to the guide. The project group will submit the synopsis including title of the project, Technical Key Words (Ref. ACM Keywords) and relevant mathematics associated with the Project, names of at least two conferences, where papers can be published, Review of Conference/Journal papers (at least 10 papers + White papers or web references, (if any)) supporting the project idea, Plan of project execution using planner or alike project management tool. (Recommended dates: 3 weeks after Commencement of the Term). Preferably, the projects are Industry Sponsored or part of high level research/ Sponsored Research Project that are not conducted for any award of the educational degree or entrepreneurship project.

III. The project conduct and procedures are suggested as detailed below: -

Problem statement feasibility assessment using, satisfiability analysis and NP-Hard, NP-Complete or P type using modern algebra and relevant mathematical models. (recommended date of submission: - 8 weeks before term end).

IV. Use of above to identify objects, morphism, overloading, functions and functional relations and any other dependencies. (Recommended submission date: - 6 weeks before term end) Functional dependency graphs and relevant UML diagrams or other necessities. (recommended submission date: - 3 weeks before term end)

V. Testing of problem statement using generated test data (using mathematical models, Function testing principles) selection and appropriate use of testing tools, testing of UML diagram's reliability. (Recommended submission date: - two weeks before term end)

VI. The index of submission must cover above mentioned 5 heads in addition to the instructions by the guide. Students must submit a Latex Report consisting of problem definition, literature survey, platform choice, SRS (System Requirement Specification)

Document in specific format and high-level design document along with

- Annex A: Laboratory assignments on Project Analysis of Algorithmic Design,
- Annex B: Laboratory assignments on Project Quality and Reliability Testing of Project Design at the end of term-I and
- Annex C: Project Planner and progress report after checking, removing/ avoiding the plagiarism.

Give an additional assignment per reporting plagiarism to be submitted in the report under the Annex heading extra-work. If the project is the replica of any other previous project or work from other unrelated persons than the student's team, such project should be rejected for the term work.

The term work at the end of Term-I shall be assessed and evaluated for 50 marks by the panel of examiners in the subject (Internal (preferably guide) and external examiner from Computer Department of Engineering Colleges). At-least one technical paper must be submitted on the project design in the conferences/workshops in IITs, Central Universities or UoP Conferences or equivalent International Conferences Sponsored by IEEE/ACM and review comments received as Annex D. The examiners must seek answers regarding the suggestions given in the review comments of the paper submitted.

Term-I Project Laboratory Assignments: Tutorial Session

1. Refer Chapter 7 of first reference to develop the problem under consideration and justify feasibility using concepts of knowledge canvas and IDEA Matrix.
2. Project problem statement feasibility assessment using NP-Hard, NP-Complete or satisfiability issue using modern algebra and/or relevant mathematical models.
3. Use of divide and conquer strategies to exploit distributed/parallel/concurrent processing to identify objects, morphisms, overloading in functions (if any), and functional relations and any other dependencies (as per requirements).
4. Use of above to draw functional dependency graphs and relevant Software modeling methods, techniques including UML diagrams or other necessities using appropriate tools.
5. Testing of project problem statement using generated test data (using mathematical models, GUI, Function testing principles, if any) selection and appropriate use of testing tools, testing of UML diagram's reliability.

For Entrepreneurship type project additional assignments: Tutorial Session

6. To sign the MoU/agreement with the Engineering College for the Industry-on-Campus. The college shall provide the company the enclosure with lock-and-key to accommodate required table space, stabilized electricity and the Internet access. The College may host such company for first two years and further by renewing the MoU/Agreement. The college shall provide all the documents necessary for the establishment of the company. The College shall provide all the facilities as per agreement for Rent FREE, without any charges or fees or returns whatsoever for the First Year or Academic Duration of the activity. The college may prepare joint proposal with Industry for the AICTE/Government/University grants if any.
7. To study and establish a partnership company/proprietorship and get the PAN, MVAT, Profession Tax Number and such other necessary legal permissions.
8. Try and prepare clients list and communication with the clients or advertise the product by developing the Company WEB Site.
9. To submit Product Proposal for raising venture capital through government schemes of micro/small sector industries or through private venture capital entities.
10. To submit National/International patent/Copyright for first year to the Government Department of Patents and IPR.
    - Note 1. The guide for an entrepreneurship project shall be a full time approved Professor or Associate Professor possessing qualifications as per AICTE norms.
    - Note 2. If the students fail to complete the entrepreneurship assignments successfully then the project shall be treated as Internal Project for the purpose of assessment.
    - Note 3. All projects are expected to exploit multi-core, embedded and distributed computing wherever possible.

Term II

Teaching Scheme:

Tutorial: 6 Hours/Week   Term Work Assessment: 100 Marks

Oral: 50 Marks

Course Objectives:

- To develop problem solving abilities using mathematics;
- To apply algorithmic strategies while solving problems;
- To develop time and space efficient algorithms;
- To develop software engineering documents and testing plans
- To use algorithmic solutions using distributed, Embedded, concurrent and parallel environments.
- To encourage and expose students for participation in National/ International paper presentation activities.
- Exposure to Learning and knowledge access techniques using Conferences, Journal papers and participation in research activities.

Course Outcomes:

- To solve problem in projects;
- To develop SRS and other software engineering documents in the project report;
- To solve problems using multi-core, distributed, embedded, concurrent/Parallel environments;
- To write conference paper;
- To demonstrate presentation, communication and team-work skills.

Tools:

> Preferably 64-bit FOSS tools but if sponsoring company's requirement is non-open source platform then it must be latest and current version of non-obsolete tools. 64-bit i5/i7/Desktops/Mobiles, Latest SAN,3-tier architectures along with latest version of FOSS Operating systems like Fedora 21 or equivalent, LAMP tools, Web server, Applications servers, Database servers, MongoDB or latest open source Big DATA tools, FOSS Programming Tools like gcc,g++,Eclipse, Python, Java and other tools are as per the requirement of the SRS. The documentation tools like Open office, GIT, Latex, Latex-Presentation.

1. Project workstation selection, installations and setup along with report to the guide. (Recommended submission date: - 3 weeks after commencement of second term)
2. Programming of the project, GUI (if any) as per 1st Term term-work submission. (recommended submission date: - Progress report every week during laboratory hours)
3. Test tool selection for various testing recommended by preferably external guide and generate various testing result charts, graphs etc. including reliability testing. (7 weeks before Term II Conclusion)

4. Review of design and necessary corrective actions taking into consideration feedback report of Term I assessment, and other competitions/conferences participated like IIT, Central Universities, University Conferences or equivalent centers of excellence etc.

5. Students must submit and preferably publish at least one technical paper in the conferences held by IITs, Central Universities or UoP Conference or International Conferences in Europe or US.

6. Final term work submissions in the prescribed format given by the guides consisting of a project report consisting of a preliminary report prepared in term-I, detailed design (all necessary UML diagrams) document, User Interface design, Laboratory assignments on test cases and test results generated by selected project testing tool, conclusions, appendix (if necessary), glossary, tools used and references at the end of Term-II after checking, removing/ avoiding the plagiarism. Give an additional assignment per reporting plagiarism to be submitted in the report under the Annex heading extra-work. If the project is the replica of any other previous project or work from other unrelated persons than the student's team, such project should be rejected for the term work.

7. The Term II examination is conducted by panel of examiners (preferably guide and expert from Industry having at least 5 years' subject experience or senior teacher in the subject in case of non-availability of industry expert). The project assessment shall be done using Live Project Demonstration (in existing functional condition), using necessary simulators (if required) and presentation by the students. The remarks of Term I assessment and related corrective actions must be assessed during examining the term-work.

Term-II Project Laboratory Assignments

1. Review of design and necessary corrective actions taking into consideration the feedback report of Term I assessment, and other competitions/conferences participated like IIT, Central Universities, University Conferences or equivalent centers of excellence etc.

2. Project workstation selection, installations along with setup and installation report preparations.

3. Programming of the project functions, interfaces and GUI (if any) as per 1st Term term-work submission using corrective actions recommended in Term-I assessment of Term-work.

4. Test tool selection and testing of various test cases for the project performed and generate various testing, result charts, graphs etc. including reliability testing.

Additional assignments for the Entrepreneurship Project:

5. Installations and Reliability Testing Reports at the client end.

6. To study Clients Feedback reports and related fix generations.

7. To create Documents will Profit and Loss accounts and balance-sheet of the company.
   - Note: If the students fail to complete the Entrepreneurship assignment successfully then the project shall be treated as Internal Project for the purpose of assessment.

4. Undertaking by Students

MIT | Academy of Engineering

(An Autonomous Institute affiliated to Savitribai Phule Pune University)

Department of Computer Engineering,
Academic Year 2018-19

UNDERTAKING BY STUDENT

We, the students of B.E. Computer hereby assure that we will follow all the rules and regulations related to project activity for the academic year 2017-2018.The Project entitled-

_____

_____

will be fully designed/ developed by us and every part of the project will be original work and will not be copied/ purchased from any source.

Name of the student, seat no and sign of students

1. …………………………………..   …………………………………..   ……..
2. …………………………………..   …………………………………..   ……..
3. …………………………………..   …………………………………..   ……..
4. …………………………………..   …………………………………..   ……..

Name of Guide, Co Guide and Sign

1. …………………………………..   ………………………………….

2 …………………………………..   ………………………………….

5. Instructions Regarding Project Proposal and Finalization

1. The project work may involve the designing a system/subsystem or upgrading / improving an existing system. The design is to be implemented into a working model (software or hardware or both) with necessary software interface as an executable package (installable package or hardware model) along with User & system manual and quick reference guide. A project report including all necessary documents.
2. Group may come up with sponsored project. Sponsorship may not be in terms of money or resources. It might be in terms of just suggesting problem definition and associated guidance. Students may collect the letter required for applying the Institute/Industries for the project sponsorship from project coordinator
3. List of suggested projects, prominent domains and respective expert, whom you may contact for guidance, with Project Coordinator. Students may contact respective staff along with synopsis for the guidance. Students may contact respective staff for projects suggested by them in the respective areas.
4. Meet Project Coordinator for project title registration.
5. Synopsis must include project title, group members, sponsor details (if any), detailed problem definition, area, abstract, details of existing similar systems if any, scope of the project and software-hardware requirements. Sponsorship details include name of sponsoring authority, address, name of guide, sponsorship terms & conditions and respective documents certifying the same from authorities.
6. A Panel of experts will approve the project group and title only after presentation as per schedule. Presentation will cover details mentioned in the synopsis as above.

6. Schedule of Project Work

Semester I

SN	Activity Scheduled	Date
1	Registration of Project groups + Submission of Abstract + Finalize Problem Statement	16/07/2017
2	Submission of Project Synopsis (University Synopsis)	23/08/2017
3	Presentation about progress of Project work (Review I)	First Week of August
4	Presentation about progress of Project work (Review II) + Assignment 1 and 2	Third Week of August
5	Presentation about progress of Project work (Review III) + Assignment 3 and 4	First Week of September
6	Presentation about progress of Project work (Review IV) + Assignment 5 and 6	Third Week of September
7	Submission of partial project report First Week	Last Week of September
8	Submission of partial project report (College Report)	Second Week of October
9	University project Exam	As per University timetable

Semester II

SN	Activity Scheduled	Date
1	Fifth presentation about progress of project Mid of Jan work(Review V)	Mid of Jan
2	Sixth presentation about progress of project work Second week of Feb (Review VI)	Second week of Feb
4	Review of Publication Activity	Last week of Feb
5	Seventh presentation about progress of project Second week of March work(Review VII)	Second week of March
6	Submission of Draft of Report for checking	Third Week of March
7	Submission of final project report and Project Work Last Week of March book to the project Coordinator	Last Week of March
8	Mock Project Examination	First Week of April
9	Project Examination	As per University timetable

7. Copy of Proposal / Synopsis as per format (Annexure I)

Note : All groups delete this line and attach Synopsis as per format here

8. Project Review (Semester I)

MIT Academy of Engineering,

Department of Computer Engineering,
Project Work (Academic Year 2018-19) Project Review (Semester I)
Review-I: Problem Statement, Motivation, Objectives and Literature Review

Student is expected to deliver presentation covering Problem Statement, Motivation, objectives and Literature Review.

SN	Question	Date	Remark/Grade	Sign of Guide
1	Does the statement gives clear identification about what your project will accomplish?			
2	Is the statement short and concise?			
3	Can a person who is not familiar with the project understand scope of the project by reading the project problem statement?			
4	The project's objectives of study (what product, process, resource etc.) are being addressed?			
5	Is similar type of methodology / model used for existing work?			
6	Is the studied literature sufficient to decide scope of the project?			
7	Are the objectives set will help to achieve goal of the project?			
8	Does Research gap identified will lead to find motivation of project?			
9	Does your project contribute to our society by any means and will lead to find motivation?			
10	Are the objectives clearly and unambiguously listed?			
Remark and Suggestions:				

Group ID :

Name and Sign of Guide and Co-Guide :   Sign of HOD

1.

2.

MIT Academy of Engineering,

Department of Computer Engineering,
Project Work (Academic Year 2018-19) Project Review (Semester I)
Project Review-II: Feasibility and Scope

Student is expected to deliver presentation covering Feasibility and Scope.

SN	Question	Date	Remark/Grade	Sign of Guide
1	Is the project's view point is understood?			
2	Is the project goal statement is in alignment with the sponsoring organization's business goal and mission?			
3	Who is the project's end user?			
4	What is the projected cost of producing a product?			
5	Is project achievable in specified (Time, Cost Budget)?			
6	Are the requirements within the scope of the project?			
7	Is the scope properly defined?			
8	Does the problem statement clearly define scope of the project?			
9	Do the project requirements fit into available software and hardware?			
10	Whether the milestones are stated completely and project timeline is given?			
11	Whether risks like technical risks Operational risks, schedule risks, business risks are identified correctly or not?			
12	Whether Risk prioritization is done properly or not and any back up plan is there or not?			
Remark and Suggestions:				

Group ID :

Name and Sign of Guide and Co-Guide :   Sign of HOD

1.

2.

MIT Academy of Engineering,

Department of Computer Engineering,
Project Work (Academic Year 2018-19) Project Review (Semester I)
Project Review-III: Requirement Analysis.

Student is expected to deliver presentation covering Requirement Analysis

SN	Question	Date	Remark/Grade	Sign of Guide
1	Is information domain analysis complete, consistent and accurate?			
2	Is problem statement categorized in identified area and targeted towards specific area there in?			
3	Is external and internal interfacing properly defined?			
4	Are requirement consistent with schedule, resources and budget?			
5	Are all requirements traceable to system level?			
6	What is needed to make the product?			
7	Is there a demand for the produce?			
8	Is identification of stakeholders is done properly?			
9	Whether all requirements are captured and documented in line with scope?			
10	Whether all type of analysis classes are identified or not?			
11	Whether the Acceptance criteria is decided are not?			
Remark and Suggestions:				

Group ID :

Name and Sign of Guide and Co-Guide :   Sign of HOD

1.

2.

MIT Academy of Engineering,

Department of Computer Engineering,
Project Work (Academic Year 2018-19) Project Review (Semester I)
Project Review-IV: Design

Student is expected to deliver presentation covering Design

SN	Question	Date	Remark/Grade	Sign of Guide
1	Are requirement reflected in the system architecture?			
2	Does the design support both project (product) and project goals?			
3	Does the design address all the issues form the requirement?			
4	Is effective modularity achieved and modules are functionally independent?			
5	Are structural diagrams (class, Object, etc.) are well defined?			
6	Are all class associations clearly defined and understood?(Is it cleat which classes provide which services)?			
7	Are the classes in the class diagram clear? (What they represent in the architecture design document?)			
8	Is inheritance appropriately used?			
9	Are the multiplicities in the use case diagram depicted in the class diagram?			
10	Are all objects used in sequence diagram?			
11	Are the symbols used in all diagrams corresponding to UML standards?			
12	Are behavioral diagrams (use case, sequence, activity, etc.) well defined and understood?			
13	Does each case have clearly defined actors and input/ output?			
14	Does the sequence diagram matches with class diagram?			
15	Is aggregation/ containment (used) clearly defined and understood?			
16	Whether State charts are capturing system's dynamic behavior correctly or not?			
17	Related to procedural thinking whether DFDs and CFDs along with			

	transaction and transformation flow are done correctly or not?			
Remark and Suggestions:				

Group ID :

Name and Sign of Guide and Co-Guide :   Sign of HOD

1.

2.

9. Internal Evaluation Sheet (Semester I)

Name and Signature of Evaluation Committee:

1. Prof.

2. Prof.

Examiners Feedback and Suggestions:

Signature of Guide   **Sign of HOD**

Bibliography

1. Roger S. Pressman, "Software Engineering: A Practitioner's Approach", 6th Edition McGraw-Hill, ISBN978–0–07–337597–7.
2. Joseph Phillips, "IT Project Management", Tata McGraw-Hill 2003 Edition, ISBN 13: 978-0071700436
3. www.csc.villanova.edu/~tway/courses/csc4181/s2010/srs_template-1.doc
4. http://unipune.ac.in/Syllabi_PDF/revised-2015/engineering/BE-Computer-2012-course-27-8-15.pdf

Annexure i: Final Synopsis (after approval of the project work)

Title Page

Project Group ID/ group
Details Title of the project
Domain such as databases, image processing, network based, web technology based etc.
Team Members (List with Signatures)
Sponsorship details if any (Name, External Guide name and Designation with Signature, e- Mail ID)
Internal Guide (with signature of approval)

Inner Pages:

Keywords (ACM Keywords)
Problem Definition
List of modules/ functionalities
Current market survey: This should include list of similar products available, if any and also their pros and cons.

Scope of the project

Literature survey (List of references only): This should include the list of books, magazines, research papers, web links etc. referred by the students.
Software and hardware requirements of the project
Probable date of completion

Outcomes

Annexure ii: Partial Project Report (Semester I)

A preliminary report of project work (Partial Project Report) is to be prepared as per the guideline given below using Latex and is to be submitted at the end of semester I.

Title Page

> First page containing Name, Topic Name, Guide Name, Year, Branch, and
> College Name etc. (see format displayed herewith)
> Certificate
> Certificate (provided by college)
> Project approval sheet (see format displayed herewith)
> Certificate certifying the project work done approved by the sponsoring authority,
> if any.
> Acknowledgements (if any)
> Thanking any person / staff member / friend if to be done so.

Abstract

> A minimum of 100 words briefing the topic in consideration.
> Keywords
> A minimum of 5 and maximum of 10

Introduction

> Introduction should be minimum of 200 words, briefing of the details to follow. It should cover details of project work, objectives, scope of the project and organization of report.

Literature Survey

> The purpose of the literature survey is to identify information relevant to project work and the potential and known impacts of it within the project area. This section should include a comprehensive report of current market survey done with respect to problem. Include study of similar systems available, if any along with their pros and cons. Identify those areas where there is an absence or scarcity.

Design Details (Phase I to IV)

Phase I: Requirements Analysis

> The Group is to submit a detailed write – up indication the requirements that the project demands, viz.

Actual detailed problem definition.

The definition is to include all that is to be done and is to be put up in the final software and / or Hardware (product) that is to be generated from the years' work (User's point of view).

Requirement may not be final and provision should be available to add features dynamically without affecting the actual flow and design of the document. Modified Requirements (After doing feasibility study) are to be prepared under all the 3 categories listed above from the developer's point of view. The requirement listed herein should be feasible technically from the software / Hardware point of view. The new list is also be categorized in the 3 categories listed above.

Follow the standard format of SRS.

Phase II: Analysis Phase

The group (based on Phase I) is to suggest the paradigm followed by them in the project. The paradigm should be justifiable from Phase I. The various stages and work to be completed under them is to be indicted in detail.

Phase III: Design Phase

ERDs (Optional, decide in consultation with guide)

The group is to draw the ERD (Entity Relationship Diagram) for the project. (This should be justifiable with regard to Phase I & II) The ERD after getting evaluated (by dry running) is to be analyzed for incompleteness from any point of view. The ERD thus validated should be made fair in a presentable fashion. This ERD is to be included in the Report.

IF

The project group is to follow an "Object Oriented" Approach for their Project.

THEN

The group will draw all (all the nine) UML (Unified Modeling Language) diagrams for the project. These diagrams are to be refined in every aspect for this report (as per requirements finalized in phase I) Proper notations are to be used in all the figures drawn. Proper Color-coding if required is to be used. Extensions to diagrams / customizations may be done and represented (if the project demands it)

ELSE (groups following Structured Approach)

The group will draw the DFD-s (Data Flow Diagrams) for the Project. (These should be justifiable with respect to Phase I, II and the ERD) DFD Level 0, Level 1, Level 2 should be drawn in an evolutionary fashion (No entries to appear in Level 2 unless they are in Level 1, which in turn are in Level 0) The DFD's are to be validated and made final in a presentable fashion. Proper Color- coding is expected Extensions to DFD-s may be represented (if the project demands it).

Phase – IV: Planning Phase

The group is to finalize the Front End/ Back End required for the project as per the demands of the project (Software and / or hardware) The Front End/ Back End should be justifiable depending on the complexity of the project. The structure of the database to be finalized depending on the complexity of the project. Any normalization required on the database is done so as to ensure correctness for the future phase. Coding Language / Methodology should be finalized/ Time requirement to be finalized and indicated Actual project plan including major milestones should be decided and finalized.

Rough estimates of lines of code / functions / routines to be made.

Rough estimates of lines of code / Objects / Classes to be made (for Groups following OO Paradigm) Software Reuse /Re – Engineering possibilities are to be expected and indicated Software and Hardware requirement. Probable date of completion. Scope of the project

Phase – V: Prototyping

A prototype is expected which basically includes all the MAJOR features in the project.

The GUI/ Front end is to be prepared. The structure of the database / back end (if any) to be indicated. The prototype is built basically to give a feel of the actual software and / or hardware (Product) that is expected
Major routines / Functions are expected. Conclusions Include conclusions from the work done with a minimum of 50 words.

References

List out Books, Magazines, Thesis, Journals, Web links etc. referred in IEEE format

Plagiarism Check Report

Format of SRS

Software requirement Specification is a detailed write-up indicating the requirements that the project demands. it contains actual detailed problem definition. The definition is to include all that is to be done and is to be developed in the final software and / or Hardware (product) that is to be generated form the years' work (User's point of view). The entries under this section are to be categorized under the categories,

1. Necessary functions,
2. Desirable functions, and others

Requirement may not be final and provision should be available to add features dynamically without affecting the actual flow and design of the document. Modified requirements (after doing feasibility study) are to be prepared under all the 3 categories listed above form the developer's point of view. The requirements listed herein should be feasible technically form the software/ Hardware point of view.
It should include following important requirements.

1. Detailed Problem Definition
2. External Interface Requirements
      User interfaces
      Hardware Interfaces
      Software Interfaces
      Communication Interfaces
3. System Features
      Feature 1
      Feature 2 etc.
4. Other Non- functional requirements.
      Performance requirements
      Safety requirements
      Software Quality attributes.