410448 & 410455: Project Work Book (Guidelines and Log)

Fourth Year Computer Engineering

Year 2022 - 2023

Group/Project ID:

Team Members:
1. _____
2. _____
3. _____
4. _____

Project Title   : _____

Project Guide : _____

Area of the Project: _____

Department of Computer Engineering

Matoshri Education Society's
Matoshri College of Engineering and Research Centre, Nashik
Eklahare, Near Odha Gaon, Aurangabad Road, Nashik
Affiliated to Savitribai Phule Pune University, Pune

Preamble

Project work is one of the most important components of the curriculum for the Engineering Graduate. From conceiving the idea to the materialization of it is a journey that has to be systematized, well defined and well documented to enjoy the full benefits of the efforts undertaken.

Every activity of the project development has its own importance and typical activities are like: Team formation, conceiving the idea, preparing the hypothesis, reporting the progress / development to the guide/ mentor, Interactions, suggestions and improvements, relevant documentations in proper format, schedule plans and visit logs.

Every institute is following their own best methods and techniques as per the guidelines and curriculum at the affiliated university. To bring the uniformity and standardization for the project work there is a need to come together and prepare the comprehensive guidelines regarding it.

This work book for the project work will serve the purpose and facilitate the job of students, guide and project coordinator. This document will reflect accountability, punctuality, technical writing ability and work flow of the work undertaken.

This document will definitely support the work undertaken.

Dr. Varsha H Patil
Coordinator, BoS Computer Engineering
SPPU, Pune

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's 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.

Table of Contents

This booklet is supportive document to rules and a regulation provided by affiliated university curriculum providing recommendations, guidelines and is record of all related activities associated with project. This booklet is provided with the genuine intent to bring uniformity and to systematize the project work and to keep the audit of the work undergone by team members.

Work Book Development Project

Project Institution	Department of Computer Engineering Matoshri College of Engineering and Research Centre, Nashik
Support & Guidance	Dr. Gajanan K. Kharate, Principal, Matoshri College of Engineering and Research Centre, Nashik
Concept and Design	Dr. Varsha. H. Patil BoS Coordinator Computer Engineering , SPPU, Pune Vice Principal, Matoshri College of Engineering and Research Centre, Nashik
Project coordinator	Mrs. Swati A. Bhavsar Assistant Professor, Matoshri College of Engineering and Research Centre, Nashik
Technical Committee Members	1. Dr. Goraksh V. Garje 2. Dr. Parikshit Mahalle 3. Mr. Niranjan L. Bhale 4. Dr. Sunil R. Dhore 5. Dr. Nuzhat Saikh 6. Dr. Sudeep Thepade 7. Dr. Mangesh Bedekar 8. Ms. Swapnaja Hiray 9. Mr. Ranjeet Gawande
Date	5th January 2017
Version No.	3.0
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(For circulation at BoS Computer Engineering, Savitribai Phule Pune University only)

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.

1. 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.

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

(Refer Rubrics – page number 23)

2. University Syllabus

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

Term I
Teaching Scheme:
Practical: 2 Hours/Week   **Presentation: 50 Marks**

Course Objectives:
- To solve real life problems include social, safety, environmental.
- To increase problem solving skills
- To develop communication skills
- To work in a team and develop report writing skills.

Course Outcomes:

CO1: Knowledge Application and Independent Learning: Solve real life problems by applying knowledge and skills keeping eye on current technologies and inculcating the practice of lifelong learning.

CO2: Problem Solving Skills: Analyze alternative approaches, apply and use most appropriate one for feasible solution exhibiting project management skills. Report and present the original results in an orderly way and placing the open questions in the right perspective.

CO3: Communication: Demonstrate effective communication at various levels and write precise reports and technical documents in a nutshell. Appreciate practical implications and constraints of the specialist subject

CO4: Collaboration: Participate effectively in multi-disciplinary and heterogeneous teams exhibiting team work, Inter-personal relationships, conflict management and leadership quality.

CO5: Ethics: Provide solution to problems considering social, safety, environmental, ethical and legal issues.

Guidelines:
Project work Stage – I is an integral part of the Project work. In this, the student shall complete the partial work of the Project which will consist of problem statement, literature review, SRS, Model and Design. The student is expected to complete the project at least up to the design phase. As a part of the progress report of project work Stage-I, the candidate shall deliver a presentation on the advancement in Technology pertaining to the selected project topic. The student shall submit the duly certified progress report of Project work Stage-I in standard format for satisfactory completion of the work by the concerned guide and head of the Department/Institute. The examinee will be assessed by a panel of examiners of which one is necessarily an external examiner. The assessment will be broadly based on work undergone, content delivery, presentation skills, documentation, question-answers and report.

Follow guidelines and formats as mentioned in Project Workbook recommended by Board of Studies

CO Mapping Table:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CO1	3	3	3	-	3	2	-	-	-	-	-	3	3	3	3
CO2	3	3	3	2	-	-	-	-	3	2	3	2	3	3	3
CO3	-	-	-	-	-	-	-	-	-	3	3	-	2	3	2
CO4	-	-	-	-	-	-	-	-	3	3	3	-	3	3	3
CO5	-	-	-	-	-	3	3	3	-	-	-	-	2	3	2
Average	3	3	3	-	3	2.5	3	3	3	3	3	2.5	2.6	3	2.6

Savitibai Phule Pune University
(Refer SPPU website for recent syllabus)
Semester II

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Tutorials: 6 Hours/Week   **Term Work: 100 Marks**
                                                      Presentation: 50 Marks

Course Objectives:
- To solve real life problems include social, safety, environmental.
- To increase problem solving skills
- To develop communication skills
- To work in a team and develop report writing skills.

Course Outcomes:

CO1: Knowledge Application and Independent Learning: Solve real life problems by applying knowledge and skills keeping eye on current technologies and inculcating the practice of lifelong learning.

CO2: Problem Solving Skills: Analyze alternative approaches, apply and use most appropriate one for feasible solution exhibiting project management skills. Report and present the original results in an orderly way and placing the open questions in the right perspective.

CO3: Communication: Demonstrate effective communication at various levels and write precise reports and technical documents in a nutshell. Appreciate practical implications and constraints of the specialist subject

CO4: Collaboration: Participate effectively in multi-disciplinary and heterogeneous teams exhibiting team work, Inter-personal relationships, conflict management and leadership quality.

CO5: Ethics: Provide solution to problems considering social, safety, environmental, ethical and legal issues.

Guidelines:

In Project Work Stage–II, the student shall complete the remaining project work which consists of Selection of Technology and Tools, Installations, UML implementations, testing, Results, performance discussions using data tables per parameter considered for the improvement with existing/known algorithms/systems and comparative analysis and validation of results and conclusions. The student shall prepare and submit the report of Project work in standard format for satisfactory completion of the work that is the duly certified by the concerned guide and head of the Department/Institute. Follow guidelines and formats as mentioned in Project Workbook recommended by Board of Studies

CO Mapping Table:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3
CO1	3	3	3	-	3	2	-	-	-	-	-	3	3	3	3
CO2	3	3	3	2	-	-	-	-	3	2	3	2	3	3	3
CO3	-	-	-	-	-	-	-	-	-	3	3	-	2	3	2
CO4	-	-	-	-	-	-	-	-	3	3	3	-	3	3	3
CO5	-	-	-	-	-	3	3	3	-	-	-	-	2	3	2
Average	3	3	3	-	3	2.5	3	3	3	3	3	2.5	2.6	3	2.6

III. Circular regarding malpractices in project work from DTE, Pune

तंत्र शिक्षण विभागीय कार्यालय, पुणे
४१२-ई, शिवाजीनगर, पुणे- ४११ ०१६.

फॅक्स २५६५६२३४ Email : jdtepu@pn3.vsnl.net.in. Web.repune.org.in

जा.क्र.विकप्र/निधि/प्रोजेक्ट/२००९/ ३७६१
प्रति,

प्राचार्य,
शासकीय / शासकीय अनुदानित आणि
विना अनुदानित पदवी अभियांत्रिकी महाविद्यालये

दिनांक : १ ९ MAR 2009

विषय : अभियांत्रिकी विद्यार्थ्यांना प्रोजेक्ट विकणा-यावर कार्यवाही करणेबाबत

संदर्भ : १) शिक्षण संचालनालय, (उच्च शिक्षण) महाराष्ट्र राज्य, पुणे यांचे पत्र क्र. युएनआय/अभियांत्रिकी प्रोजेक्ट/विशि(६)/२००१/१०९१३ दि. ३०.०१.२००९
२) शासनपत्र क्र युएसजी-२००८/(२४६/०८)विशि-४ दि. ३१.१२.२००८
३) मा.संचालक, तंत्र शिक्षण संचालनालय, महाराष्ट्र राज्य, मुंबई यांचे पत्र क्र.२/ एनव्हीपी/प्रोजेक्ट/२००९/१६१-अ दिनांक १३-०३-२००९

उपरोक्त विषयासंदर्भात आपणांस कळविण्यात येते की, अभियांत्रिकी विद्यार्थ्यांनी विकत घेतलेले प्रोजेक्ट स्वीकारण्यात येऊ नयेत, अशी प्रोजेक्ट स्वीकारणा-या संस्थावर कार्यवाही करण्यात यावी तसेच अभियांत्रिकी महाविद्यालयातील विद्यार्थ्यांना प्रोजेक्ट विकणा-यावर कारवाई करण्यात येईल असे शासनाने वरील संदर्भीय पत्र क्र २ अन्वये कुलसचिव, सर्व विद्यापीठांना कळविण्यात आले आहे. तरी याबाबत अभियांत्रिकी महाविद्यालयातील विद्यार्थ्यांनी विकत घेतलेले प्रोजेक्ट स्वीकारण्यात येणार नाहीत तसेच अभियांत्रिकी महाविद्यालयातील शिक्षकांनी कोणत्याही विद्यार्थ्यांस प्रोजेक्ट विकू नयेत. जर असे आढळल्यास संबंधित शिक्षकांवर योग्य ती कारवाई करण्यात येईल. याची संबंधित संस्थांनी नोंद घ्यावी. तसेच आपल्या संस्थेमध्ये शिक्षकांनी विद्यार्थ्यांस प्रोजेक्ट विकले असतील, अशा शिक्षकांची नांवे तसेच ज्या विद्यार्थ्यांना प्रोजेक्ट विकण्यात आला आहे अशा विद्यार्थ्यांची नांवे व तपशील या कार्यालयास त्वरित सादर करावा

(गो. पं. चौधरी)
प्र. सहसंचालक,
तंत्र शिक्षण विभागीय कार्यालय, पुणे

4.Undertaking by Students

lMatoshri College of Engineering and Research Centre, Nashik

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 20____-20.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   **Signature**

1._____   _____

2._____   _____

3._____   _____

4._____   _____

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

Sr. No.	Activity Scheduled	Date
1.	Registration of Project groups	Mid of June
2.	Submission of Project Synopsis	Last Week of June
3.	Project presentations	First week of July
4.	Finalization of projects & allotment of guide	Second week of July
5.	Submission of final synopsis	Third week of July
6.	First presentation about progress of project work(Review I)	Last week of July
7.	Second presentation about progress of project work (Review II)	Third week of August
8.	Third Presentation	Second week of Sept
9.	Fourth presentation about progress of project work(Review III)	Last week of Sept
10.	Submission of partial project report	1st Week Oct
11.	Project work Examination	As per SPPU Notification

Semester II

Sr. No.	Activity Scheduled	Date
1.	Forth presentation about progress of project work	Second week of Jan
2.	Fifth presentation about progress of project work	Second week of Feb
3.	Sixth presentation about progress of project work	Last week of March
4.	Submission of final project report and Project Work book to the project Coordinator	First week of April
5.	Project Examination	As per SPPU Notification

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

8. Project Review (Semester I)

The group members are expected to present their work undertaken during the semester. Journey of development has to be rationally presented with thorough literature survey.

8.1 Project Review-I: Problem Statement, Motivation, objectives and Literature Review,

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

Sr. No.	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:

Name and Sign of Reviewers:

1.

2.

8.2 Project Review-II: Feasibility and Scope
Student is expected to deliver presentation covering Feasibility and Scope

Sr. No.	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:				

Name and Sign of Reviewers:

1.

2.

8.3 Project Review-III: Requirement Analysis
Student is expected to deliver presentation covering Requirement Analysis

Sr. No.	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:				

Name and Sign of Reviewers:
1.

2.

8.4 Project Review-IV: Design

Student is expected to deliver presentation covering Design

Sr. No.	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:				

Name and Sign of Reviewers:
1.
2.

9. Internal Evaluation Sheet (Semester I)

Sr. No.	Name(s) of the student in the project group	Problem Statement / Motivation / Objectives / Scope/ Feasibility Requirement (05)	Literature Survey (05)	Requirement Analysis (05), Modeling & Designing (10)	Planning & Prototyping (05)	Presentation & Question - Answer (10)	Partial Project Report (10)	Total (50)
1.								
2.								
3.								
4.								

(Refer Rubrics – page number 23)

Name and Signature of Evaluation Committee:

1. **Prof.**

2. **Prof.**

Examiners Feedback and Suggestions:

Signature of Guide
[Name of Guide]

Signature of Head
[Name of HoD]
Head of Department

10. Project Review: (Semester II)

The group members are expected to present their work undertaken during the semester. Journey of development has to be rationally presented.

10.1 Project Review-I: Modeling (Model Refinement and Algorithm development)

Student is expected to deliver presentation covering Modeling

Sr. No.	Question	Date	Remark/ Grade	Sign of Guide
1)	Which software Development Process model is used? (Water fall, Incremental, RAD) How?(? at this level?)			
2)	Do you clearly identify data objects, their attributes and relationships?(All constraints fro SRS are captured or not?)			
3)	Have you clearly matched the objects with respective classes and their responsibilities?			
4)	Have you analyzed the requirements and represented them into respective models?			
5)	Can you differentiate between different system states and depict them in the form of state transition diagram?			
6)	Does the mathematical model clearly imply design of the project?			
7)	Does the mathematical model clearly states goal of project?			
8)	Does the interface between the modules properly identified?			
9)	Does any functional dependencies are identified and described?			
10)	Which architectural model does your system supports?			
11)	Whether Deployment diagram is inline with selected architecture?			
12)	Whether all components are designed properly and represented in component diagram?			
13)	Whether NP-completeness of algorithms is checked or not?			
Remark and Suggestions:				

Name and Sign of Reviewers:

1.

2.

10.2 Project Review-II: Coding / Implementation
Student is expected to deliver presentation covering Coding / Implementation

Sr. No.	Question	Date	Remark/ Grade	Sign of Guide
1)	Does the code completely and correctly implement the design?			
2)	Does the code comply with the coding standard?			
3)	Is the code well structured, consistent in style, and consistently formatted?			
4)	Are all functions in the design coded?			
5)	Does the code make use of object oriented concepts?			
6)	Does the code support granularity?			
7)	Does the language used for coding is correctly chosen as per the project need?			
8)	If any off the shelf components are used, Have you understood the functionalities of using it?			
9)	Are all comments consistent with the code?			
10)	Whether code optimization is done properly or not?(By using language features)			

Remark and Suggestions:

Name and Sign of Reviewers:
1.

2.

10.3 Project Review-III: Validation and Testing
Student is expected to deliver presentation covering Validation and Testing

Sr. No.	Question	Date	Remark/ Grade	Sign of Guide
1)	Have you done alpha testing?			
2)	Have you done beta testing?			
3)	Have you validated the requirements, design and code as per standard?			
4)	Have you performed GUI testing of project? How?			
5)	Does your system comply with basic usability norms?			
6)	Have you tested the code using standard datasets available in your area of project?			
7)	Have you tested the code in real time environment?			
8)	After integration of all components whether total performance of system is checked or not?			
9)	Whether repository of all components along with versions is documented or not?			

Remark and Suggestions:

Name and Sign of Reviewers:
1.

2.

10.4 Project Review-III: Report Writing
Student is expected to deliver presentation covering Report Writing

Sr. No.	Question	Date	Remark/ Grade	Sign of Guide
1)	Is the report written as per the prescribed format?			
2)	Is the report timely prepared?			
3)	Is the report properly organized, spelled, grammatically correct?			
4)	Is the report plagiarism free?			
5)	Is the report precise and written to the point?			
6)	Is the report contains complete results and comparative graphs?			
7)	Are all figures and tables properly numbered and labeled?			
8)	Are all figures and tables properly cited?			
9)	Weather references are properly cited?			

Remark and Suggestions:

Name and Sign of Reviewers:
1.

2.

11. Internal Evaluation Sheet (Semester II)

Sr. No.	Name(s) of the student in the project group	Modeling (10)	Coding and Implementation (40)	Testing (10)	Understanding, Individual Involvement / Contribution in the project (10)	Team Work (10)	Demonstration cum Presentation (10)	Documents & Report (10)	Total (100)
1.									
2.									
3.									
4.									

(Refer Rubrics – page number 23)
Name and Signature of Evaluation Committee:

1. **Prof.**

2. **Prof.**

Examiners Feedback and Suggestions:

Signature of Guide   **Signature of Head**
[Name of Guide]   [Name of HoD]
                                                           Head of Department

12. Software Engineering Code of Ethics and Professional Practices

(Courtesy / Reference- http://www.acm.org/about/code-of-ethics)

Computers have a central and growing role in commerce, industry, government, medicine, education, entertainment and society at large. Software engineers are those who contribute by direct participation or by teaching, to the analysis, specification, design, development, certification, maintenance and testing of software systems. Because of their roles in developing software systems, software engineers have significant opportunities to do good or cause harm, to enable others to do good or cause harm, or to influence others to do good or cause harm. To ensure, as much as possible, that their efforts will be used for good, software engineers must commit themselves to making software engineering a beneficial and respected profession. In accordance with that commitment, software engineers shall adhere to the following Code of Ethics and Professional Practice.

The Code contains eight Principles related to the behavior of and decisions made by professional software engineers, including practitioners, educators, managers, supervisors and policy makers, as well as trainees and students of the profession. The Principles identify the ethically responsible relationships in which individuals, groups, and organizations participate and the primary obligations within these relationships. The Clauses of each Principle are illustrations of some of the obligations included in these relationships. These obligations are founded in the software engineer's humanity, in special care owed to people affected by the work of software engineers, and the unique elements of the practice of software engineering. The Code prescribes these as obligations of anyone claiming to be or aspiring to be a software engineer.

Software engineers shall commit themselves to making the analysis, specification, design, development, testing and maintenance of software a beneficial and respected profession. In accordance with their commitment to the health, safety and welfare of the public, software engineers shall adhere to the following Eight Principles:

1. PUBLIC - Software engineers shall act consistently with the public interest.
2. CLIENT AND EMPLOYER - Software engineers shall act in a manner that is in the best interests of their client and employer consistent with the public interest.
3. PRODUCT - Software engineers shall ensure that their products and related modifications meet the highest professional standards possible.
4. JUDGMENT - Software engineers shall maintain integrity and independence in their professional judgment.
5. MANAGEMENT - Software engineering managers and leaders shall subscribe to and promote an ethical approach to the management of software development and maintenance.
6. PROFESSION - Software engineers shall advance the integrity and reputation of the profession consistent with the public interest.
7. COLLEAGUES - Software engineers shall be fair to and supportive of their colleagues.
8. SELF - Software engineers shall participate in lifelong learning regarding the practice of their profession and shall promote an ethical approach to the practice of the profession.

Environment and Computing-

Information and communication technologies (ICTs) have been contributing to environmental problems: computers, electronic devices and ICT infrastructure consume significant amounts of electricity, placing a heavy burden on our electric grids and

contributing to greenhouse gas emissions. In 2007, the total footprint of the ICT sector – including personal computers (PCs) and peripherals, telecoms networks and devices and data centers – was 830 Mt CO_2 emission, about 2% of the estimated total emissions from human activity released that year (a figure equivalent to aviation). ICT hardware poses severe environmental problems both during its production and its disposal. Each stage of a computer's life, from its production, throughout its use, and into its disposal, presents environmental problems. Manufacturing computers and their various electronic and non - electronic components consumes electricity, raw materials, chemicals, and water , and generates hazardous waste. All these directly or indirectly increase carbon dioxide emissions and impact the environment and the trend is to increase in the BAU (Business As Usual) scenario.

Green Computing-

Hence you all our students are requested to follow green computing practices. Green computing is the study and practice of designing, manufacturing, using, and disposing of computers, servers, and associated subsystems — such as monitors, printers, storage devices, and networking and communications systems —efficiently and effectively with minimal or no impact on the environment. Green computing includes the dimensions of environmental sustainability, the economics of energy efficiency, and the total cost of ownership, which includes the cost of disposal and recycling. Green computing benefits the environment by improving energy efficiency, lowering greenhouse gas emissions, using less harmful materials, and encouraging reuse and recycling . Green design, Green manufacturing, Green use, Green disposal are complementary paths of green ICT. Only focusing on these four fronts we can achieve total environmental sustainability from the IT side and make IT greener throughout its entire lifecycle.

Social Life and Computing-

Each IT professional must keep in mind the three key components of a corporate Green IT best practices policy -Environment, Economy and Social aspect. The invention of the computer has completely changed the way we live our lives. Nearly everything is controlled by a computer; cars, satellites, phones, etc. Computers have made our lives easier. Computers can also have positive effects on a person's social life when their power to connect over great distances is harnessed fully. Computers have both positive and negative impact in our society. While technology is a wonderful thing it is almost likely that it can be used in an immoral or wrong way. There is a price to pay for everything even if it appears it's making life easier on people.

While proper lifecycle management can greatly boost a IT company's ecological and environmental sustainability position, it can also contribute to achieving goals on the social front. Hardware retirement practices are the primary concern in this regard. In addition to seeking carbon neutrality, a proper asset retirement strategy should seek sustainability in the communities where companies operate.

The following social objectives should be considered:
1. To optimize sustainability in their IT infrastructure, companies should focus on each state of the IT lifecycle
2. Setting the Appropriate Corporate Sustainability Policy
3. Avoiding unethical labor practices and Controlling unethical exports
4. Accountability in the Recycling e-waste and Sustainability Metrics and Reporting
5. Greater Transparency Regarding Material Analysis and Extraction
6. Compliance with stringent, evolving security regulations

13. Contest Participation Details.

A. Participation in project Competition / Contest

Sr. No.	Name and Place of Project Competition and Exhibition	Date	Certificates prizes won if any
1.			
2.			
3.			
4.			

Attach attested copy of certificate(s)

B. Paper Publication/ Presentation/IPR

Sr. No.	Name of Organizer	Date	Certificates/ Prizes won if any
1.			
2.			
3.			
4.			

Attach attested copy of certificate(s)

14. Rubrics
A. Idea Inception

Grade (Grade Point) \ Parameter	Excellent (10-9)	Very Good (6-8)	Fair (3-5)	Poor (1-2)
Problem Definition and Scope of the Project	Identified Innovative problem statement	Identified Enhancement of existing work	Correctly interpreted problem area	Unclear problem statement
Literature Survey	In-depth exploration and review of articles published in IEEE , ACM, Springer and other renowned Journals.(Transaction)	Reviewed articles from National Journal and Conferences only.	Correct but incomplete review.	No exploration of good literature
Software Engineering Approach	All aspects of Software Engineering Approach have been identified and used successfully.	All aspects of Software Engineering Approach have been identified but not used completely.	Software Engineering Approach is not clear.	Aspects of Software Engineering have not been used.
Requirement Analysis	Extensive requirement analysis has been done	Sufficient requirement analysis has been done	Poor requirement analysis has been done	No requirement analysis has been carried out

• Implementation

Grade (Grade Point) \ Parameter	Excellent (10-9)	Very Good (6-8)	Fair (3-5)	Poor (1-2)
Implementation- Design, platform, coding,	Proper identification of Modules in project and good coding standards used.	Identification of all Modules in project but coding best practices have not been used.	Unclear modules identification and no coding standard has been used	No modules identified and no coding standards have been used.
Optimization considerations(Memory, time, Resources, Costing)	Time & Space complexity, resources required and costing has been taken into consideration.	Only Time & Space complexity has been taken into consideration.	Time & Space complexity has not been calculated and only resources required and costing has been taken into consideration.	No Optimization Consideration
Thorough Testing of all modules	All test cases identified and tested	All test cases identified but a few have been tested tested	All test cases but not tested for the project	No test cases identified.
Integration of modules and project as whole	All modules are integrated well	All modules are integrated good	All modules are integrated average	No modules Integration

- **Documentation**

Grade (Grade Point)	Excellent (10-9)	Very Good (6-8)	Fair (3-5)	Poor (1-2)
Parameter				
Proposal	Proposal is well written and clearly explains the project idea in brief	Proposal is fairly written and clearly explains the project idea in brief	Proposal is fairly written and does not clearly explains the project idea in brief	Incomplete documentation
Project Report	Excellent documentation	Satisfactory Documentation	Average Documentation	Incomplete documentation
Quick references	All references are properly cited	Some of the references are cited	Only few references are cited	references are not cited
System manual	System manual is well written and clearly explains what the various modules are accomplishing	System manual is fairly written and clearly explains what the various modules are accomplishing	System manual is fairly written but does not clearly explain what the various modules are accomplishing.	No system manual.
Installation Guide	Installation Guide is well prepared in consideration with whole project	Installation Guide is fairly prepared in consideration with whole project	Installation Guide prepared but whole project is not considered	No installation guide
Work Book	Work book is well filled up	Work book is fairly filled up	Work book is averagely filled up	Not filled up

- **Demonstration**

Grade (Grade Point)	Excellent (10-9)	Very Good (6-8)	Fair (3-5)	Poor (1-2)
Parameter				
Project Presentation and Demonstration(User Interface, ease of use, usability)	Able to explain program design correctly and provide alternative e solutions	Able to explain entire program design correctly as it is.	Able to explain some program design.	Unable to explain program design
Understanding individual capacity & involvement in the project	Excellent Involvement in the project	Fairly Involvement in the project	Average Involvement in the project	No Involvement in the project
Team Work (Distribution of work, intra-team communication and togetherness)	Demonstrate cooperation through group hierarchy	Demonstrate cooperation through personal dominance	Demonstrate cooperation after intervention	Unable to cooperate in a group
Outcomes / Usability	Project has excellent usability	Project has fair usability	Project has average usability	No Usability

3. **Contest Participation / Awards, Publications and IPR**

Grade (Grade Point)	Excellent (10-9)	Very Good (6-8)	Fair (3-5)	Poor (1-2)
Parameter				
Participation in various contests	Participation in paper presentaion and project competition Contest	Participation in only one event Contest	Not Participated	-
Appreciation and Awards	Received Award	-	Not Received Award	-
Publications	Published paper in SCI Journal	Published paper in Scopus Journal	Published paper in International Journal	Published paper in National Journal
Copyright	Copyright is registered	Applied for Copyright	Rejected	Not Applied
Patent	Patent Granted	Applied for Patent	Rejected	Not Applied
Commercial value /product conversion of Work	Product has high commercial Value	Product has low commercial Value	Product has very low commercial Value	Product has no commercial Value

F. Environment & Ethics (solution to problems considering)

Grade (Grade Point)	Excellent (10-9)	Very Good (6-8)	Fair (3-5)	Poor (1-2)
Parameter				
Social	Provides excellent solution to social problem	Provides fair solution to social problem	Provides average solution to social problem	No solution
Safety	Provides excellent solution to safety problem	Provides fair solution to safety problem	Provides average solution to safety problem	No solution
Environmental	Provides excellent solution to environmental problem	Provides fair solution to environmental problem	Provides average solution to environmental problem	No solution
Ethical	Provides excellent solution to ethical problem	Provides fair solution to ethical problem	Provides average solution to ethical problem	No solution
Legal issues	Provides excellent solution to handle Legal issues	Provides fair solution to to handle Legal issues m	Provides average solution to to handle Legal issues	No solution

15. 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 decide 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

Annexure iii: Project Report (Semester II)

A report of project work is to be prepared as per the guidelines given below using Latex and is to be submitted at the end of semester II along with CD containing (copy of Partial Project Report, Final Project Report along with .tex files, Power point presentation, copy of base paper and reference papers, executable Project Code, supportive software platform for the project execution).

- **First page as per standard college reports**
  First page containing Name, Topic Name, Guide Name, Year, Branch, and College Name etc. (see format displayed herewith)
- **Certificate** (will be provided by college)
  Dissertation approval sheet (see format displayed herewith) Also attach certificate certifying the project work done approved by the sponsoring authority, if any.
- **Abstract**
  A minimum of 100 words briefing the topic in consideration.
- **Keywords**
  A minimum of 5 and maximum of 10
- **Index**
  Details of various Topics, Sub-Topics, with Page No. Figure Index, giving details of page number, figure number and figure caption Table Index, giving details of page number, table   number and table caption (If any) Index of Pseudo-code / Sample code (If any)

I) Introduction
Minimum of 200 words, giving some briefing of the details to follow.

   · Detailed problem definition

   · Justification of problem

   · Need for the new system

   · Advances/additions/updating the previous system

   · Presently available systems for the same

   · Purpose of your system

   · Organization of the report

This section should be relevant to the Literature Survey done and reported in the partial project report. 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.

II) Analysis
   · Project plan
   · Requirement analysis
   · Team structure
The Group is to submit a detailed write-up indicating the requirements that the project demands-

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 from 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,
3. 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 from the developer's point of view. The requirements 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 IEEE format of SRS)
The group 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.

III) Design
  · Software Requirement Specification(SRS) format is as given below.
  · Risk assessment
  · Brief discussion on Project plan submitted in semester I including major
milestones
  and the work done as per it.
IV) Modelling
  · UML diagrams (all 9)
  · ERD & Normalization (NF) for database (if any)
ERDs (Optional, decide in consultation with guide)
  · The group is to draw the ERD (Entity Relationship Diagram) for the Project. (This shouldbe 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 is to 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 is to 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 notations are to be used in all the figures drawn

· Proper Color-coding is expected

· Extensions to DFD-s may be represented (if the project demands it)

V) Coding

. Algorithms/ Flowcharts

· Software used

· Hardware specification

· Programming language

· Platform

· Components

· Tools

. Coding Style Format

V) Result Sets

VI) Testing

· Format technical reviews

· Test plan

· Test cases

· Test results

(Unit, integration, regression, system,α,ß)

VII) Configuration Management Plan

VIII) Software Quality Assurance Plan

* Costing (Time, Money and Resources)

(Do not include costing in the project report; submit to the guide)

Conclusion

Your conclusions from the topic dealt with a minimum of 50 words.

References

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

Glossary

In Keyword Alphabetical Order Ascending along with Page numbers

Plagiarism Check Report

Annexure iv: Project Report Formatting Guidelines

1) **Report Size:** Limit your Project report to preferably 25- 40 pages for partial project report. Limit your Project report to preferably 80-100 pages for final project report.
2) **Footer:** The footer "Department of Computer Engineering, <mark>MCERC Nashik</mark>" should be included. It should be TIMES NEW ROMAN 10 pt and centrally justified.
3) **Header:** Project Title centered and page nos. on right should be included. **Start numbering from introduction.**
4) **Paper Size:** A4 Size, bond paper.
5) **Margins: Mirrored.**
   1. **Top   : 1 inch**
   2. **Bottom   : 1 inch**
   3. **Inside :1.25 inch**
   4. **Outside   :1 inch**
6) **Line Spacing:** 1. 5 lines
7) **Title of Chapter:**
   1. **Font   : Arial (Bold face, Capital,)**
   2. **Size   :16 pt, Alignment:** centered
8) **All Topics heading:**
   i.   First order Heading: (for example -**1. Introduction**)
      1. Font   : Times New Roman(Bold Face)
      2. Size   : 14 pt
   ii.   Second order Heading: (for example -**1.1 Evolution)**
      1. Font   : Times New Roman(Bold Face)
      2. Size   : 12 pt

   iii. Third order Heading: for example -1.1.1 Image Processing
      1. Font   : Times New Roman(Normal Face)
      2. Size   : 12 pt
      3.
9) **Text:**
   1. Font   : Times New Roman(Bold Face)
   2. Size   : 12 pt
10) **Figures and Tables:**
      1.**Caption:**(for figures below the figure and for tables above the table)
      2. Font: Garamond(Bold)
      3. Size:11 pt
      4. Alignment: Center
11) **References :**
      . Book
   Author name(s), Book Title, Publisher, Copyright Year, page nos. if any.
      . Journal/ Magazine/ Periodical
   Author name(s), paper name, Journal/ Magazine/ Periodical name, issue   no., page nos.
      .Web Resources
      Complete URL including File name.
   Plagiarism Check Report

(Partial) Project Report
On

Title of Project

by

Name of Student 1 (Exam NO:)
Name of Student 2 (Exam NO:)

Under the guidance of

Name of the Guide

Department of Computer Engineering
<mark>Matoshri College of Engineering and Research Center, Nasik - Pin</mark>

SAVITRIBAI PHULE PUNE UNIVERSITY
2022-2023

Annexure vi: Project Approval sheet

PROJECT APPROVAL SHEET

A

Project

on

(Project Title)

Is successfully completed by

Student names (Exam NO:)

at

Department of Computer Engineering
<mark>Matoshri College of Engineering and Research Center, Nasik – Pin</mark>
Savitribai Phule Pune University
2022-2023

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