JAMAL MOHAMED COLLEGE, (Autonomous)

Tiruchchirappalli – 620 020

[Approved byUGC and Affiliated to Bharathidasan University]

[Accredited (3rd Cycle) with 'A' Grade by NAAC]

DEPARTMENT OF COMPUTER SCIENCE

[`SF-MEN]

Course: M.Sc., – COMPUTER SCINCE

SOFTWARE PROJECT GUIDELINES

BATCH: 2021– 2023, SEMESTER : IV

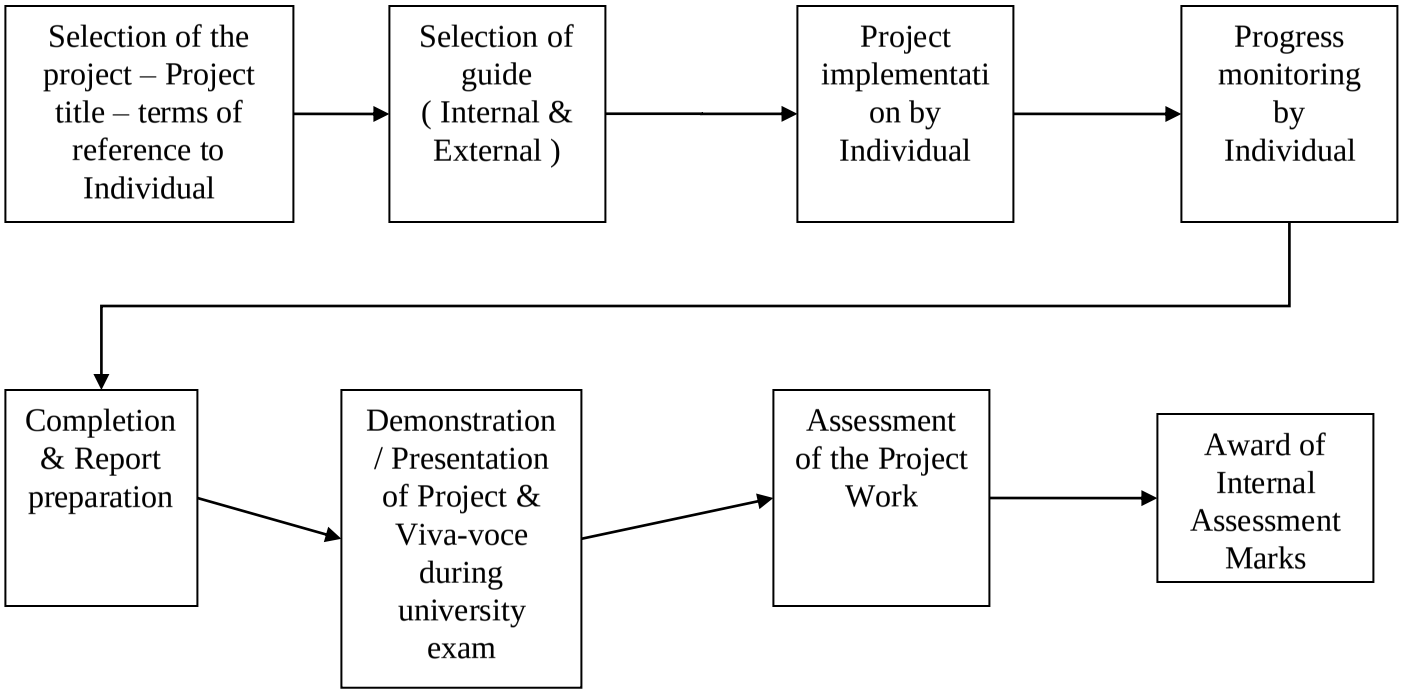
SUBJECT : – PROJECT WORK

Duration : APRIL 2023 to JUNE 2023 (03 Months)

Subject Code: 20PCS4PW

GUIDELINES AND FORMAT FOR PREPARATION OF MAIN PROJECT REPORT FOR FINAL YEAR MSC-CS - CANDIDATES

CONTENTS



Project work is given during final semester: By individual student.

INTERFACE: Students, Project Guide, Project Coordinators, HoD and University examination.

PROCESS MEASUREMENT: 1. Internal assessment marks 2. Review Presentations

1. ROADMAP OF PROJECT EXECUTION

2. PERIODICAL PROJECT REVIEW DATES AND MARKS ALLOCATION

Method of Valuation for Awarding Internal Assessment (IA)

Particulars	**Review Date(s)**	**Awarding of Internal Marks (Max. 100)**				**Guide Initial**
	Student Name					
Review Date Details						
Review – 0	**4/2022**	12.5				
Review – 1	**4 /2022**	12.5				
Review – 2	**May 2023**	12.5				
Review – 3	**/06/2023**	12.5				
Submission of Project Report **[Rough Copy – Quality of Project Work]**	**/06/2023**	50				
Submission of Project Report **[Final Copy]1**	**/06/2023**	-				
TOTAL		**100**				**/ 100**

PROJECT INTERNAL, EVALUATION AND VIVA-VOCE MARKS

1. Internal [Attendance & Review Presentation] :

2. Evaluation [Project Report] :

3. Viva-Voce :

4.

Maximum Marks : 300

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3. GUIDELINES TO THE CANDIDATES ON SOFTWARE PROJECT

1. During Reviews, the Project Contents must be presented by the candidate only through Power Point Presentation (LCD) in the presence of authority concerned.

2. Internal Marks will be awarded based on Attendance secured in every Project Review and Review presentation. Hence, students are asked to report in the date specified along with your Review Contents.

3. Students should report by 9.00 a.m. at the College campus on all review dates.

4. Students should come in dress code with ID card for every review.

5. On Every Review, students should submit one "Hard copy of prepared contents" to the Dept. MID with the signature of Internal Guide.

6. During All Reviews, the students must register their signature in the Attendance Sheet without fail, which is available with the Project MID.

7. Students should submit "Project Confirmation Letter" to the Project Coordinator by getting signature from Internal Guide and HOD without fail during Review –0.

8. Students should obtain "Project Completion Certificate" (By mentioning your **Name, Register No., Title of the Project and Duration of the Project Period ie., April 2023 to June 2023)** from the industry/organization where they undergo their project work and same to be shown to Internal Guide, Project coordinator and HOD before compiling the project documentation.

9. Students can choose External Projects [Preferably any Organizations / IT Sectors / Real Time Projects from any Corporate].

10. Students should choose the projects [Problem Domain and Technology] in consultation with their Internal Guide. If student chooses project related with IEEE journals, they should submit sample and recent Literature papers.

11. "Project Title" must be relevant, meaningful, readable form and should focus the hidden contents of your project.

12. If any project found to be copied, downloaded or repeated will be rejected by the authority concerned.

13. Before submission of the Project Title, Avoid redundancy and Similarity.

14. Ensure the Project title with the Guide and MID.

15. Reviews will be conducted by External Expert member. Based on the "Remarks" extended by the External Expert, students should update their document.

16. Students who fail to attend the "Reviews" will loose their internal marks and information may be sent to their parents as well.

17. Students should get prior permission from the Internal Guide and HOD to avail a leave on any review dates. They should also inform this to Project Coordinator also.

18. Before PPT presentation, students should get review corrections from Internal Guide.

19. Students should check their E-mails often for the updated information and also keep in contact with their respective internal guide. They may come and interact with the guide before the scheduled (review) dates.

20. Mock Project Viva-Voce Examination will be conducted and reviewed by the External Examiner.

21. All students should submit their full Company/ Organization Address, Personal Mail-Ids and Phone numbers, External guide details to their Internal Guide so as to facilitate the smooth rapport and better communication. Avoid communication gap during all reviews. Respond for every Mail or SMS or Phone call to the sender during the project period.

22. Students should pay University Project Viva-Voce Fees while filling up their IV semester University Exam. Application (As per the instructions by Controller of Examinations, JMC. This will be intimated later through student WHATSAPP.

23. Maximum number of pages allowed in Project Documentation: As per Anna University, Chennai.

24. Students should submit **"**Rough Copy of the document" to the Internal Guide and get it verified by him/her. Students should also show the "Final Project Proof" to the Internal Guide and HOD (for document Completion, Clarity and Worthwhile) before binding.

25. Students can bring his/her completed and developed application project during Final Review for execution.

26. Students are strictly instructed that avoid Late Submission of dissertation.

27. In Submitted projects, if any project found to be worthy noted and thrust on research / social relevance, shall be reviewed by expert team and recommended for "Research Journal Publication" **[Optional].**

28. Further Details, students may contact with the respective Project Coordinators.

4. A COMPLETE DESCRIPTION OF PROJECT REVIEW PROCESS

Name of the Review		Contents to be submitted	Nature of Presentation
Review – 0	**1.**	**Confirmation Letter** from S/W Industry / Organization any other data providers. (Contents: Student Name, Register No., Duration of the project period **(03 Months)** , Date & Seal , Phone No., E-mail id and other essential data)	**In-person**
	2.	**Software Industry / Organization Profile**	
	3.	**Project Title,** **System Specifications**: Front End, Back End, O.S., Special Tools, Browsers, Servers etc., **Project Area (Domain selected)** Eg., Finance, Insurance, Cargo, Medical, Transport, Agriculture, Travels, Manufacturing sector etc.,	
	4.	**Abstract (Not < 150 & > 600 Words)** It should comprise the details of; (Problem description with existing drawbacks / causes), Methodology adopted [Technology / Technique], Possible outcome of the results with validation)	
	5.	**<u>Type of Project:</u>** **Any Application (including Embedded) areas;** Sample Applications areas are; 1) Web / Data Mining Applications 2) Networking (Mobile / Ad-hoc / Wireless/ Sensor/ /WLAN etc.,) 3) AI / Image Processing Applications 4) Medical / Banking / ICT / GIS / GPS / Graphics / Multimedia / Business Applications 5) Embedded / Real-time / Android Applications 6) Computer Security Applications /S/W Testing 7) Big Data Analytics etc., ***<u>IEEE Papers</u>*** 1) Relevant & Recent papers to be identified and select any one from IEEE Journals on Computer Science / Applications / Computing Technology. 2) Find possible feasibility of complete execution of the Project.	
	6.	**Student Project Profile Updation by Guide**	

Review-1	**1.**	**Title Verification and Confirmation** by Internal Guide, Project coordinator and HOD.	**In Person**
	2.	**System Analysis : [Preliminary Analysis / Study]** Project Description, Modules Specification and Data Collection.	
Review -2	**1.**	**System Design :** I/O Design [Form Design], Database Design (Tables), Module Description (At-least two Modules)	**Through PPT**
	2.	**Graphical Notations :** DFD / UML / E-R Diagrams (Overall project architecture)	
Review-3	**1.**	**Software Testing & Implementation** • Generation of Test Case Reports (Thro' Manual / Testing Tools) • Pseudo – Code / Algorithm Input (s) : Output (s) : *Begin {* Step 1:Start Step 2: …….. Step n: Stop *} End* • Execution of the application project (Coding) • User Manual / Step by step process for operation environment) if any • Installation procedure if any • Education & Training if applicable	**Through PPT**
Final Submission of Dissertation	**1.**	Confirm with Internal Guide that all the **corrections** suggested in earlier reviews are incorporated correctly.	**Through PPT**
	2.	**Submission of sample proof of full project documentation** in the form of Hard copy.	
	3.	**Model Viva-Voce examination** through PPT presentation (MS-Power Point – 2003 Version only).	
	4.	Process of ascertaining the **Project Completion Certificate** by the Internal Guide.	
	5.	**03 Hard Copies of Dissertation** to be submitted to the respective Project Coordinator after getting signature from Internal Guide and MID.	

	6.	**Submission of all completed copies of project** to the respective Project Coordinator.	
	7.	**Submission of 02 DVDs** (Soft copy of full project documentation (Word 2003 edition only) along with PPT contents to meet out Univ. Viva-voce) with **proper Label** (Name, Register No., Title of the project, Software used, Batch) to the Project Coordinator.	
	8.	Get to know the tentative time-table for University Viva-voce examination, IV semester Hall ticket and get in touch with Project Coordinator.	
	9.	Process of students' **Semester fees defaulters** if any by Internal Guide and Counselor. Intimation must be forwarded to HOD and Project coordinator.	

5. TABLE OF CONTENTS

8.	**PERFORMANCE & LIMITATIONS** 8.1 Results & Conclusion 8.2 Merits of the application 8.3 Limitations of the application 8.4 Future enhancements if any	
9.	**APPENDICES** 9.1 Source Code List 9.2 Screen Shots 9.3 User Manual if any 9.4 Installation Procedure if any	
10.	**REFERENCES** 10.1 Bibliography (Referred Books, Manuals, Magazines and Scientific evidences for Journal Papers if applicable) 10.2 Web-liography (All referred Websites / Portals if any)	

6. ARRANGEMENT OF CONTENTS OF PROJECT REPORT

The sequence in which the "Project Contents" should be arranged and bound should be as follows:

1. Title page (First Page) with BARD, Tiruchirappalli Emblem and our College Emblem **(JUNE 2023)**
2. Bonafide Certificate from the College (Signed by Internal Guide and HOD)
3. Project Completion Certificate from Software Industry / Organization
4. Abstract (not < 150 & > 600 words)
5. Acknowledgements
6. Table of Contents with Page Number
7. List of Tables, List of Figures, List of Symbols / Abbreviations if any
8. Chapters [as in Table of Contents]
9. Appendices
10. References

Note:

- ✓ Preparation of whole project document through specified chapter heading, sub-heading, font size, font name, page numbering, header and footer spacing, document spacing, justification etc., will be extended to the students in later as recommended by AU, Chennai. [Refer Appendix-]

- ✓ The tables and figures shall be introduced in the appropriate places.

SIZE OF PROJECT REPORT

- The size of project report material should not exceed the pages [as prescribed in Anna University, Chennai format] of typed matter from the first page of Chapter 1 to the last page.

NUMBER OF COPIES TO BE SUBMITTED

- Students should submit **THREE (03) copies** of project reports to the Head of the Department through Project coordinators on or before the specified date.

- One copy to the University, one copy to the department library, one copy each to the internal and external examiner and one copy to the student concerned.

7. FACTORS TO BE CONSIDERED IN PROJECT EVALUATION

1. Subject Contents with depth of knowledge
2. Methodology used
3. Sample Coding and Design
4. Neatness and Completeness in Documentation
5. Presentation Skills
6. Ability to answer the questions

8. PREPARATION OF FINAL PPT PRESENTATION

1. Student Name, Register No., Class, Section and Name of the Internal Guide
2. Title of the Project
3. Abstract
4. Objectives of the Project (List the Min. 4 or 5 Objectives)
5. Existing System (List the Drawbacks / Limitations / Causes)
6. Proposed System (List the Advantages)
7. System Specifications (S/W & H/W, Focus the new specifications if used)
8. I/O Design [Designed Sample Forms]
9. Database Design
10. Modules Explanation (List the Name of the Modules & its Purpose)
11. Data Flow Diagram (DFD) / UML / E-R Diagrams
    (Diagrammatical representation on any one of Graphical Notations used)
12. Pseudo Code
13. Testing details (Test Plan, Test Cases and Test case Reports)
14. Sample experimental results / reports
15. Conclusion
16. Future enhancements if any
17. References
18. Execution of the Project

Note:

1. **Greater than 10 & less than or equal to 20 PPT slides to be prepared (MS-Power Point Version 2003).**

2. **Contents are in the form of strictly Bullets form only.**

9. DETAILED DESCRIPTION ON PROJECT REVIEW-1 TO REVIEW– 3

Project Review -1

SYSTEM ANALYSIS

1. REQUIREMENT ANALYSIS
    a. Input Data
    b. Output Information
    c. Hardware and Software requirements
2. FEASIBILITY STUDY
    a. Cost Feasibility
    b. Time Feasibility / Scheduling
3. EXISTING SYSTEM
    a. DRAWBACKS / CAUSES OF EXISTING SYSTEM
4. PROPOSED SYSTEM
    a. ADVANTAGES / MERITS OF PROPOSED SYSTEM
5. USER INTERFACE RERUIREMENTS
6. MODULES DESCRIPTIONS (TO BE DESIGNED)

The following basic questions pertaining to the project should be clearly understood in order to obtain a good grasp of the problem:

1. What is the problem?
2. Why is it important to solve the problem?
3. What are the possible solutions to the problem?
4. What exactly are the data input to the system and what exactly are the data output by the system?
5. What are the likely complexities that might arise while solving the problem?

Project Review - 2

SYSTEM DESIGN

1. I/O Design [Form Design]: (Also include the User Interface (UI) Screens).
2. Database Design: Data Dictionary / Table Design

   Example:

   Table Name:

   Purpose: [Single Line Description about the Table]

S. No.	Field/Column Name	Data Type	Description

3. DFD / UML Diagrams / ER Diagram:
   - Should draw the either DFD (along with its Definition, Symbols introduction) or Relevant UML diagrams or E-R diagrams.

   (Refer: Software Engineering or UML or OOAD Text Books)
4. Module Design (Description):
   - Explain the **Number of Modules and Sub Modules** (if any).
   - Write the relevant text in two or three sentences along with **diagrammatic representation.**
   - Module's Screen Shots (At-least Two Completed Modules).

Project Review - 3

SOFTWARE TESTING & IMPLEMENTATION

SOFTWARE TESTING

Testing is a creative and challenging task. It is the process of exercising a software component using a selected set of test cases, with the intent of i) revealing defects, and ii) evaluating quality. It has different activities. The Process is as below:

Test Objectives (To uncover errors in software) → Test Plan →

Design Test Cases → Prepare Test data → Run program with Test Data →

Compare results to Test Cases → Test Reports

Note 1: "Test Case" is a test-related item must contain (Set of Test Inputs, Execution Conditions and Expected Results / Outputs). It should be developed for both Valid and Invalid Input conditions.
(i.e., It is a document executed for each and every component in the application).

2. **Test results** should be inspected meticulously.
3. **Tests** must be repeatable and reusable.
4. **Testing should** be planned
5. **Testing activities** should be integrated into the Software Life Cycle.

1. **Test Strategy**
   a. Type of Testing is required for your Project.

(Detailed information on applicable testing type to be clearly mentioned).

e.g., **White Box Testing** (Structural Testing or Glass Box Testing)

It examines the Procedural details of software

(Or)

Block Box Testing (Behavioral Testing)

It is used to verify the operational features and functional aspects.

2. **Test Plan and Test Cases**

Sample Test Case: e.g., If Mark >=50 then Printf "Pass" else Printf "Fail"

3. **Test Case Reports (**Final outcome of the report may be;)

Sl. No	Test Module	Test Input	Test Output	Status [Pass/Fail]

SYSTEM IMPLEMENTATION

1. Execute the application project to run on the system

JAMAL MOHAMED COLLEGE (Autonomous),

TIRUCHCHIRAPPALI – 620 020

DEPARTMENT OF COMPUTER SCIENCE

STUDENT PERSONAL & PROJECT PROFILE

COURSE : M.Sc-CS YEAR / SEM. : II/IV, BATCH : 2021-2023

Name of the Student :

Register Number :

Roll Number :

Personal E-Mail Id. :

Personal Mobile WhatsApp No. :

Name of the Counselor & Sign. :

Parent's Name :

Other Contact Phone Numbers :
(either Parent / Guardian)

Name of the Internal Guide :

Project Area (Domain) :

Project Title :

Platform / Software (F&B End):

Name of External Guide :
Contact Mobile No. :
E-Mail id. :

Company / Organization Address:

Company's E-Mail & Phone No.:

Fax Number :

Signature of the Student **Signature of the Internal Guide**

PERIODICAL PROJECT REVIEW DATES

Particulars	**Review Dates**
Review – 0	**/04/2023**
Review – 1	**/04 /2023**
Review – 2	**May 2023**
Review – 3	**/06/2023**
Submission of Project Report **[Rough Copy]**	**/06/2023**
Submission of Project Report **[Final Copy]**	**/06/2023**
Guide Signature	