

Note to the Project Guides MSC (CS-FOSS) Final Semester Projects

The students of MSC (CS-FOSS) of students are now in the final semester and will be doing their project work this semester. **This is one of the important components of MSC (CS-FOSS) programme and in this context we have brought out some guidelines regarding project work to ensure that the project by the student is authentic and is of high quality.** One of the important stipulations regarding project for MSC is that the candidate is to undertake a project in the area of computer science. The projects will be reviewed, monitored and tracked by the **Central Steering Committee** (at the Centre for Distance Education, Anna University, Chennai), **Project Monitoring Committee** (at Coordinating Centre) and the **Project Guide**.

1. PROJECT GUIDANCE:

As the project guide your role is most significant in getting a quality project done. The Centre for Distance Education, Anna University, Chennai requests your valuable expertise in counseling, advising, monitoring, tracking and evaluating the projects under your guidance. We request your full cooperation in our endeavor of ensuring quality projects.

In addition, in order to ensure quality, the qualification and experience of the guides have been made stringent. The project should be carried out under the direct supervision of a qualified guide / as per the qualification prescribed below.

1.1 Qualifications of Guide

- As regards to MSC (CS-FOSS) programme the guide must have appropriate Masters Degree with specialization in the appropriate area.
- The guide should have five years of teaching experience at BE/ME/MCA/MBA/M.Sc. level with expertise in relevant area or five years of industrial experience as middle level executive.
- At a time a guide can supervise a maximum of ten students.

1.1 Functions

- As regards to MSC (CS-FOSS) projects, the guide is expected to offer suggestions to fine tune the problem identified for the project study. In the case of MCA/MSc the project should be according to a clearly specified design and implemented, also use of CASE tools is encouraged. The problem identified should be sufficient enough for a study at MCA/MSc level.
- The guide has to monitor and review the project work periodically with minimum two reviews during the course of the project.
- The guide has to send project review marks of students to the project monitoring committee of the Coordinating Centre, which in turn shall forward the same to the Central Steering Committee of the Center for Distance Education, Anna University, Chennai.
- The guide has to offer the suggestions for framework of analysis, and structuring the project report.
- The guide has to go through the draft project report and offer suggestions wherever necessary and to confirm that the project report is submitted as per the prescribed format (for sample format refer www.annauniv.edu/cde)
- The guide has to confirm that the project report submitted is as per the format provided by Anna University, Chennai.

1.2 Co-Guides

Given the heavily applied and continuously evolving nature of FOSS, the Coordination Centre may, wherever felt necessary, appoint Co-Guides who may not have the formal qualifications specified for the guides but may otherwise have proven expertise and experience in the particular topic of the projects. The Coordination Centre will ensure that in such cases the Guide and the Co-Guide carry out the guidance functions jointly and in coordination with each other. The Coordination Centre has to have the list of Co-Guides approved by the Distance Education Centre. Any remuneration that may have to be paid to the Co-Guides would have to be borne by the Coordination Centre.

1.3 Qualified persons desirous of guiding projects

- Directly apply to the Centre for Distance Education, Anna University Chennai, in the prescribed format available on the web
- Can fill in the prescribed format when approached by a prospective project student who is expected to forward the same to the Centre for Distance Education, Anna University Chennai
- Please note that you will become an eligible guide only on approval by the Centre for Distance Education, Anna University, Chennai Central Steering Committee

2.0 Central Steering Committee and Project Monitoring Committee

2.1 Central Steering Committee

In order to directly monitor and track projects we have a **Central Steering Committee at the Centre for Distance Education, Anna University Chennai. The functions of this committee include:**

- ❖ Going through the project proposal and ensuring that it is of the chosen specialization and checking the qualifications of the proposed project guide.
- ❖ It is responsible for approving the project and conveying the same to the student through the web.
- ❖ During the approval process the Committee will give suggestions for improvement if needed.
- ❖ Going through the evaluation reports sent by the Coordinating Centre after each review meeting and giving suggestions if necessary.
- ❖ Approving the final list of students allowed to submit Projects at the end of the semester.
- ❖ Preparing the panel of Experts for the Viva Voce Examination and forwarding the same to the controller of Examinations, Anna University, Chennai

2.2 Project Monitoring Committee

In addition, there will be a **Project Monitoring Committee at the Coordinating Centre** headed by a project in-charge and consisting of two other senior faculty members. The functions of the committee include:

- ❖ Providing appropriate counseling, advice and suggestions to all students

- undertaking project work regarding project area and choice of guide and in general helping the project-in-charge in project related activities
- ❖ Ensuring that the project proposal and the Guide are approved by the Central steering committee of Centre for Distance Education, Anna University, Chennai and no project is undertaken without prior approval.
 - ❖ Conducting atleast two reviews and evaluating the progress of the projects
 - ❖ Ensuring that the student has incorporated all suggested improvements and suggestions
 - ❖ Checking that the content and format of thesis report is as per norms

All Correspondence regarding projects should be addressed as given below:

- ❖ **The Convener, MSC (CS-FOSS), Central Steering Committee, Centre for Distance Education, Anna University Chennai (in an envelope marked Project – proposal).**
- ❖ **E-mail: distanceprog@annauniv.edu please mark subject as MSC (CS-FOSS) Project -Request for Guideship etc.)**

Project Guidelines given to students:

Given below is the extract of the Project Guidelines given to students. Please go through the same to understand the expectations and requirements of a typical MSC (CS-FOSS) project to be undertaken.

Project Guidelines (Extract)

2. Guidelines for undertaking Project

- ❖ **One of the important stipulations regarding project for MSC (CS-FOSS) is that the candidate is to undertake a project in the area of computer science/Information Technology/Software Engineering .The project work may be carried out by identifying research/ system oriented application problem/web resources/tools in any one of the business/services computerized organizations/information technology organizations.**
 - ❖ **Candidates have to prepare the following**
 - **A brief synopsis of the proposed project in the prescribed format given in Annexure I**
- Note: Annexure I available on the web or can be obtained from Coordinating centre**
- ❖ **The Annexure is to be sent for approval. They are to be submitted in triplicate to project-in-charge at the Coordinating Centre in the prescribed formats (Annexure I - available in the web or obtained from Coordinating centre) and an extra advance copy sent directly to the Convener, MSC (CS-FOSS), Central Steering Committee, Centre for Distance Education, Anna University Chennai (in an envelope marked Project – proposal).**
 - ❖ **The students are permitted to proceed with topic of the projects only under qualified supervisor after approval by the Central Steering Committee Centre for Distance Education, Anna University, Chennai. The status of the approval of the project should be checked on the web.**
 - ❖ **The student is expected to execute original work. If at any point of time it is noticed that the work is not original, the project will be summarily rejected.**

2.1 Major Types of Project (Domain Area)

The project undertaken may be of various types Viz:

- ❖ **System software / tools development type**
- ❖ **File systems/Device Drivers**
- ❖ **Application software development type**

- ❖ **Computer networks performance analysis type**
- ❖ **Web source development type(Client-Server)**
- ❖ **Middle ware technology development type**
- ❖ **Mobile computing /data base Applications**
- ❖ **Cloud Computing**
- ❖ **Multimedia development type**
- ❖ **Data mining**
- ❖ **Network security**
- ❖ **E - Governence, E-Learning applications**
- ❖ **Image Processing, Soft Computing.**
- ❖ **Open Sources**

2.2 Role of Project Guide

- ❖ The Student is required to meet and discuss with the guide periodically on mutually agreed upon dates.
- ❖ The Student is also advised to maintain e-mail contact with the guide
- ❖ Any Conflict of interest during the course of the project can be immediately brought directly to the notice of the Central Steering Committee, Centre for Distance Education, Anna University, Chennai.

3. Steps to be followed in undertaking Project

3.1 Problem identification

- ❖ A project guide is to be identified by the student. The project guide should have qualifications as prescribed by the Centre for Distance Education, AU, Chennai (given in Section 1.3.1).
- ❖ By referring to relevant literature through conference papers, journals etc or discussing with industry experts – a problem may be formulated in the chosen area of Specialization and the same can be fine tuned by drawing input from the Project Guide.
- ❖ The topic and project guide should be submitted through web compulsorily.
- ❖ The topic and the guide proposed, are to be submitted in triplicate to project-in-charge at the Coordinating Centre in the prescribed formats (Annexure I - available in the web or obtained from Coordinating centre) and **an extra**

advance copy sent directly to the Convener, Central Steering Committee, Centre for Distance Education, Anna University, Chennai (in an envelope marked Project – proposal).

- ❖ You are requested to look into the website for confirmation of project proposal.
- ❖ Do not proceed with the project topic or with project guide until approval has been obtained from the Central Steering Committee, Centre for Distance Education, Anna University Chennai

3.2 Progress for First Review

- ❖ You may now proceed to undertake the project in consultation with the project guide.
- ❖ Any suggestions made by the Central Steering Committee in the project proposal should be incorporated while preparing for First Review (tentative schedule given in Annexure III).
- ❖ For the First Review, the student is required to submit the following details at the time of First Review:
 - ❖ Major area : Title of the project proposed
 - ❖ Problem identified and confirmed
 - ❖ Guide confirmed (will be present for review)
 - ❖ Background Study
 - ❖ Objectives and scope of the project
 - ❖ Literature survey
 - ❖ Methodology
 - Assumptions, Constraints and Limitations
 - Proposed Methods
 - Platforms/tools
 - ❖ System requirement specification (SRS) (IEEE format)
 - ❖ Overall architecture (Block diagrams)
- ❖ The evaluation by the project guide and the Project Monitoring Committee is based on the above points. The evaluation form for First Review by the Project Guide and Project Monitoring Committee is given in Annexure IV

3.3 Progress for Second Review

- ❖ Any Suggestions/extensions suggested by the Project Monitoring Committee at the First Review should be incorporated and project modified accordingly before the Second Review.
- ❖ For the Second Review, the student is required to present the following details :
 - Work completed so far
 - Over all system set / block diagrams / SRS
 - No. of modules – proposed, No. of modules – completed
 - Test plan for each modules/sub system (Given in annexure A)
 - Result and demo
 - Further work to be done
 - Deviation if any and justification
 - Attendance details regarding meeting (in person or by e-mail with guide) – attested by the guide
 - Confirmation of tools for Analysis/design
- ❖ A report incorporating all the above details should be submitted at the time of Second Review.
- ❖ A draft copy of Thesis signed by guide
- ❖ The evaluation by the project guide and the Project Monitoring Committee is based on the above points. The evaluation form for Second Review by the Project Guide and Project Monitoring Committee is given in Annexure V.

3.4 Preparation of Project Report

- ❖ Each student is expected to **submit four copies of Project Report**
- ❖ The following should be the contents of the report:
 - Title Sheet
 - Bonafide Certificate duly signed by the Project Guide and Project-in-charge
 - Acknowledgement
 - Abstract
 - Table of Contents

- List of Tables
- List of Figures
- List of Abbreviations
- Chapter 1 - Introduction
 - Overview of the project
 - Literature survey
 - Proposed System
 - Objectives & Scope
 - Organization of the report
- Chapter 2 – Requirements specification
 - Introduction
 - Overall Description
 - Product Perspective
 - Product Functions
 - User Characteristics
 - Operation Environment
 - Constraints
 - Specific Requirements
 - External Interface Requirements
 - System Features
 - Data Flow Diagrams, Entity Relationship Diagrams or UML Diagrams, Whatever applicable
 - Performance Requirements
 - Software Quality Attributes
- Chapter 3 – System Design and Test Plan
 - Decomposition Description
 - Dependency Description
 - Detailed Design
 - Proposed Sampling Methods
 - Test plan
- Chapter 4 – Implementation and Results
 - Implementation

- Results
 - Chapter 5 – Conclusion and Future work
 - Summary
 - Future Work
 - References
 - Appendixes
4. Sample Project (For Details and Reference only)
- 4.1 Project : Application Project
- 4.2 Topic : Online Railway reservation.
- 4.3 Literature Survey
- ❖ Literature related to this area
 - Railway reservation in general
 - Special emphasize on passenger behavior towards facilities viz , reservation, cancellation, check availability .. etc.
 - ❖ Intensive learning Analysis – Study of Existing methodologies.
 - ❖ Interact with related industry and subject experts
 - ❖ Fine tune the need, scope and likely deliverables of study
- 4.4 Abstract – based on Literature Survey
- 4.5 Introduction
- ❖ Existing System
 - Clearly state the existing system in detail with its drawbacks.
 - ❖ Proposed System
 - Create a set of Design principle to overcome the drawbacks.
 - Provide architecture of the project
- 4.6 System Analysis
- ❖ Development Environment
 - ❖ Requirement Specification
 - ❖ Software Specification

4.7 System Design

- ❖ Module Descriptions – like
 - Reservation
 - Cancellation Plan the travel
 - Extra features like hotel booking,catering.
- ❖ Architectural Design
- ❖ Input Design
- ❖ Database Design
 - Train details
 - Booked history
 - Cancellation procedures
 - Passenger details
- ❖ Output Design
 - Ticket availability
 - Ticket booking
 - Cancel the booked ticket

4.8 Implementation

- ❖ System Description
- ❖ System Implementation

4.9 Code Review and Testing

- ❖ Code Review
- ❖ Testing Process
 - Front-end Validation
 - Back-end Validation

4.10 Conclusion

- ❖ Summary of finding suggestions, conclusions for Future Research
- ❖ Conclusions
 - Efficient working of Online Railway reservation provided with automatic facilities
- ❖ Summary Report of Findings
- ❖ Suggestions

- How to promote online Railway reservation facilities to the rural areas.
 - ❖ Future Directions
 - To study Online Railway reservation usage in Rural versus Urban areas
 - To extend Online Railway reservation usage to access various banking gateways.
- 4.11 Bibliography
- ❖ List the references related to the project
 - ❖ References can also include websites
- 4.12 Appendix
- ❖ Questionnaire, any other details.

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- ❖ **E-mail : distanceprog@annauniv.edu please mark subject as MSC (CS-FOSS) (AY 2011 - 2012 Project –Proposal,)**

ANNEXURE - I

Director's copy

FORMAT FOR PROJECT PROPOSAL

Study centre copy

To be submitted in duplicate

(Two copies to be submitted to the Study Centre and **project proposal must also be submitted online**)

- 1. Name of the programme : MSC (CS-FOSS)
- 2. Name of the Student :
- 3. Roll Number :
- 4. Examination Registration Number :
- 5. Name and address of study centre :
- 6. Name of Proposed Guide :
- 7. Title of the Project :
- 8. Problem Identified : Add a separate sheet about the description of the Proposed project work in 15 lines (Include the algorithm or solution methodology and proposed modules)
- 9. Implementation Methodology :
 - 1. Software /Language to be used :
 - 2. Database :
 - 3. Tools (If any) :
 - 4. Platform :
 - 5 Any other :
 (add a separate sheet)

- 10. Time Schedule :
- (add a separate sheet)

Date:

SIGNATURE OF STUDENT

ACCEPTANCE OF THE GUIDANCE

I, Dr./Mr./Ms.(Name in Capital Letters).....(Designation) hereby convey my willingness to guide Mr./Ms.(Name of the student) in the topic(Title of the project) during the period September 2013 to March 2014. I also agree to adhere to the deadline specified by the CDE for the completion of the project. I further agree to submit/produce details of assessment/mark etc to the study centre in time. I also enclose my profile.

Date:

Name in Capital Letters:

Address:

Office Seal:

Signature:

ANNEXURE II
PROFILE OF GUIDE

NAME OF GUIDE:

DATE OF BIRTH:

CONTACT NUMBERS - MOBILE :

OFFICE :

RESIDENCE:

EMAIL ID:

PRESENT DESIGNATION:

OFFICE ADDRESS:

RESIDENTIAL ADDRESS:

EDUCATIONAL QUALIFICATIONS (start with highest qualification):

(Please attach photocopies of degree certificates)

Please affix recent passport
sized colour photograph -
duly attested by the
coordinator of the study
center with study center
seal.

Name of Degree	Specialization	Year of passing	Institution / University

WORK EXPERIENCE (start with latest employment):

(Please attach photocopies of experience certificates)

Designation	From	To	Name of Organization

I hereby state that the information provided by me is true. Kindly include me in the list of approved guides under CDE, Anna University, Chennai 25.

(SIGNATURE with date)

Certified that the Dr/Mr/Ms _____ affixed his/her signature in my presence and the photograph matches with the physical appearance of the applicant.

(Signature and Name of Coordinator of Study Center with Seal)

Date:

Annexure A

Sample Test Plan

1. Introduction (Describe problem to be solved by the application, including critical success factors. Available documentation such as a requirements specification should be listed.)

2. High Level Functional Requirements A Requirements Traceability Matrix can be used to trace user requirements through development and testing. Minimum system requirements for the software applications should also be defined and documented.

3. Exit Criteria (Include criteria for when to stop testing. Usually the capability of the system to satisfy all requirements must be verified. In addition, some ad hoc testing is advisable.)

4. Test Deliverables (May include test plan, test scripts, test log, system summary report, defect report)

5. Test Environment (Describe main components of the test environment including hardware, firmware, software, and operating system. Request assistance from the DBA assigned to the project as required.)

6. Test Team (List testing participants and their role)

7. Test Schedule (The schedule should include information gathering, test planning, test execution/evaluation. More than one iteration of testing may be required. A project management tool such as Microsoft Project can format the schedule into a Gantt chart. Request assistance of the Project Leader as required)

8. Defect Recording/Tracking (A tool such as spreadsheet should be developed for recording defects and tracking status)

9. Issue Resolution (Define how testing issues will be tracked and resolved)

10. Approval (Define who needs to approve test deliverables. Approval can vary from formal sign off to informal review and comments)

Annexure IV (10 students per Page) – First Review

S.No	Roll.no	Exam Reg No.	Branch	Topic of Project	Background Study, Need, objectives and scope – suggestions of CSC incorporated (20)	Review of Literature (10)	Proposed Methodology defined (20)	Frequency of meeting with guide and Guide marks (40)
1.								
2.								
.								
.								
10.								

Annexure V (10 students per Page) – Second Review

S.No	Roll.no	Exam Reg No.	Branch	Topic of Project	Work Completed so far (25)	Test Plan (20)	Implementation (30)	Frequency of meeting with guide, draft report copy submission, guide marks (20)
1.								
2.								
.								
.								
10.								