GUIDELINES TO UNDERTAKE THE FINAL SEMESTER MCA PROJECT

OBJECTIVE:

One of the important stipulations regarding project for MCA is that the candidate is to undertake a project in the area of Computer Science/ Computer Applications. 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.

Major Types of Project (Domain Area)

The project undertaken may be of various types Viz:

- ❖ System software / tools development type
- ❖ 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
- ❖ Multimedia development type
- ❖ Data mining, Network security
- ❖ E-Governance, E-Learning applications
- ❖ Image Processing and Soft Computing
- ❖ E- commerce / E –shopping.

Sample Project (For Details and Reference only)

Project : Application Project
Topic : Online Railway reservation. **(Title of the project should posses at least 7 words)**
Literature Survey
- Į Literature related to this area
  - o Railway reservation in general
  - o Special emphasize on passenger behavior towards facilities viz, reservation, cancellation, check availability, etc.
- Į Intensive learning Analysis – Study of Existing methodologies.
- Į Interact with related industry and subject experts
- Į Fine tune the need, scope and likely deliverables of study
- Į Abstract – based on Literature Survey
Introduction

- Į Existing System
  - o Clearly state the existing system in detail with its drawbacks.
- Į Proposed System
- Į Create a set of Design principle to overcome the drawbacks.
- Į Provide architecture of the project

System Analysis

- Į Development Environment
- Į Requirement Specification
- Į Software Specification

System Design

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

Implementation

- Į System Description
- Į System Implementation

Code Review and Testing

- Į Code Review
- Į Testing Process
  - o Front-end Validation
  - o Back-end Validation

Conclusion

- Į Summary of finding suggestions, conclusions for Future Research
- Į Conclusions
  - o Efficient working of Online Railway reservation provided with automatic facilities
- Į Summary Report of Findings
- Į Suggestions
  - o How to promote online Railway reservation facilities to the rural areas.
- Į Future Directions
- Į To study Online Railway reservation usage in Rural versus Urban areas
- Į To extend Online Railway reservation usage to access various banking gateways.

Bibliography

- ļ   List the references related to the project
- ļ   References can also include websites

Appendix
- ļ   Questionnaire, any other details.

For each module of the project, test plan has to be prepare as given below.

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)

THE ABOVE GUDELINES MAY BE FOLLOWED WITH PERIODIC DISCUSSIONS WITH THE GUIDE.

The queries relating to the projects will be handled by the guide, project in-charge and / or the Coordinator at the study center. If there are further queries, you may contact the CDE office on 2235 7214.