GUJARAT TECHNOLOGICAL UNIVERSITY

Syllabus for Master of Computer Applications, 5ᵗʰ Semester
Subject Name: Software Project-III (SP-III)
Subject Code: 4659304

1. Learning Objectives:

- To be able to develop Project using Emerging Framework
- To solve industrial (or society or research) problems
- To plan, schedule, and monitor the software project
- Development, coding, and testing of a large project cohesively
- Documentation of project

2. Prerequisites:
Programming Language, Basic Concepts of Software Engineering, RDBMS

3. Suggested Frameworks : IONIC / Xamarin / DJANGO

4. Guidelines for Project using Framework

- It is recommended that the team should be of 2-3 students.
- The project should be free from plagiarism of any kind.
- Project must have proper documentation.
- It is mandatory that the project should be developed using One of the above mentioned framework on Linux or Windows Platform. Linux is the preferred platform.
- This may not be a live project.
- Coding standards should be followed meticulously. At the minimum, the code should be self documented, modular, and should use the meaningful naming convention.
- It is advisable that object-oriented methodology is used with reusability of classes and code, etc.
- The output reports must include MIS reports, if applicable.
- The documentation should include a chapter on "Learning during Project Work", i.e. "Experience of Journey during Project Duration".
- Student may be asked to write the code related to the project during examination.
- Mentor/ Internal guides (i.e. the faculty members) must devote time, allocated as per the time table to guide the students for the project. The time allocation will be in accordance with the teaching scheme for 5th semester project.

5. Documentation:

- The project has to be well-documented in the form of a Project Report (at least 50 pages comprising of the relevant description of the project including design, data dictionary, source code, screenshots, etc.).
- Format : The Project report Print out should be taken on both the side of page with single line spacing. Use Times New Roman of size 10 for normal text. A typical Table of content will be as follows.

TABLE OF CONTENTS
1. Introduction
    1.1. Existing System
    1.2. Need for the New System
    1.3. Objective of the New System
    1.4. Problem Definition
    1.5. Core Components
    1.6. Project Profile
    1.7. Assumptions and Constraints
    1.8. Advantages and Limitations of the Proposed System

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With effective from academic year 2018-19

2. Requirement Determination & Analysis
    2.1. Requirement Determination
    2.2. Targeted Users
3. System Design
    3.1. Use Case Diagram
    3.2. Class Diagram
    3.3. Interaction Diagram
    3.4. Activity Diagram
    3.5. Data Dictionary
4. Development
    4.1. Coding Standards
5. Agile Documentation
    5.1 Agile Project Charter
    5.2 Agile Roadmap / Schedule
    5.3 Agile Project Plan
    5.4 Agile User Story (Minimum 3 Tasks)
    5.5 Agile Release Plan
    5.6 Agile Sprint Backlog
    5.7 Agile Test Plan
    5.8 Earned-value and burn charts
6. Proposed Enhancements
7. Conclusion
8. Bibliography

6. Knowledge about the following is expected to be demonstrated.
- The objective of the Project Development is to make students aware about the industry based process and workings using Framework. As a result, Project must meet with the industry standards.
- Proper knowledge about the purpose of the application.
- Use of justifiable application for group of 2-3 members.
- Project must include features like MIS Reports, Advance Search, File based processing etc.

7. Evaluation

Sr. No	Particulars	Weightage
1	Project	30%
2	Documentation	20%
3	Code Changes	25%
4	VIVA	25%

Web References:

1) ionicframework.com/docs
2) https://visualstudio.microsoft.com/xamarin/
3) https://github.com/xamarin
4) https://www.djangoproject.com/\
5) https://www.djangoproject.com/