

Course Project

SALIENT POINTS

1. **Three phases.** (1) Project Selection and proposal, (2) Mid-semester Project progress Presentation (3) Final Demo
2. **Grading:** The project contributes to 30% of your grade.
3. **Goal:** In the project you will work in a team to develop a working web application designed and implemented using the software tools and technologies learnt in the first half of the semester. The final software should satisfy business requirement(s) outlined in your project requirements. Professional Web application developers continue to earn an average of a six figure salary in the competitive software development industry of today. A successfully executed course project will be a first step in your training for professional software development or showcasing your business as an entrepreneur.

1 PROJECT PROPOSAL

1. Groups of two to three are encouraged. More people are allowed in case the software functionality justifies the group size.
2. Students should add name of all team members to the report.
3. It is expected the teams will present the project topic in the final presentation that they sign up for in this project selection phase. Changing the topic after project selection is discouraged.
4. Multiple groups can work on the same topic but should present independent implementations.
5. A brief 1-to-2 page proposal with the following sections should be provided.

Business Requirements

What are the business objectives that you are attempting to achieve with this software project?

Success Metrics

What are your success metrics? How do you know you are doing well?

User and System Requirements

What are your functional and non-functional requirements? A UML model or an XP style requirements analysis is expected here.

High-Level Design Flow

This needs to be a block and arrows diagram that gives the developers an idea of what the flow of the project will be like, what happens first, then second and so on. What are the screens or options that the user of your system may expect to see.

Ideas for Projects

- A real-time To-Do list
- A calendar with the ability to add events.
- A blog engine
- A web application to catalog your DVD|Books|MP3 collection
- Online Voting System
- Expense Tracker
- Resume Builder
- Local music streaming
- A simple shopping cart and product catalog
- A Customer Management System

Be creative!

Example (Not a complete example but illustrates the main portions)

Business requirement

Allow the customer to pay for gas at the pump

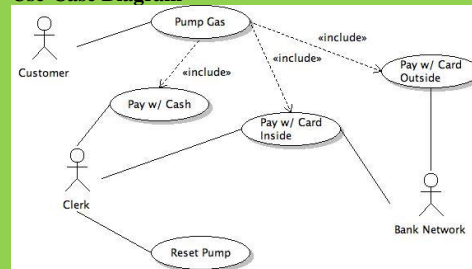
User Requirement

- Swipe credit or debit card
- Enter a security PIN number
- Request a receipt at the pump
- ...

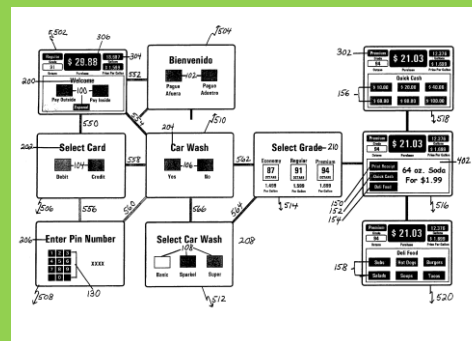
System Requirements

- Prompt the customer to put his or her card into the reader
- Detect that the card has been swiped
- Determine if the card was incorrectly read and prompt the customer to swipe the card again
- Parse the information from the magnetic strip on the card
- ...

Use-Case Diagram



High-Level Design Flow



Marking Criterion

Does the proposal clearly state the problem the students are trying to solve?

Is the proposed solution realistic? Easy to do within a semester

Appropriate use of software engineering notation to document the requirements.

Appropriate use of software engineering notation to document the high-level design flow.

Total Marks 20

2 MID SEMESTER PROGRESS REVIEW

Students should schedule a 15 min meeting with the course instructor during office hours to demo the Release 1 of their project, review completed and incomplete features and discuss any problems faced.

Marking Criterion
Do students attend the meeting as a group at the scheduled time
Evidence that the students are progressing positively on the proposed projects.
Points: 10

3 FINAL PRESENTATION AND DEMOS

This activity involves a presentation of the results of the research conducted during the semester communicated in an interesting way.

1. Every team should present their project topics focusing more on the working demo, testing and evaluation.
2. Students should give adequate answers to questions raised during the presentation.
3. There should be a summary/take-away message from the project.

Marking Criterion
Brief Background and Introduction.
Overview of Features planned and actually implemented
Design and Architecture
Live Demo of the software developed (in class using laptop or remote connection or video). Show what the software does, how it works.
Preliminary Implementation coding and Configuration/Testing.
Lessons learnt, future work if any.
Look and feel of the software including ease of use and aesthetics
Question / Answer Session
Total Marks 40