Checkpoint 1: Project Proposal
CIS 435, Fall 2022
Due: 3 PM September 20

In this course, a team of students is required to develop an interactive multiuser website for UMDearborn students/faculty. As an example, using the website, multiple users can login, upload some contents and other users can give feedback, comments or reaction (like/dislike) to the uploaded contents.

In this checkpoint, you will finalize your team project idea. Well planned is half done. Your proposal document should be used as a roadmap for guiding your work throughout this semester.

In particular, you should consider the following points in your proposal:

1. **Introduction:**
   In this section, explain your core of your idea and proposed solution. You should justify why users care about your product. You should also consider what are the unique features/novelty of your solution.
2. **Modules (Entities, see [1]):**
   You need to provide 2-3 main modules for your website. As an example, for a second-hand textbook website, the three main modules can be: 1) book information; 2) message/discussion; 3) user.
3. **From Modules to Operations (following the CRUD operations [2]):**
   Describe how each module works. To continue with the example, the operations on books information can be:
   1) Add new books: upload general information about the textbook, associate the textbook with a course, describe the status of your book or upload pictures, set the asking price, etc.
   2) Update book status: mark a book as sold, change the price, …
   3) Search for books: search by title, course, status, etc.
   4) View book details/list
   5) Delete a book/set a book invisible
4. **User Roles and access control [3]:**
   Describe different user roles in your system and what operations can different roles perform. For example, a registered user can: 1) Add new books; 2) update book status for the book owned by him/her; 3) search for books; 4) view book details; 5) delete books owned by him/her, an unregistered user can: 3) search for books; 4) view book details, while an admin user can access all 5 operations.

5. **From Operations to Pages:**

Design the most important 3-5 pages for your website. You can either use Google drawing or any open source mockup tools to portrait your pages. You can skip access control in the page portrait. In our in-class example about collecting projects from community partners, the three pages you want to demonstrate can be: 1) project details; 2) students' homepage; 3) project list. The portrait of the project detail page is attached at the end of this document.

6. **Individual workload division:**
   Provide a reasonable workload of each individual in a group. All members in a team should know the basics of product design, testing, frontend, and backend, and participate in all these steps, while each can focus more on one aspect.

Rubrics:

	Excellent	**Meet expectations (full credit)**	**Need improvements**
Introduction 20%	- Problem-driven - have unique novelty - custom-tailored for UMD	- Describe the functions - Aware of your competitors - Multi-user interactive	- Unclear functions - Similar to existing website - Single user
Modules 10%	- Clear entity design - Reasonable workload	- Knowledgeable about how to breakdown functions into modules - Make reasonable efforts on dividing your proposed functions into modules	
Operations 10%	Clear operation design	- Knowledgeable about how to breakdown modules into operations following CURD - Make reasonable efforts on dividing modules into operations	
User Roles 10%	Clear user role and permission design	- Knowledgeable about user roles - Make reasonable efforts on dividing modules into operations	
At least 3 page portraits 40%	Can be directly converted into HTML pages	- Clearly demonstrate the functions of your proposed website - Describe which user role can access which operations in each page	Fail to demonstrate the basic functions of your website
Workload Division 10%	- Reasonable workload division - Clear roles	Reasonable workload division	No workload division provided

Last but not the least:

1) Keep your submission simple but effective. Submissions longer than 3 pages (excluding images) will not be graded.
2) You are welcome to contact the TA (Khairul Mottakin, khairulm@umich.edu) if you have questions. **Plan early and act early!** Don't wait until the last minute to contact him if you have questions.

3) You may need to change your design along with getting more knowledgeable about the subject, and that's perfectly fine. This assignment is meant to help you get familiar with the planning procedure.

Reference:

1. Database Entities: https://www.youtube.com/watch?v=UaOh1Wj5LtQ
2. https://en.wikipedia.org/wiki/Create,_read,_update_and_delete
3. https://artandlogic.com/2020/05/role-based-design/

Project-based Learning for CIS 435

UNIVERSITY OF MICHIGAN-DEARBORN

Console

Browse Projects

User Profile

Your Projects

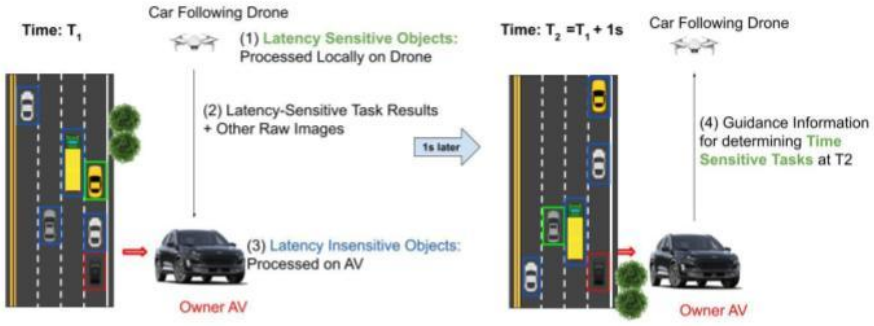
keywords search

Projects → drone-car collaboration

Proposed by Ford Inc., Feb 2022
Contact: John Doe (jd@ford.com)

Project Description:

This project proposes to solve this problem by dividing video frames into time-sensitive regions and time-insensitive regions based on their impact on the driving decision making algorithm, processing the time-sensitive tasks on the drone locally, and offloading the time-insensitive tasks to car-mounted computers. Our solution makes it possible for AV to strengthen driving decision making by leveraging drone-provided information, without draining the drone's battery.



Project Status: 3 students registered, one slot available Sign Up for this project

	Student name, senior	★★★★★
	Student name, Junior	★★★★
	Student name, Junior	★★★★★

Project Results

To fully realize our vision, the following research activities are proposed:

1) Develop object segmentation algorithm for bird's-eye view video streams.
2) Model how the division between computing tasks locally and transmitting video to cars impacts the power consumption of the drone and the information delay on the car.

Project Reviews

Ford The students are very reliable and professional!

She was in charge of the database design part Review her Performance