Impromptu Design Session

This activity counts as part of your in-class activity grade.

Introduce yourself to the people in your group.

Group member 1: Allyson King	UIN:626002655
Group member 2: Brent Hendrix	UIN: 727001378
Group member 3: Shane McGookey	UIN: 725000279
Group member 4: Tyler Thames	UIN: 627002434
Group member 5: Kevin Santos	UIN: 325002544

Roles:

Everyone will participate in designing the software construction environment, but some will have an additional role:

Role	Purpose	Fulfilled By
Scribe	Fills out activity sheet	Allyson
Reporter	Shares group experience in class discussion	Tyler
Moderator	Makes sure everyone gets a turn to give input	Shane

The Problem:

TAMU needs a new system to replace HOWDY that provides a more streamlined experience for the student user. As a team, decide what software construction environment you will use. In your discussions and decision-making, justify your choices. Use the checklist on pages 69-70 in Code Complete to guide your discussion.

Describe your selected software construction environment:

Example questions to consider: What are the system requirements? What language will you use? What tools will you need? Will you use a sequential or iterative approach? What conventions will you use? How will code be reviewed, tested, and integrated? How will coding take place? How will revisions be managed?

Describe your construction environment here. Explain why you made the choices you made.

System requirements: reliability, scalability, strong UI, fault tolerance, accessibility

Purpose: system to manage registration, student info, billing, etc.

Language: HTML, CSS, JavaScript, SQL

Tools: VSCode, GitHub, AWS

Approach: Iterative

Conventions: Camel case, clean code commenting

Review, Testing, Integration: randomly selected students use it, phased deployment

Coding: Individual with collaboration using GitHub

Revisions: GitHub

We need a robust website to handle all of TAMU students' needs. As a web application, we will rely on the programming languages most common to web development. We will work as a team to collaborate on coding, keeping in mind our conventions chosen and tracking revisions using GitHub. We will deploy phases of our product to a randomly selected group of students.

Sketch your initial high-level design:

Place sketch here.
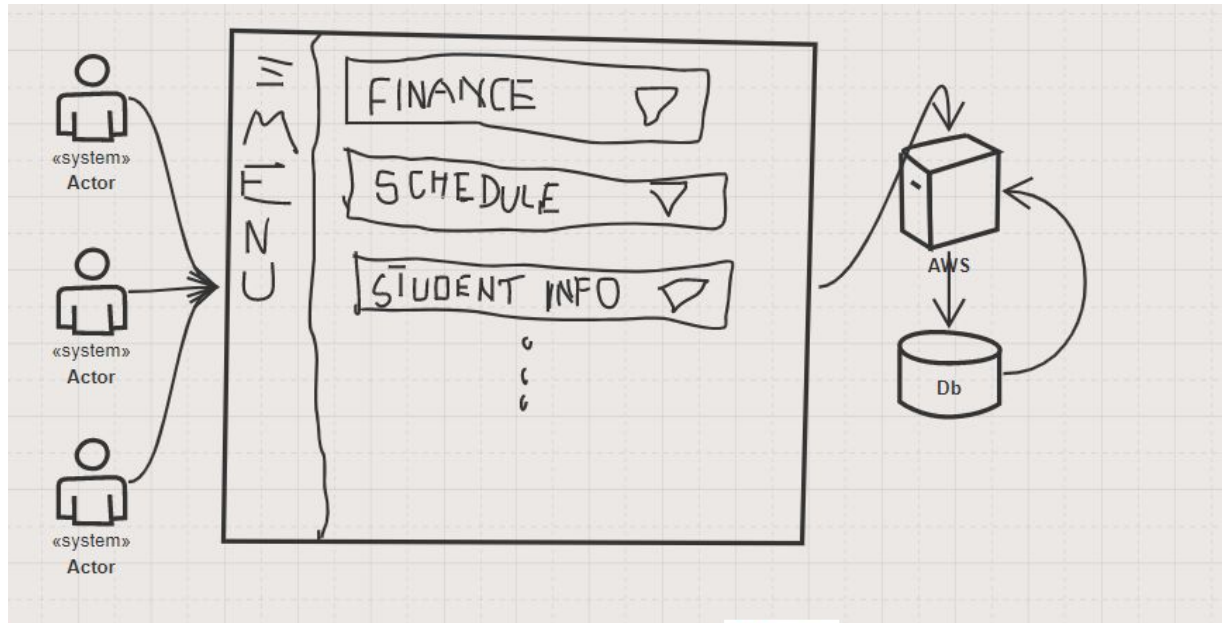
Define your development phases and percentage of time spent for each:

Use the examples in Chapter 3 of Code Complete to help with defining and estimating.

Phase	Definition	% Time Spent (should all add up to 100)
Problem Definition	Determining the problem that must be solved.	5%
Requirements Development	Determining factors of the project that must be included in the final product	5%
Construction Planning	Determining what construction environment to use & why.	5%
Software Architecture	Laying out the high-level design of the system.	5%
Detailed Design	Taking the high-level design down to a more concrete set of steps, incorporating the technologies used.	10%
Coding & Debugging	Implementing the project and debugging errors	50%

Testing Phase	Testing your project at multiple scales (unit, integration, system, acceptance)	10%
Deployment	Pushing the new program out to be used by the client	4%
Maintenance	Proactively working on the system <u>after</u> release to maintain its functionality and improve small portions of the software.	6%

Reflect on your experience:

Which parts did your team find challenging to complete? What would help your team overcome those challenges?

Doing a high-level design in such limited time was difficult. Additionally, giving an existing app and being told to improve it left us with a lot of uncertainty on what changes to be made. Learning to quickly use new tools (drawing app) was rushed. Having more time and earlier exposure to the tools would help us in the future!