Capstone Project

BNTA

Capstone

- Aim: design and build an application to solve one of the many issues facing a fictional company
- **In addition to the code**, you will also need to provide:
  - a business case for your proposed application
  - a log of any associated risks (risk register)
  - a project timeline
  - a consideration of any ethical/regulatory issues which may arise
  - Bug tracker
- You don’t need to solve EVERY problem the company has - probably best to hone in on one aspect

Tech Stack

- Full-stack, must include a frontend and backend
- We recommend a React frontend and a Spring backend, but you can build on that by incorporating additional/relevant functionality
- Libraries are fine, but please ensure everyone in the group understands what they are for, how they work, the case for using them
- If you decide to use an external API, make sure you spend time looking at it! And that you can get everything you need from it

Planning (before you start)

- Wireframes
- Component Diagrams
- Entity Relationship Diagrams
- Class Diagrams
- A list of routes your API needs to provide
- A breakdown of your project into MVP and extension tasks
- A business case*

Business Case

- Let’s look at the scenario (all groups will use the same one)
- Once you have discussed as a group what aspect/problem(s) you want to solve you will need a business plan
- The business plan should cover:
  - High level summary of the problem and how you will solve it
  - Summary of the current situation and contributing factors
  - Consideration of any constraints
  - A list of requirements for your solution*
  - Summary of expected benefits
- A template and example has been provided

Managing Risks

- Inevitable that something will happen during the project that will affect your progress in some unforeseen way
- Mitigate effects by considering likely blockers in advance
  - Does anyone in the group have another appt they need to miss time for?
  - Are there any likely internet issues?
  - Are you attempting something complex that will require external support?
- Construct a risk register (a template and example have been provided)
- Not a static document, you will need to fill it out as you go along

Timeline

Wed 20th Sept (PM)/Thur 21st Sept	**Sign off diagrams** Frontend wireframes (Frontend) Component diagram (Frontend) Class diagrams (backend) ERDs (backend) Business Case
Fri 22nd Sept	9.30am Stand up / Housekeeping (please nominate someone to speak for your group)
Thurs 28th Sept	4pm: Project submission
Fri 29th Sept	12pm: Final Stand up 😭 2pm: Presentations 4pm: Graduation

Structure & Tips

- Use Scrum
  - Stand up/stand down
  - Organise your time into sprints (as long and short as necessary)
- Use a Kanban board - Trello, GitHub, etc or other collaboration tool like Google docs
- Do a retro about half way through - MetroRetro/Google docs/Excalidraw
- Team norms! - how are you going to work together, etc
  - Pair program properly
- Set limits on research ⏳
- No authentication 😱 … until you've done MVP
- Do not skimp on planning - diagrams, diagrams, diagrams
- Separate repos for frontend and backend
- Do you really need Tailwind?
- **MVP THEN extensions ⬅️ very important**