

Coursework: Group project – GAMES TIPS & TRICKS

The coursework is worth **70%** of the total module mark. Delivery of the coursework is divided into four Sprints. You will deliver the sprints as a group. For each sprint, all members of the group will receive the same mark. You will also be evaluated for your individual contribution to the project via your individual reflection document, worth 20% of the coursework mark. The marks for the coursework element are divided as follows:

Title	Deadline	Marks	Review
Sprint 1	tbc	20%	DONE
Sprint 2	tbc	20%	
Sprint 3	tbc	20%	
Sprint 4	tbc	20%	
Individual	tbc	20%	

Technologies	
Front End	HTML, CSS, JavaScript, PUG templating system
Back En	Node.js, Express.js MySQL database
Dev Ops & CI/CD	Docker, Git
Github actions PM	Github Project

Coursework description - Overview

Each group will produce a ‘full stack’, dynamic web application which can be deployed using Continuous Integration/Continuous Deployment techniques.

Technologies

The technologies used in the module are as follows:

Frontend: HTML, CSS, JavaScript, PUG templating system

Backend: Node.js, Express.js, MySQL database

DevOps and CI/CD: Docker, Git

Github actions Project management: Github project

Your application must be built using the tools and techniques taught in the module.

For 2025, our theme will be “Sharing, exchange and mutual aid”.

To address the theme, students should consider how they can use their skills to promote community development and help solve real problems, for example: waste, climate change and cost of living crisis, and/or support their interests and hobbies. They will do this by creating a dynamic, database driven web application through which users can exchange goods or services co-operatively, for mutual benefit rather than financial gain.

Our chosen Indicative project ideas: **Game tips and tricks**

The groups will be expected to consider usability, security and ethics as they develop their application. While all groups will start with basic functionality, the projects will allow increasing creative input and unique ideas as they develop.

Deliverables

You will work on the project using a ‘scrum’ project management methodology. This means that you will work as a team to deliver your project iteratively.

Your progress will be discussed weekly during ‘stand-up’ meetings in lab time with your lecturer, and formally via the code-review assessment points.

Sprint 1: Review point: Lab of Week 3

The aim of this sprint is to check that the project workflow is set-up for the team, you have clarified your project idea and adopted a code of conduct.

Checklist Submission 1

The following must be in place:

- GitHub repository for coursework set-up and at least one commit from every group member
- Product Backlog created and kanban board in Github project created
- Scaffolding files added to github and README file customised for your project

- Correct branches for GitFlow workflow created - includes `master`, `develop`, and `release` branches
- Each member of the team able to run the development environment using Docker
- A single PDF document with: Your group members and group name
- Project description refined
- Code of Conduct
- At least two ‘Personas’
- Ethical issues identified
- Meeting records completed

Sprint 2: Lab of Week 5

The aim of this sprint is to assemble the initial requirements and ensure that specifications are ready for sprint 3.

Checklist Submission 2

The following must be in place:

- A single PDF Document with: Features for your application defined as user stories, Use case diagram, Sprint 3 specification prepared with at least: user stories, wireframes, activity diagrams.
- Other artefacts may be included such as sequence diagrams, ERD diagram, class diagram, designs, colour schemes
- Sprint 3 tickets prepared on your Kanban board
- A screenshot of your Kanban board
- All students up to date with lab work and ready to start development
- Meeting records completed

Sprint 3: Lab of week 8

The aim of this sprint is to begin the application development by creating some simple features. All members of the team must show that they can build the development environment and have contributed code. For your sprint review you will be expected to be able to have your database populated and be able to run your code

Checklist Submission 3

- Initial requirements implemented using MySQL, Express and PUG, using Docker containers for the team development environment and demonstration. To include at minimum (these pages must use data pulled from your database):
 - Users list page
 - User profile page
 - Listing page
 - Detail page
 - Tags/categories
- A single PDF document with:
 - The user stories you implemented in sprint 3
 - Database design
 - A breakdown of tasks and developers allocated (from Github project)
 - Github repository and github project links
 - A screenshot of metrics from github showing that all team members are participating
 - A screenshot of your kanban board
 - Meeting records
- In your sprint 3 review, you will plan your final sprint which will be tailored to each groups progress

Sprint 4: To be presented in Week 12

The aim of this sprint is to complete your ‘MVP’ to by adding features and refining your design as much as possible. The scope of your sprint 4 will be tailored to each group and will be determined in your sprint 3 review meeting. You will also add some CI/CD workflows using github actions. Groups will present to the whole class in week 12.

Checklist Submission 4

Web application: Intermediate and/or advanced requirements implemented to include at least some of:

- User login
 - Basic matching algorithm
 - User points or ratings
 - Advanced ratings or points system
 - In-app messaging
 - Advanced matching algorithm / recommendations
 - Use of external APIs where relevant (eg. Transport, maps, weather)
- DevOps and CI/CD**
- Application runs in Docker containers
 - At least one github action implemented

Individual Assessment Individual contributions to the team will be assessed based on attendance at the various meetings and code reviews, and via the metrics gathered from tools such as GitHub. Individual contributions can lead to a scaling of the overall coursework grade if the module team have evidence that illustrates a lack of contribution to the team deliverable.

The coursework **must** be delivered as part of a team. **If anyone is dismissed from their team this means they cannot deliver the coursework and is at high risk of failure for the whole module.** Dismissal from a team involved the following process:

An individual is evidenced as breaching the code of conduct as set-out by the student team

Evidence is presented at the next available meeting with a member of the module delivery team
The individual evidenced will have the opportunity to explain any mitigating circumstances either to the student team or privately to a member of the module delivery team
The module delivery team retains the right to the final decision of whether the dismissal is warranted
Any dismissed team member has a week to appeal the decision to the module team with suitable evidence provided.

Code Review Meetings

Each group will undertake **four** graded code reviews:

1. Week 4 (20% of CW mark)
2. Week 8 (20% of CW mark)
3. Week 10 (20% of CW mark)
4. Week 12 (20% of CW mark)

The meetings will take place during the lab sessions. Each group will be given **10 minutes maximum** for the code review. Your group will be **allocated a time for the code review**. The details of the individual review points are below. These meetings **must be attended** at the **stated time**. Guidelines for grading the group:

Being late for the meeting or **not being ready** when the meeting starts will result in the grade for that review being capped at 40%

Not attending the meeting will mean the code review will be marked at 0%

All team members should attend the code review; however commitments and other considerations will be taken into account. **Individuals attendance at reviews will be monitored** to ensure the team is contributing collectively to the project.

Being ready means that you are ready to present the points for the code review. This means that you have a computer with your application ready to run