

# Programming Studio 1

## COSC2803 | Semester 1 2024

### Studio Project Milestone 1: Ideation

<b>Assessment Type</b>	Group Assessment (pairs)
<b>Due Date</b>	11.59pm, Sunday 19 May 2024 (End of Week 4)
<b>Silence Period</b>	From 5.00pm, Thursday 17 May 2024
<b>Weight</b>	15% of the final course grade
<b>Submission</b>	Online, via Canvas. Submission instructions are provided on Canvas.
<b>Learning Outcomes</b>	This assignment contributes to CLOs: 1, 2, 4, 6 - 8.

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## 1 Overview

The objective of the studio project is to develop a web-based application to address a **Social Challenge**. For the competitive review many students embraced the social challenges and found their own unique product idea. For the studio project we are going to be working with the same social challenge, however, we are going to provide the product idea so that all students will work from a consistent starting point. Most importantly, it is not a problem if your product idea is different to the scope we have defined. You can use your previous work to **help inform** your design choices.

**In Milestone 1** you will:

1. Form a group, with your assigned team partner(s).
2. Setup your group collaboration tools.
3. Complete the Group Information form.
4. Study the **product idea**, (also known as the **business case**) in the requirements document for your chosen social challenge, along with dataset that we provide that will power your website.
5. Design the **User Interface** and **Database Model** for your web application.

### 1.1 Group Work & Group Work Assessment

In Week 3, you will be assigned your group for the Studio Project. You will work with this group for the duration of the Studio Project. If there are any problems, you should inform your cohort's lead staff member as soon as possible.

You are required to setup and use **team collaboration tools** on MS Teams, described later in this document. You will also be required to evaluate the contributions of your group partner.

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## 2 Social Challenges

We will focus on the same Social Challenge from the competitive review, repeated here.

### 2.1 Challenge: Investigating Food Loss and Waste

Food loss and waste is defined as food products that end up not being eaten for a variety of reasons. Food loss occurs along the food supply chain from harvest/catch/slaughter up to, but not including, the sales level. Food waste occurs at the retail and consumption level. Reasons for loss and waste can vary during each stage. For example, consumption by pests, and spoilage/decay due to improper temperature control, can both occur during the storage stage. Food loss and waste both have a significant impact on many other current global issues, including climate change, food security (availability), resource usage (land and water) as well as an impact on biodiversity among others.

Your challenge is to develop a web-application to **help various key parties in the supply chain (including consumers and policy makers) explore *unbiased* information on the sources of food loss and waste over an extended time period.** You will need to present statistics and calculated information about the types of food loss/waste. You will need to:

- Present this information in an informative, respectful, and unbiased manner.
- Cater for a diverse range of users who are seeking to become more informed on this topic.
- Provide diverse types of information and functionality, including both high-level summaries, and enabling an in-depth analysis of the data.

By using your website, users should be able to become well-informed of the levels of food waste/loss across the world.

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## 3 Assessment Details

For Milestone 1, complete the tasks described in this section.

### 3.1 Setup your Team Collaboration Tools

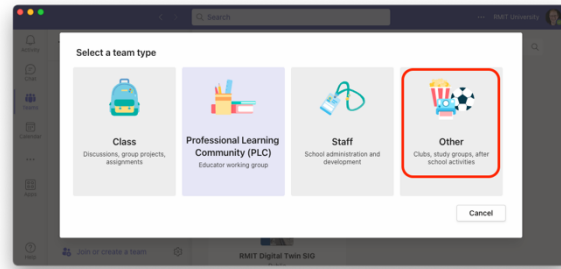
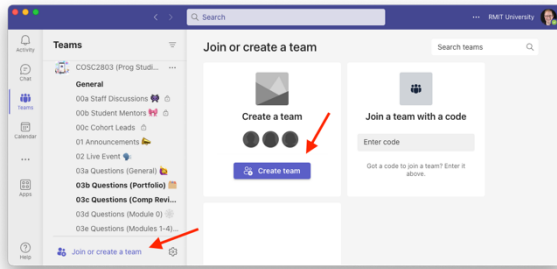
You are required to use team collaboration tools like those used in industry to conduct your teamwork across the studio project. In this course we are using MS Teams. We have chosen to use MS Teams as it's part of RMIT's IT infrastructure and linked to your RMIT student account.

Your group must **create a private team on MS Teams** where you will conduct your group work. You must name this group:

Team\_xxx\_COSC2803\_Apr24

Replacing 'xxx' with your assigned group number. For example, if your group number is 123, your private team should be called Team\_123\_COSC2803\_Apr24. You can create a private team by:

1. Selecting the "teams" tab.
2. Clicking "Join or create team" at the bottom of the team's list.
3. Clicking the "Create team" button in the right-panel.
4. Selecting the "Other" option from the types of teams to create.
5. Entering the team's name (as specified above).



After creating your team, you must add the following people as *owners* of your team:

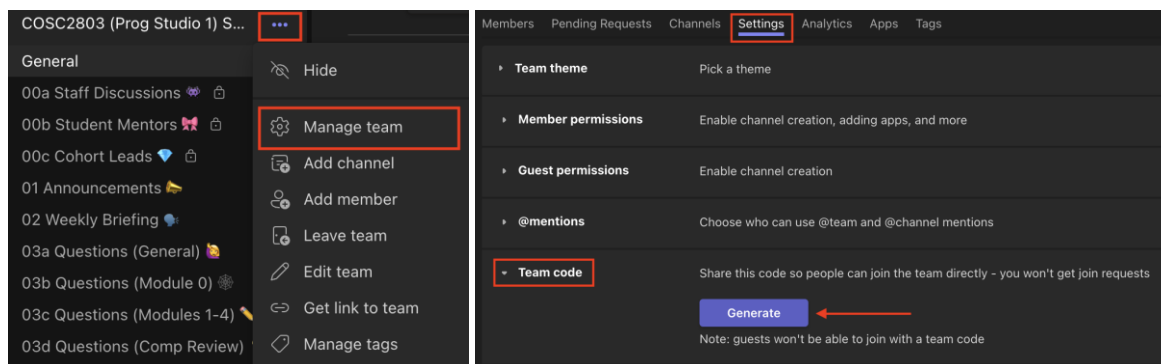
- All group members.
- Your cohort lead.
- Your group's *assessor*. Details of the assessor will be communicated through Canvas.

You can add a person to the team with their RMIT email address. Owner permissions are required so that staff can review all communications on your team. Note that, you may not grant access to your private team to any other student.

### 3.2 Complete the Group Information form.

**All team members** must complete the [group information form linked here](#). This form asks for the 'Join Code' for the Private MS Team you set-up above. You can get the code by:

1. Selecting 'Manage Team' from the 'three dots' option menu for the team.
2. Going to the 'Settings' tab.
3. Selecting the 'team code' drop-down section.
4. Clicking on the 'Generate' button, to create a team code.



The form also asks the sub-tasks for which you are creating the UX/UI ideation, explained below.

### 3.3 Review the Product Idea / Business Case for each Social Challenge

For Milestone 1, we have provided the product idea so that all students will work from a consistent starting point. In the product idea, we will target the following types of users:

- People who are completely unfamiliar with the social challenge.
- People who are familiar with the social challenge but need more in-depth information.

We will also divide the tasks that your websites need to satisfy into "levels":

**LEVEL 1 (GREEN):** Capture the attention of people who are unfamiliar with the social challenge and present the “big picture” issues of the social challenge.

**LEVEL 2 (ORANGE):** Provide a method for users to explore a “shallow glance” of the key issues of the social challenge. Users have a simple exploration of the data set.

**LEVEL 3 (RED):** Provide a method for users to “deep dive” into the detailed data of the social challenge. Users can conduct an in-depth examination of data.

In Milestones 2-4 you will have the option to complete an additional **LEVEL 4 (PURPLE)** extension task. You don't need to worry about this in Milestone 1.

We have expanded upon these levels in a *separate requirements document*. Each level has “sub-tasks”. Groups of 2 **must** use Sub-Tasks A & B. Groups of 3 additionally use Sub-Task C. These will let you share the work between the group members.

### 3.4 Creating Personas

Create at least 3 Personas whose needs and goals are relevant to the elements specified in the social challenge requirements document. These Personas are necessary to evaluate your UX/UI ideation. You can draw inspiration for these Persona from your competitive review Persona(s).

Include your Personas in your report.

**All team members** must contribute to writing the Personas.

### 3.5 User Interface Ideation

Create an *ideation*, of the UX/UI for a web application that satisfies the Sub-Task descriptions of all Levels in the *requirements document* and satisfies the *needs & goals* of your Personas.

Create a **wireframe layout** of your ideations for each page of your website using either hand-drawn sketches, Miro, or another tool of your choice. Your ideation should use **wireframe sketches**, that is, they don't need to be “photoshopped images”. Your ideation should:

- Satisfy the needs and goals of your Personas.
- Satisfy Nielsen Design Heuristics.
- Make use of suitable Design Patterns.

We recommend creating one wireframe diagram for each sub-task. However, your group may choose a different approach. Remember, this is only an *ideation*. You will have the opportunity to revise your ideation in Milestones 2-4. In fact, this revision is a crucial part of your overall studio project!

In your report, include:

- Your wireframes.
- An explanation of how your ideations satisfy Nielsen design heuristics.
- An explanation of how your ideations satisfy the needs and goals of your Persona(s).
- You should make use of common Design Patterns to help make these justifications.

Each team member **must** be allocated a Sub-Task in each Level such that:

- Each team member must create an ideation for one **LEVEL 1 (GREEN)** sub-task.
- Each team member must create an ideation for one **LEVEL 2 (ORANGE)** sub-task.
- Each team member must create an ideation for one **LEVEL 3 (RED)** sub-task.

### 3.6 Database Ideation – Entity-Relationship (ER) Model

Create **one** Entity-Relationship (ER) Model of the database for your website. You must describe this ER model in the form of an **Entity-Relationship Diagram**. This database will store the information that you will need to present to users of your website. The **business case** for your ER Model is provided by the *requirements document*. Your group should produce **one** ER Model covering all requirements of all sub-tasks. That is, you should examine the requirements of each sub-task and use these to inform:

- The Entities of the ER Model.
- The Attributes and Primary Key (or Partial Key) of each Entity.
- The Relationships between the Entities.
- The Cardinalities of the Relationships.

We have provided you with the **dataset** that you will use to power your web application. You should investigate this dataset to help inform your ER model.

Your group's ER Diagram **must** be presented using UML notation, as we have used in classes. You may use any suitable diagramming tool such as Miro, hand drawn images, or another tool. Your ER Model is an *initial design*, that you will have the opportunity to refine in Milestones 2-4.

You must also explain why your ER Model meets the needs of your website. That is, why your ER model:

- Is well-suited for storing all the data your website will need to display.
- Captures all required entities/attributes and their relationships, with unnecessary information.

In your report, include:

- Your ER Model in the form of an ER Diagram.
- An explanation of why your ER Model is well suitable for storing the data your website requires.

**All team members** must contribute to creating the ER Diagram and writing the explanation.

### 3.7 Database Ideation – Database Schema of the ER Model

Create a **Relational Database Schema** from the ER Model that you created. The relational schema must be fully specified, by providing all the tables, attributes, primary keys, and foreign keys of the relational schema. You should follow the **7-step process** described in the preparation material of **Studio Class 6** to create the relational schema following the format that has been covered in Studio Class 6.

In your report include the relational database schema. Only the final schema is required. You may include the exact steps you took to follow the 7-step process, but this is not required.

**All team members** must contribute to creating the Database Schema.

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## 4 Report

Place all your work for Milestone 1 into a report of no more than 11 pages. You report should include:

- Personas that your website targets.
- User interface ideation(s) in the form of wireframe diagram(s).
- Database ER Model in the form of an Entity-Relationship diagram.
- Relational Schema created from the ER Model.
- Justifications for why your ideations follow UX/UI and Database practices.

Your document must be no more than 11 pages<sup>1</sup>. Your report must use no less than 11pt font and no less than 1.5cm page margins. All text, including used on diagrams must comply with this restriction. *Any work that is illegible or beyond these limits will not be read and will not count towards your marks.*

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## 5 Teamwork Skills & Assessment of Teamwork

Teamwork is an important professional skill. In Milestone 1 you will be **assessed** on your teamwork, and you will evaluate the teamwork of your group member(s).

### 5.1 Teamwork

You must use the **private MS Team** to conduct your group work as setup in the instructions earlier in this document. In Milestone 1, your teamwork will be assessed on **Organisation, Contribution** and **Communication**. This will be **evidenced through the private MS Team**. We recommend that:

- You schedule regular meetings (every 2-3 days) with your group:
  - If you meet online, use your private MS Team and record the meeting.
  - If you meet in-person, record the outcomes of the meeting in your private MS Team.
- Use your *private* MS Team for all text-based communication.
- Store your group's files (such as your report) in the Files section of your private MS Team.

Evidence of group work will only be accepted from your **private MS Team**. Evidence of teamwork in other places such as private messages, Discord, or Snapchat will not be considered. This process is used because staff require reliable access to evidence of group work on which to award grades.

### 5.2 Teamwork Contribution and Peer Review Form

All team members must individually complete the Teamwork Contribution and Peer Review Form. The link to the review form will be placed on the Canvas in Week 4. This form asks you to:

- Describe your teamwork contributions, and the date(s) on which you completed your teamwork.
- Review the teamwork of your group partner(s). This should be a fair and honest review of your partner(s) contributions, and how they collaborated with you over the course of Milestone 1.

### 5.3 Issues with Teamwork and Individual Grades

Ideally your teamwork will progress smoothly. Thus, the final grade that you will receive will reflect the quality of the work to which both team members contributed equally.

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<sup>1</sup> Groups of 3 may use up to 14 pages.

If you have concerns about your teamwork, make sure you discuss these with your Cohort lead **as soon as issues arise**. Should one member of the team have an insufficient contribution, the assessor may award individual grades for one or more components of the rubric. The studio project has been structured so that each member of the team has tasks they can *individually complete*. Therefore, even if your team member's work is insufficient, *you* are expected to complete *your individually allocated tasks*.

Note that individual grading:

- Is the sole determination of the assessor. You may provide explanations if you believe your work should be individually assessed, however, the assessor makes the final determination.
- Assesses the teamwork rubric component. You are still assessed on your *teamwork performance*, such as whether you made a concerted effort towards good teamwork.

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## 6 Submission

Follow the instructions on Canvas to submit Milestone 1. You will need to submit the following items:

- Declaration Cover Sheet (PDF).
- Report (PDF).
- Teamwork Contribution and Peer Review Form (MS Form).

### 6.1 Assessment Declaration

When you submit work electronically, you must agree [to the RMIT assessment declaration](#), by completing the [RMIT Assessment Declaration Cover Sheet](#). Failure to complete the declaration and student details may result in a grade penalty.

### 6.2 Silence Period

A silence period will take effect from **5.00pm, Thursday 17 May 2024**.

This means questions about this assignment will be not answered, whether they are asked on MS Teams, by email, or in person. The silence period is in place because staff members are generally unavailable over the weekend. Make sure to allow plenty of time for your questions to be answered.

### 6.3 Late Submissions & Extensions

A penalty of 10% per day is applied to late submissions up to 5 days, after which you will receive zero marks.

Short extensions may be granted by the course coordinator up to 1 business day *before* the due date in accordance with RMIT Assessment Adjustment process. However, extensions are not guaranteed and require suitable documentation. The course coordinator may refer requests to Special Considerations.

Special Consideration *may result in an equivalent assessment*, which may take the form of a timed assessment assessing the same knowledge and skills of the assignment and are generally granted on an individual basis. For more information refer to the [RMIT Special Consideration process](#).

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## Marking Guidelines

The marks are divided into the following categories:

1. UX/UI Ideation 5/15
2. Database Ideation 5/15
3. Database Relational Schema 2/15
4. Teamwork & Peer Assessment 3/15

The detailed breakdown is provided on the marking Rubric available on Canvas.

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## 7 Academic Integrity and Plagiarism (Standard Warning)

Academic integrity is about the honest presentation of your academic work. It means acknowledging the work of others while developing your own insights, knowledge, and ideas. You should take extreme care that you have:

- Acknowledged words, data, diagrams, models, frameworks and/or ideas of others you have quoted (i.e. directly copied), summarised, paraphrased, discussed or mentioned in your assessment through the appropriate referencing methods
- Provided a reference list of the publication details so your reader can locate the source if necessary. This includes material taken from Internet sites. If you do not acknowledge the sources of your material, you may be accused of plagiarism because you have passed off the work and ideas of another person without appropriate referencing, as if they were your own.

RMIT University treats plagiarism as a very serious offence constituting misconduct. Plagiarism covers a variety of inappropriate behaviours, including:

- Failure to properly document a source.
- Copyright material from the internet or databases.
- Collusion between students.

For further information on our policies and procedures, refer to the [RMIT Academic Integrity Website](#).

The penalty for plagiarised assignments includes zero marks for that assignment, or failure for this course. Please keep in mind that RMIT University uses plagiarism detection software.

### 7.1 Use of Artificial Intelligence (AI) Tools in Assessment Tools in this assessment

The majority of your work in this assessment should be your own work, and not plagiarised from other sources, or sourced from the use of Artificial Intelligence (AI) tools. Therefore, **the use AI tools are restricted in certain ways for this assessment task.**

In this assessment task, you may use AI tools to support you in developing and completing your work by generating ideas, planning, and/or drafting only. Any use of such tools must be acknowledged and referenced.

Work that is significantly produced by AI tools, or where AI tools are used to complete this assessment without attribution may result in an allegation of academic misconduct.