



Programming Studio 1

COSC2803 | Semester 1 2023

Studio Project Milestone 1: Ideation

Assessment Type	Group Assessment (pairs)
Due Date	11.59pm, Sunday 14 May 2023 (End of Week 4)
Silence Period	From 5.00pm, Friday 12 May 2023
Weight	15% of the final course grade
Submission	Online, via Canvas. Submission instructions are provided on Canvas.
Learning Outcomes	This assignment contributes to CLOs: 1, 2, 4, 6 - 8.

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 challenges, 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. Choose a Social Challenge to work on with your group partner.
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

On Monday of 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 will be 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.

2 Social Challenges

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

2.1 Challenge A: Closing the Gap

Develop a web-application to **help governments, Indigenous leaders and the general public observe progress towards the targets of the National Agreement on Closing the Gap across the last two Australian Censuses (2016 and 2021)**. You will need to present different statistics and calculated information about Australia's progress on a selection of the 17 socioeconomic outcomes using data in an informative but respectful manner. You will need to cater for diverse users who are interested in high-level concepts or an in-depth analysis of the data. A core focus should be on progress towards the socioeconomic outcomes across the last 5 years as captured in the 2016 and 2021 censuses.

2.2 Challenge B: Climate Change Awareness

Develop a web-application to **help governments, scientists and the general public analyse patterns of change in ocean and land temperatures over a 260-year period**. You will need to present different statistics and calculated information about observed temperatures from across various countries using data in an informative manner. You will need to cater for diverse users who are interested in high-level concepts or an in-depth analysis of the data. A core focus should be on identifying trends across various time scales and geographic locations.

3 Assessment Details

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

3.1 Social Challenge Selection

Your group must select one social challenge that you will use for this the studio project. You may choose a different social challenge from the one you used in the Competitive Review. Your selection should be clearly stated at the start of your report.

3.2 Setup your team collaboration tools

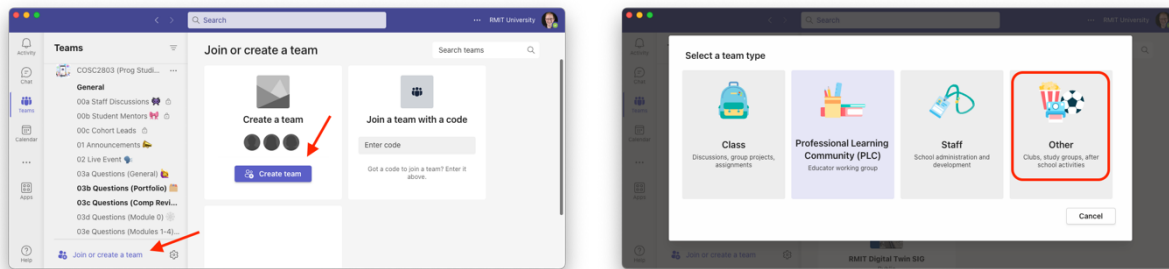
To conduct your teamwork across the studio project, you are required to use team collaboration tools like those used in industry. In this course we are using MS Teams. We have chosen to use MS Teams as it's part of RMIT's IT infrastructure and linked to your RMIT student accounts.

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

PS1_ProjectGroup_xxx_Apr23

Replacing 'xxx' with your assigned group number. For example, if your group number is 123, your private team should be called PS1_ProjectGroup_123_Apr23. 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 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 use a person's email address to add them to your team. 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. Incorrectly configuring your private team may result in a grading penalty.

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 two 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* for each social challenge. Each level has “sub-tasks”. These will let you share the work between the group members¹. Specifically:

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

¹ If you are in one of the few groups of 3, you will need to speak with your cohort's lead staff member to negotiate a third sub-task for each level. Your cohort lead will have further guidance.

3.4 Creating Personas

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

You must include your Personas in your report.

3.5 User Interface Ideation

You must create an initial design, that is an *ideation*, of the UX/UI for a web application that satisfies the *user's needs & goals* of the sub-tasks in the *requirements document*. Your ideation can be informed by:

- Gaps that you have identified with current websites that should be fixed.
- Strengths of current websites that should be kept.
- Personas you have created.

Create a **wireframe layout** of your *ideations* for each page of your website using either hand-drawn sketches, Miro, Figma, 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.

You should create the UX/UI of pages to support all sub-tasks for each level. We recommend one webpage for each sub-task, with each group member designing one page for each of their three sub-tasks. However, your group may choose a different approach. Remember, this stage is your *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.

3.6 Database Ideation – Entity-Relationship (ER) Model

You must 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* for your social challenge. 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 informing 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, LucidChart, 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.

3.7 Database Ideation – Database Schema of the ER Model

You must 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. That is, you could create the SQLite database for your website from this schema.

You must follow the **7-step process** described in the preparation material of Studio Class 6 to create the relational schema. Thus, your schema does not need to be the 'CREATE TABLE' statements. It should follow the relational schema format that has been covered in Studio Class 6.

Include your final relational database schema in your report.

4 Report

Place all your work for Milestone 1 into a report of no more than 11 pages. Your 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 pages². Your report must use no less than 11pt font and no less than 1.5cm page margins. *Any work that is illegible or beyond these limits will not be read and will not count towards your marks.*

5 Teamwork Skills & Assessment of Teamwork

Teamwork is an important professional skill that you will continue to develop during the studio. You will continue to use the team collaboration tools that you used in the competitive analysis. In Milestone 1 you will be **assessed** on your teamwork, and you will evaluate the teamwork of your team member.

² If you are in one of the few groups of 3, you may use up to 14 pages.

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 MS Teams**. We recommend that:

- You schedule regular meetings (every 2-3 days) with your group:
 - If you meet online, use a MS Team meeting and record the meeting.
 - If you meet in-person, record the outcomes of the meeting in your MS Team.
- Use MS Teams for all text-based communication.
- Store your group's files (such as your report) in the Files section of your MS Team.
- Review the Weekly Outline on Canvas, for a suggestion of how to allocate your time.

You **must** use your group's MS Team to coordinate and manage your group work. Evidence of teamwork recorded on other platform, such as Discord, will not be considered for marking.

5.2 Teamwork Contribution Document

As part of your teamwork assessment, you must submit a **teamwork contribution document** that outlines the tasks that each member completed, and the timeframe in which they completed their work. The template for the teamwork contribution document is linked on Canvas. For both team members to be considered to have sufficient contribution, **both team members must contribute to:**

- Design of the combined ER Model and creation of the Relational Schema.
- Level 1, 2 and 3 UX/UI designs.

5.3 Teamwork Peer Assessment

You must complete a peer review of the teamwork of your group partner(s). The link to the review form will be placed on the Canvas in Week 4. This should be a fair and honest assessment of your partner(s) contributions, and how they collaborated with you over the course of Milestone 1.

5.4 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.

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.

6 Submission

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

- Report (PDF).
- Teamwork Contribution Document (XLSX).
- Teamwork peer evaluation (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, Friday 12 May 2023**.

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](#).

7 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. Generally, all group members will be awarded the same grade, unless the assessor determines that an individual grade is awarded in one or more categories.

8 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, please 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.

8.1 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.