

Changemakers: Creativity and Value Creation

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Assignment 1: Ideation & Project Management

Assignment Information:

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Task 1: Ideation and Innovation

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Q1: Innovation

Innovation is what allows humans to create and improve the world around them. Everything we use in our daily lives started as an idea in someone's mind. [1] For example, Millions of people rely on computers every day, an invention created by individuals who identified a need and imagined a solution. Innovation sprouts from detailed thinking about how to improve everyday tasks. Even simple objects, such as a spoon, exist because someone recognised that using our hands were too inefficient or messy. Without these ideas, society would not be as advance as it is today.

Innovation is what makes us humans passionate about our future. We all think about how the future will look with the new inventions and how they will save us from our daily struggles. But not everyone is destined to be the innovator that will create these inventions. No one thinks they are capable of being the next Steve Jobs or Bill Gates. But why do people think this way? It's because we all have grown out of the thought of being creative and unique. By going through the standard educational system, we are all taught that makes mistakes is the worst thing that you could ever do. But they are far from correct, the furthest they can ever be. Without mistakes how will we ever learn and grow as a society. Mistakes are what lead to creative decisions, which eventually leads to creative outcomes. Innovation can help people also learn their self-worth and help them grow individually as human beings. With mistakes teaching them to be more independent and resilient. [2]

To address the decline of creativity, we must start making it socially acceptable to make mistakes and to express your ideas without any judgement. If we weren't such a judgemental society, there would be so many people that would come up with their ideas and act on it. We could have flying cars by now if we didn't have the thought of having to appeal to other people to be successful. If we didn't make mistakes products like Post-it Notes and the Chocolate Chip Cookies that we know today. Originally, the Pacemaker was originally supposed to be a recording device, but due to a wrong resistor being installed, it emitted electrical pulses. When the inventor Wilson Greatbatch, realised that this could be used to mimic a human heartbeat, he switched his focus to creating the first ever implantable pacemaker, which has saved millions of people worldwide. Mistakes can lead to amazing ideas and inventions, so being able to make them without judgement could lead to a bunch more of amazing innovations that could possibly save more lives or just simply time.

Q2: Ideation

Initial Project Ideas:

Several project ideas were considered based on areas of personal interests and problems, all surrounding the area of computing. Each of these ideas involved computing but some of the main ideas were not directly needed for computing.

Idea 1 – Wear the Weather (Selected Project)

A mobile application that uses weather data to recommend a suitable outfit based on the user's style and wardrobe.

Idea 2 – StudySmart AI Study Planner

A productivity mobile app that helps students with personal deadlines, workloads and available time.

Idea 3 – Budget Buddy

A finance management application that helps users track spending habits and generate monthly budget suggestions.

Idea 4 – SafeRoute

A mobile safety navigation app that suggests safer walking routes using GPS data and safety information.

Selected Project Idea

Project title: Wear the Weather: AI Mobile App for Personalised Outfit Recommendations Based on Weather Conditions.

Aim

To develop a mobile application that uses weather data and AI to recommend appropriate outfits for users based on daily weather conditions and personal style preferences.

Objectives

- Integrate a weather API to retrieve real-time data such as temperature, precipitation and wind conditions of the users location.
- Allow users to input wardrobe items and style preferences to personalise outfit suggestions
- Implement an AI recommendation system that analyses weather data and wardrobe information to generate daily outfits suggestions.
- Design a simple and user-friendly interface that clearly displays weather information and recommended outfits.
- Optionally include an avatar feature that visually shows the suggested outfit on a customisable character.

Project description

Wear The Weather is a mobile application designed to help users decide what to wear based on the current weather conditions and personal style preferences. The application will retrieve real-time weather information using an external weather API and analyse factors such as temperature, wind speed and precipitation. Users will be able to input their clothing preferences and wardrobe items to personalise outfit recommendations. An AI powered recommendation system will then be used to process this data to generate suitable outfit suggestions for the day. The application will have a clean and user-friendly mobile interface to make daily outfit decisions easier and more enjoyable. Future enhancements will include an avatar so users can visualise the outfits more.

Q3: Research

Research during a large scale project is very important, especially when there are skills than need to be learnt. In this instance, the skills needed are software development, Agile, AI and overall coding skills.

The resources below will aid in the growth of confidence in these skills.

Source	Type	How It Helps the Project	Link/ Source
Expo / Expo Go Documentation	Development framework documentation	Provides guidance for building cross-platform mobile apps for Android and iOS.	https://docs.expo.dev [3]
LinkedIn Learning Course on AI in software development	Understanding the role of AI in software development	Explains how to utilise AI within software development and how it can help make the process of creating an application smoother.	https://www.linkedin.com/learning/ai-and-developer-productivity/understanding-the-role-of-ai-in-software-development?upsellOrderOrigin=default_guest_learning&trk=default_guest_learning [4]
OpenAI / AI API Documentation	AI development resource	Provides methods for implementing AI-based outfit recommendations using natural language processing.	https://developers.openai.com/api/docs/ [5]
LinkedIn Learning Course on Agile development	Agile Development resource	Helps with Agile development planning and understanding.	https://www.linkedin.com/learning/agile-software-development-refactoring?upsellOrderOrigin=default_guest_learning&trk=default_guest_learning [6]
Online Tutorials and Developer Communities (Stack Overflow, GitHub, YouTube)	Learning resources	Provide coding examples, troubleshooting support, and practical implementation guidance during development.	

Having these resources to research will help develop the understanding of the skills needed to successfully complete the project. These resources range from courses to videos, all relating to different key aspects of this project.

Task 2

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Q1: Project Solution

The proposed solution for this project is to develop a cross platform mobile application that combines real-time weather data with artificial intelligence to generate personalised outfit recommendations based on the weather and style preference of the person. The app will allow the users to create a digital wardrobe with the personal styling of their choice through a questionnaire during the startup process. Using the device's location, the system will retrieve live weather data such as temperature, wind speed and precipitation, possibly through a weather API.

This information will be sent to an AI service alongside the user's wardrobe and preferences. The Ai will then analyse these inputs and produce a recommended outfit suitable for the day's conditions. The user will see a clean and user-friendly interface, with recommendations and future iterations of the next day's outfit for the forecast. These outfits will then be visually presented on a customisable character.

The required resources for this project will include a laptop, a phone, Expo (Which is a cross-platform mobile app), Visual Studio for the coding, OpenWeatherMap API, AI API and GIT.

Task	Start Date & End Date
Ideation	07/02/2026 – 11/02/2026
Aim and Objectives	11/02/2026 - 18/02/2026
Project outline: description & Key sources	17/02/2026 - 24/02/2026
Project scope: timeline & resources	20/02/2026 - 22/02/2026
Project Planning: Task schedule &	21/02/2026 - 27/02/2026

Gantt chart	
Risk Analysis	27/02/2026 - 02/03/2026
Development methodology selection	02/03/2026 - 07/03/2026
Design phase	07/03/2026 - 14/07/2026
Prototype Development / implementation	14/03/2026 - 31/03/2026
User Testing & feedback	31/03/2026 - 07/04/2025
Finish development work	07/04/2026 - 20/04/2026
Deployment planning / Deployment (If Possible)	20/04/2026 - 02/05/2026
Reflection and Report writing	02/05/2026 - 07/05/2026

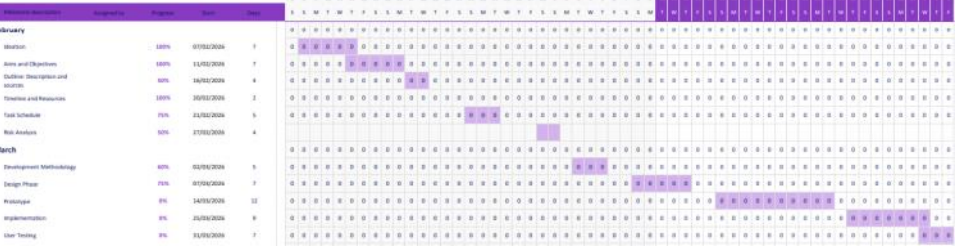
Project: Rain or Shine

Wear The Weather

Olivia Collins

Project start date: 02/01/2024

Milestone marker: 1 0



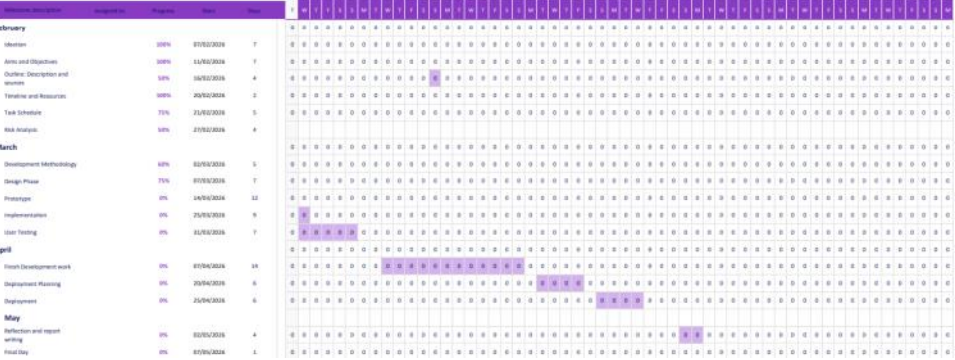
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Q3: Risk Assessment

Risk assessment table:

Risk / Challenge	Description	Likelihood	Impact	Mitigation / Solution
Limited development time	As a university student, balancing coursework and deadlines may reduce the available time for development and testing.	High	High	Use Agile planning with small milestones and weekly development goals to ensure steady progress.
Technical skill limitations	Some technologies such as APIs, or AI integration may be unfamiliar, slowing development.	High	Medium	Use online tutorials, documentation, and small prototype tests to learn required technologies before full implementation.
API integration issues	Weather API or AI services may fail, change, or have request limits that affect the app functionality.	Medium	High	Choose reliable APIs and implement error handling and fallback plans within the app.
Software bugs or technical errors	Coding mistakes or compatibility issues may cause parts of the app to stop working.	Medium	Medium	Perform regular testing during development and maintain version control using GitHub for backups.
Device compatibility	The app may behave differently on different	Low	Medium	Use cross-platform frameworks like Expo and

y issues	devices or operating systems.			test the application on multiple devices.
Poor user interface design	If the app interface is confusing or poorly designed, users may struggle to interact with it.	Low	Medium	Create prototypes before development and change the interface based on usability.
Data accuracy issues	Weather data may not always be perfectly accurate, affecting outfit suggestions.	Low	Low	Use reputable weather data sources and clearly communicate that suggestions are advisory.
Loss of project files	Accidental deletion or hardware failure could result in lost work.	Low	High	Use cloud backups and version control systems such as GitHub to store the project safely.

Summary

Conducting a risk assessment helps identify possible problems that could affect the overall completion of the project. By recognising risks such as time constraints, technical challenges and API reliability, strategies can be implemented early, creating a plan to help combat these issues. Having a risk assessment ensures that this project can remain manageable and increases the overall likelihood of completion.

Task 3

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Q1: Development Method

A suitable development method for my project, a mobile application project is the Agile development methodology. [7] Agile is an iterative and incremental approach to software development that promotes adaptive planning. This method would be well suited for my project due to its software development focus with user experience and interface design is included.

The other method that was considered for this project was the Waterfall model. But unlike Agile, Waterfall follows a rigid linear sequence, which doesn't allow the flexibility and incremental approach that Agile follows. [8] Agile allows the project to be divided into small development cycles known as sprints. Each sprint focuses on delivering a small and functional purpose towards the application.

For this particular project, the development will be structured into the following stages:

- Sprint 1: Weather API integration and data retrieval
- Sprint 2: AI outfit recommendation engine implementation
- Sprint 3: User interface refinement and wardrobe selection feature
- Sprint 4: Avatar visualisation feature

Agile is suitable because the project involves experimentation with user interface design, AI prompt usage and personalisation features. The flexibility that Agile provides allows testing and improving these components continuously. By using Agile, the project can evolve smoothly and naturally while maintaining clear progress with milestones. [9]

Q2: Design

Two key pieces of design work were created to help plan the structure of the project. These include a requirements specification and a system flow diagram. [10]

1. Requirements Specification

A requirement specification defines what the system must do and outlines both functional and non-functional requirements. This document will help ensure that the development process remains focused on the objectives.

Functional Requirements

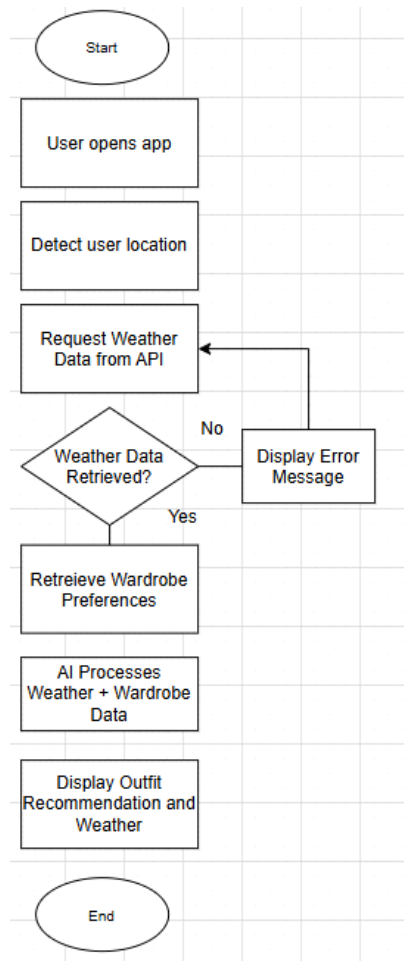
- The application must retrieve real-time weather data.
- The application must allow users to input or select wardrobe preferences.
- The system must analyse weather data and generate outfit recommendations.
- The application must display weather information and outfit suggestions clearly.

Non-Functional Requirements

- The application must provide a simple and user friendly interface suitable for mobile devices.
- The system must respond quickly when retrieving weather data.
- The application must function on both Android and iOS devices.
- The system must handle API errors or missing data well.

2. System Flow Diagram

A system flow diagram was created to illustrate how information moves through the application. This diagram will help with understanding the structure of the system and how different components interact.



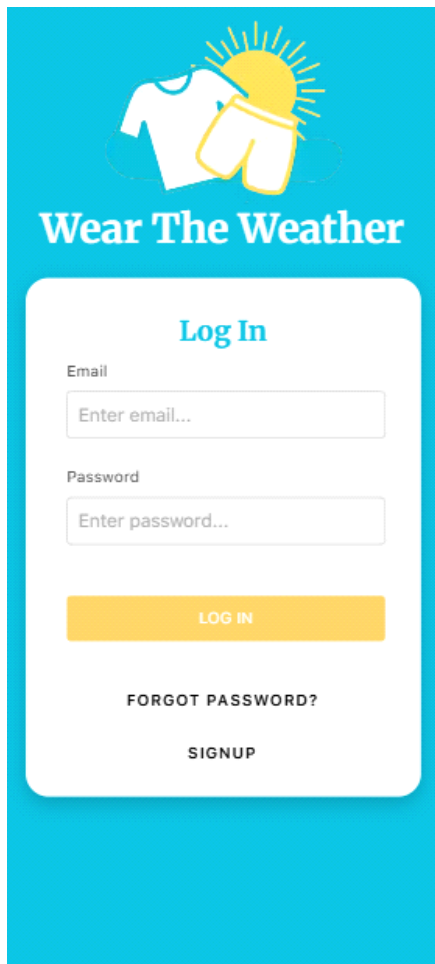
[11]

Q3: Initial Practical Implementation

Initial development work for the project has begun by using Adalo, a software that allows cross-platform mobile application development. While later work will be fully realised on Expo and Expo Go.

Initial Log In screen

This screenshot show how the log in screen will look like. This will feature the standard, email and prompts. Alongside those a forget password and a sign up feature.



Welcome Screen

This will be the first screen that the user sees when they download the app. Simple and user friendly.

Wear The Weather

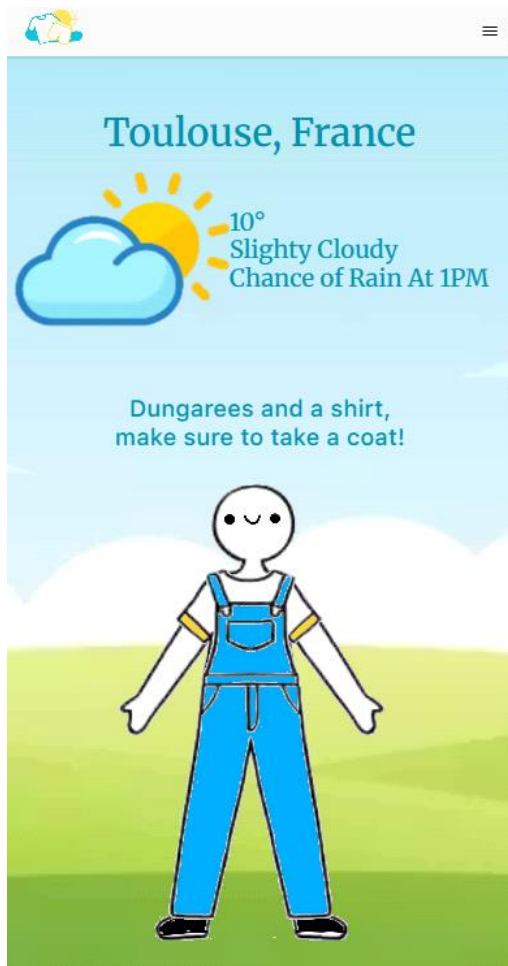


SIGN UP

ALREADY HAVE AN ACCOUNT?

Home Screen with Beta Avatar Feature

Currently, due to Adalo's limitations there is no weather API currently involved in the design version of the app. The full version will have the API.

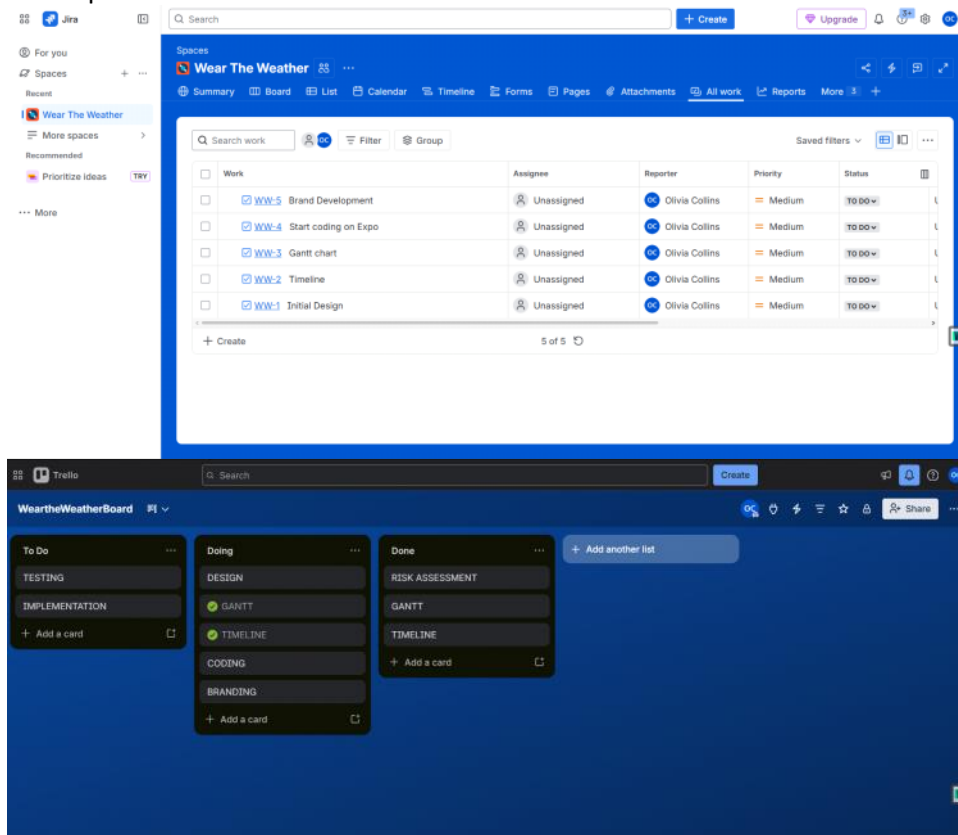


These design are the base of what the finished product will look like. By creating these design, it helps with understanding the end goal of the application.

Appendix & References

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For this project, Trello and Jira by Atlassian is being used for time management and project development.

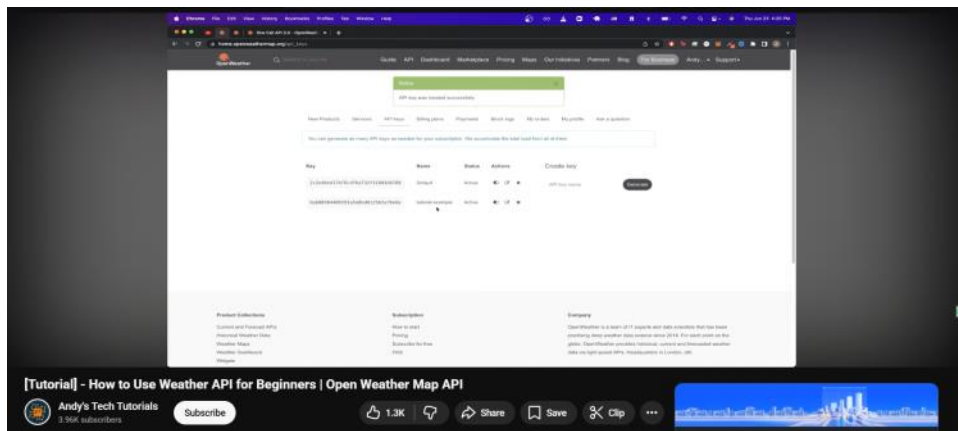


For this project, LinkedIn Learning was going to be used, but unfortunately the account that was set up could not access it for free since it was originally made last year and the trial ran out and it won't allow another trial to run.

YouTube courses:

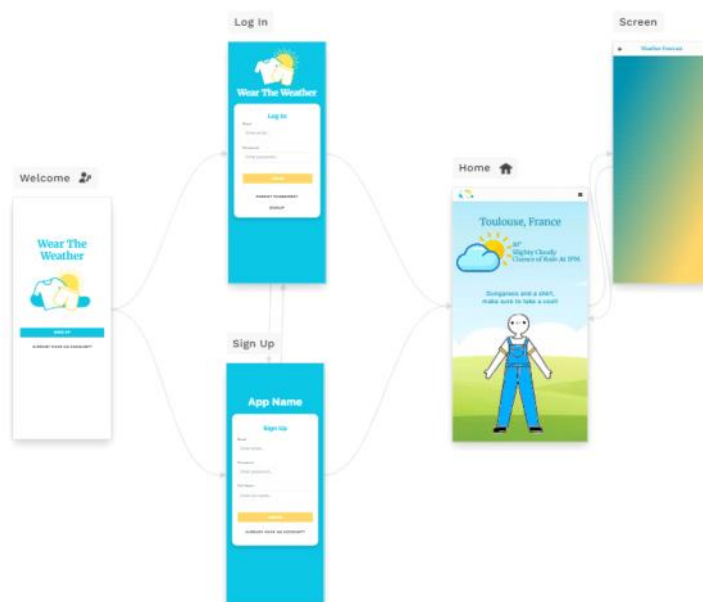


<https://www.youtube.com/watch?v=zi7uGg6FVM4>



<https://www.youtube.com/watch?v=MdlfZJ08g2I>

Adalo:



References

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[11] Olivia Collins / Draw.io. System Flow Diagram made on Draw.io <https://app.diagrams.net/>