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Miguel Richards- 2515293

Changemakers: Creativity and Value Creation

Assignment 1: Innovation and Project Management

Question1 - Innovation

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Innovation changes everything

Innovation means to "introduce new things, ideas or ways of doing something". [1] Through history, innovation has changed society, from agriculture to computing to how people communicate. Many of the technologies today only exist because earlier innovations allowed for further improvement. [2]

Technologies are changing our world

Technology continues to evolve rapidly, with artificial intelligence becoming one of the biggest and impactful innovations today. AI is already changing how people work and it is expected to continue influencing many industries.

Why is creativity so important

Creativity is an important part of innovation because it allows for new ideas and solutions to be made. As highlighted in a TED Talk, creativity encourages original thinking and it supports the making of technologies that can solve real-world problems.[3]

Question 2 - Ideation

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Potential Project Ideas

The project selected for implementation is an application, and application was selected as it aligns with the developer's skills and interests within computing. Many personal interests influenced the potential project ideas, including diet and exercise, football and education.

The potential project ideas included:

- An application to track football statistics.
- A timetable application for university studies.
- An application to help users have a healthy diet while saving time and money.

Out of the ideas listed, the diet application was selected. This decision was made because of an interest in supporting individuals who are focus on completing goals. A healthy diet is an important area of life for many which is why it's believed that this is a suitable focus for the project.

Compared to the other ideas, the diet application has greater potential benefits, as it aims to help users to save both time and money while encouraging healthier eating habits. Improved nutrition can also play a part in a better overall wellbeing, including positive effects on mental health.

The Selected Project

Project Title:

Smart Meal Planner: A Diet Management Application for Healthy Eating and Cost Savings.

Aim:

To design and develop a mobile application that helps users plan healthy meals while reducing food costs and saving time.

Smart Objectives:

Specific	measurable	achievable	Relevant	time
Research	Review 5	Achievable	Helps	Comple

existing diet and meal planning application.	existing applications or relevant sources.	through online research.	identify how the app can be made.	ed within 3 days
Research suitable APIs and software tools for the application.	Evaluate 3 APIs.	Achievable using available API documentation and technical resources.	Improves knowledge to understand how the project should flow.	Completed within 2 days
Produce a project scope, timeline, and risk assessment.	Complete a project scope, Gantt chart and risk assessment.	Achievable using project management tools.	Provides a structured project plan.	Completed within 2 weeks.
Create design artefacts, including a system flowchart and UI prototype.	Create a system flowchart and a Figma prototype UI.	Achievable using Figma and flowchart software.	Shows the application's design and user flow.	Completed within 1 weeks.

Description:

The project idea is an application that helps users to track their calories while enjoying meals of their choice. Along with that the application will support users in saving both time and money by helping them to be prepared for what they need to buy and helping them not buy more or less than necessary.

The application will work by allowing the user to enter keywords relating to the foods they would like to eat that day, few days or week. The application will process these keywords and retrieve relevant recipes through an API. The user will then select their meals that they want and the application will find out exactly how much of each ingredient is needed and then connects to a supermarket API and finds out how much the user will need to spend based on what they are wanting to eat and will make them a shopping list.

Question 3 - Research

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Four courses were discovered in preparation for the project:

- **Complete Figma Megacourse: UI/UX Design Beginner to Expert** – Covers Figma from beginner level, including wireframes, user flows, prototyping and designing mobile applications. This course will help design the interface and user experience for the application. Link: (<https://www.udemy.com/course/beginners-guide-to-prototyping-and-designing-using-figma/?utm>)
- **Responsive UX/UI Design in Figma** – Teaches the principles of good user interface and user experience design, including responsive layouts, typography and colour schemes. This will help to create an application that is easy to use and visually appealing. Link: (<https://www.udemy.com/course/learn-figma-web-design/?couponCode=KEEPLEARNING>)
- **Flowcharts and Process Mapping** – Introduces the techniques used to create flowcharts, user journeys and process maps. This course will help to clearly demonstrate how users interact with the application and how data flows between the app, recipe APIs and supermarket APIs. Link: (<https://www.udemy.com/course/process-mapping-masterclass/?utm>)

The course that has been selected is the 'Complete Figma Megacourse: UI/UX Design beginner to expert'. This course has been selected because it provides the knowledge and skills needed for the project.

Question 1 - Scope

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Proposed solution

The proposed solution is the design of a mobile application that helps users to plan their meals while managing their calorie intake and food budget. Users will enter the types of foods that they would like to eat, the application will then retrieve recipe suggestions using an APIs of multiple recipe websites. Once the meals are selected by the user, the application will generate a shopping list and calculate the total cost by connecting to the supermarket APIs. The application will also display calorie information for each meal to support healthier meal planning.

Technologies and Resources

The project will require access to a computer or a laptop to complete the research design and documentation. Figma will be used to create a user interface design and an interactive prototype of the application. Lucidchart will be used to produce a flowchart that will represent how the user navigates through the application, within Lucidchart there is a AI assistant feature, this feature will be used to support the creation of this flowchart.

Microsoft OneNote will be used to complete the project documentation and Microsoft forms will be used to create a survey so that feedback on the idea and prototype can be collected from potential users. The feedback provided will be used to evaluate the application design and find potential areas for improvement.

Online learning resources will be used to improve the skills required to use Figma efficiently, this will be done using Udemy. Research around supermarket and recipe APIs will also be conducted for a clearer understanding on how the application would retrieve recipe suggestions, macros information, ingredient details and shopping costs.

Project Timeline and Task Schedule

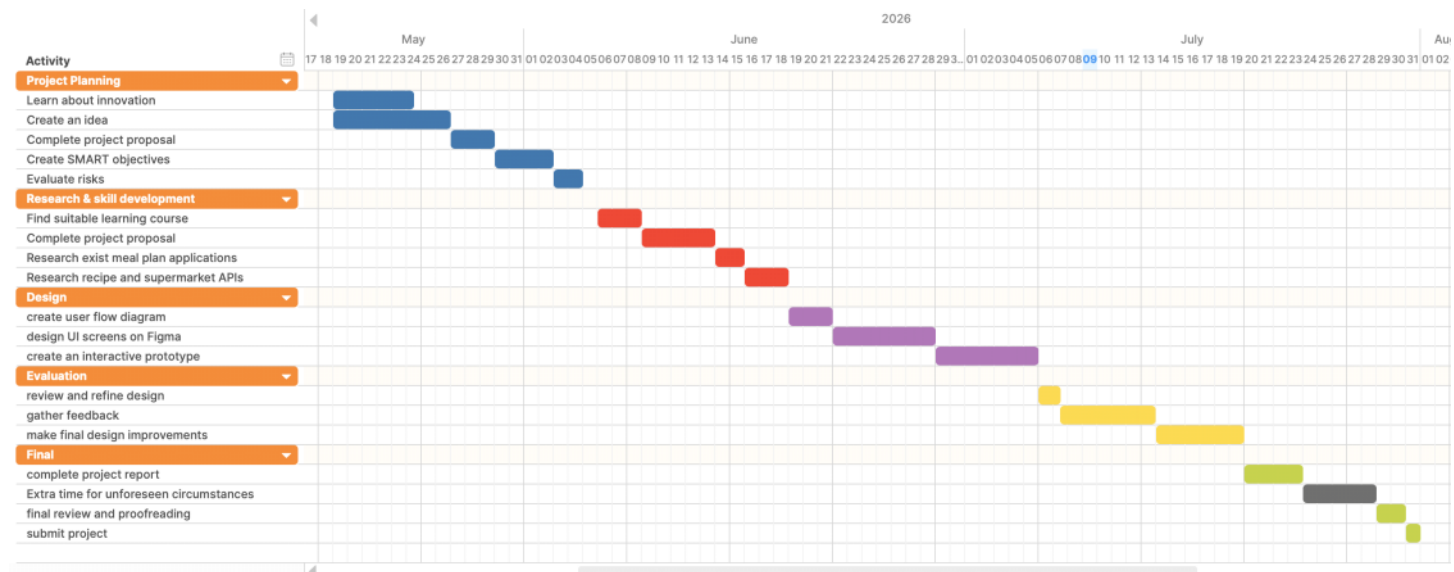
The project will be completed over a period of around 2.5 months, from the 19th May 2026 until the 31st July 2026. During this period of time, the project will progress through the planning, research, design, evaluation and documentation stages. Each stage is broken down into the following:

- Planning - Making a clear plan, defining the project scope and making sure that all potential risks are mitigated. - approximately 2 weeks
- Research - Gaining a clearer understanding of how the application could work by researching similar applications and relevant technologies and suitable APIs - approximately 1.5 weeks
- Design - Creating a design to show what the application will look like and how it will be navigated. - approximately 2.5 weeks
- Evaluation - Reviewing and collecting feedback and making any potential improvements. - approximately 2 weeks
- Documentation - Completing the project report, reviewing all the work and preparing to submit the project. - approximately 1.5 weeks(allowing extra time for unforeseen circumstances).

On the following page a Gantt chart will be shown to go into more detail.

Question 2 – Gantt chart

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Question 3 – Risks and Challenges

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Risk/Challenge	Mitigation
Illness or personal circumstances may delay progress	The project schedule will allow for unexpected delays.
Limited experience using Figma.	Online tutorials and Udemy courses will be completed before beginning the design work.
Technical issues, such as software or hardware failures, could interrupt work.	Technical safety measure will be put in place, to make sure all data and work is backed up.
Work as part of the apprenticeship may impact the time available to complete the project.	A project time line will be followed to balance work responsibilities and the project.
The project may take longer than expected.	A project timeline will be followed to ensure each stage is completed on schedule
Changes to the project scope may increase the work	The project requirements will be clearly defined at the start and reviewed regularly to avoid unnecessary changes.
Research resources may not provide all the information required	Multiple reliable sources will be used to ensure enough information is available throughout the project.

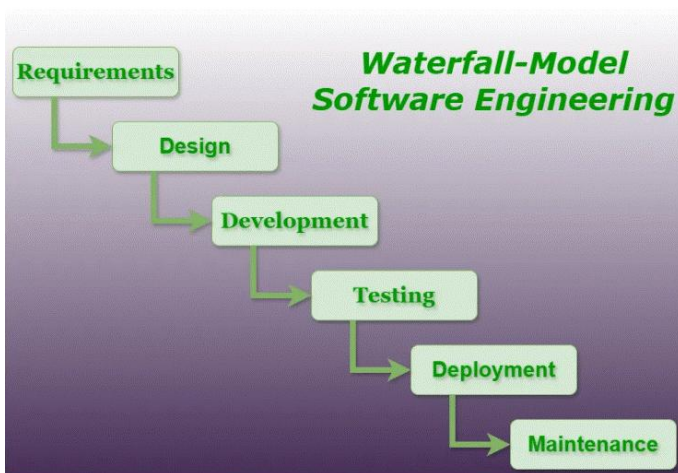
Q1- development methods

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There are several development methods that can be used to plan and manage a project. Two methods that are commonly used are the Agile method and Waterfall model. Both of these provide a structured way to complete projects, but they have difference in how changes and improvements can be manage throughout the development.

The Waterfall model has a sequential approach, which means that each stage of the project must be completed before moving on to the next stage.[4] those stages normally include:

- Requirements
- Design
- Implementation/Development
- Testing
- Deployment
- Maintenance



[5]

Approaching a project with this method helps provide a clear structure and allows the project to be planned in detail from the start. However, the downside to the Waterfall model is that changes can be difficult to be made once a stage has been completed.[4]

The agile method uses what is called an iterative approach. An iterative approach is where a project is completed through smaller stages, each of those stages being called an iteration. Each iteration involves planning, designing, reviewing and improving the work being produced. Unlike the Waterfall model, Agile allows for changes to be made throughout the whole project based on feedback and new requirements.[6]



[7]

For this project agile has been selected as the most suitable development method because the application is focused on design and the user experience the use of agile allows for all the design decisions to be reviewed and improved throughout the project. Feedback from users can be used to identify areas that can be improved before the final design is completed.

The agile approach also supports this specific project timeline by breaking the work into smaller tasks. This makes the project easier to manage and allows progress to be watched throughout each stage.

Overall, the agile methodology will be used over the waterfall model because it provides the flexibility needed for this design based project where improvements and changes are going to be made regularly throughout the development of the project.

Q2- document and describe some project design work

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To support the design of the smart meal planner application two artefacts have been produced. Those artefacts are a system flow chart and an interactive Figma prototype.

The first design is a system flow chart, this has been created to show how the application will function. The flow chart shows how the user will navigate from entering their food preferences, then to receiving recipe suggestions using recipe APIs, selecting their meals and generate the shopping list with a total cost using supermarket APIs. The creation of the flow chart helps to visualise the applications processes and find out how each component interacts with each other before any development is to take place.

The second design is an interactive Figma prototype, this demonstrates the user interface and how the application can be navigated. The prototype includes a starting page this page introduces the user to the application. The next page, the craving page, allows the user to select the types of foods they would like to eat. The following page shows recipe suggestions that the user can choose from, along with the nutritional information and prices.

The next page shows the users weekly meal plan and shows how many days are covered based on the meals that have been selected. This page is followed by a shopping list page which shows the total cost as well as the price of each item on the shopping list. The shopping list also allows a user to mark off the items as they are shopping.

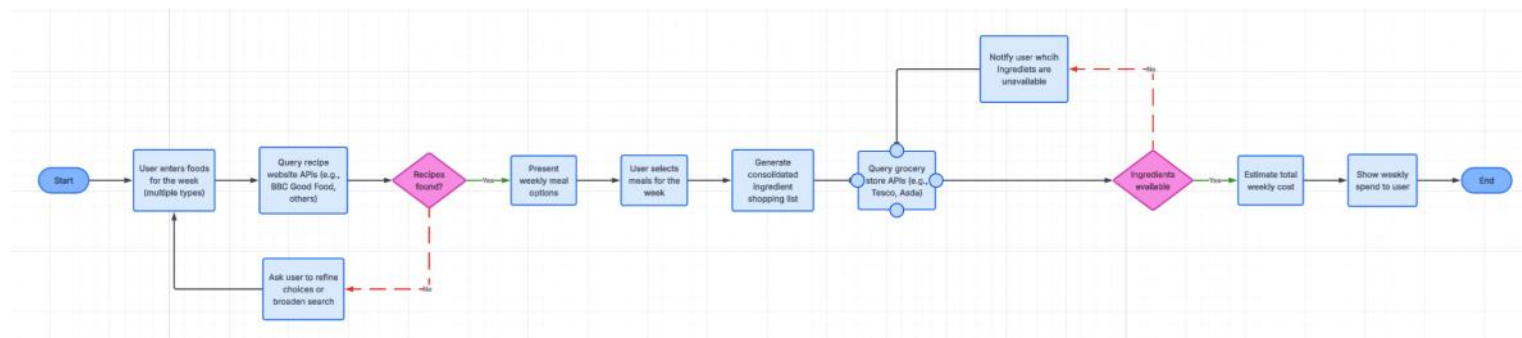
The last page is a summary page. This page displays the total amount of money that will be spent for the week, the total calories that will be consumed, the number of meals planned and the total number of items that ought to be purchased. Lastly, the users are given the option to save their meal plan or start the planning process from the beginning.

Both of these designs represent clearly the design of the application. They both allow for feedback and potential future improvements.

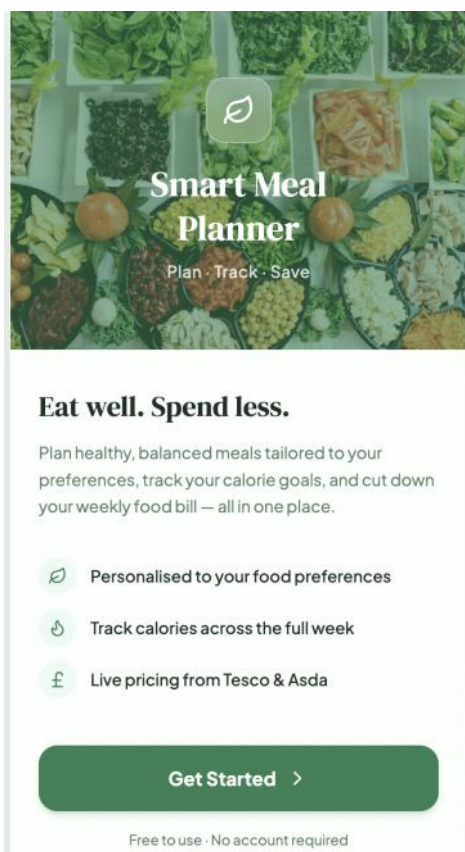
Q3- screenshot some practical implementation

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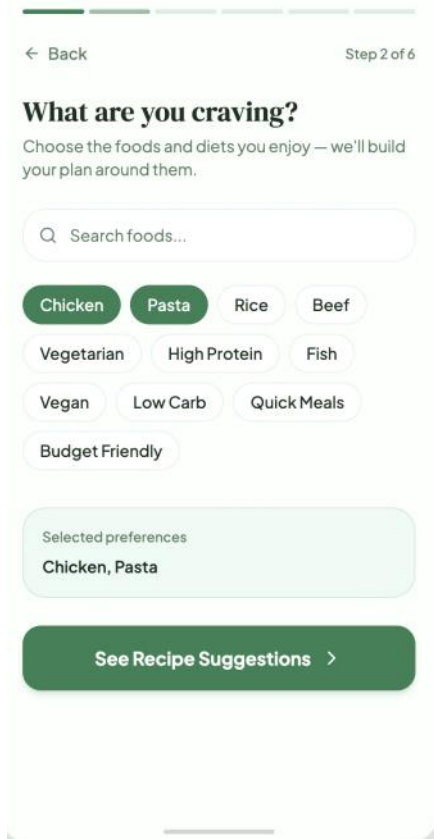
This screenshot below shows the implementation of the flow chart made in lucid chart, this flow chart shows the workflow of the application from user inputs to the generation of the shopping list and it's pricing.



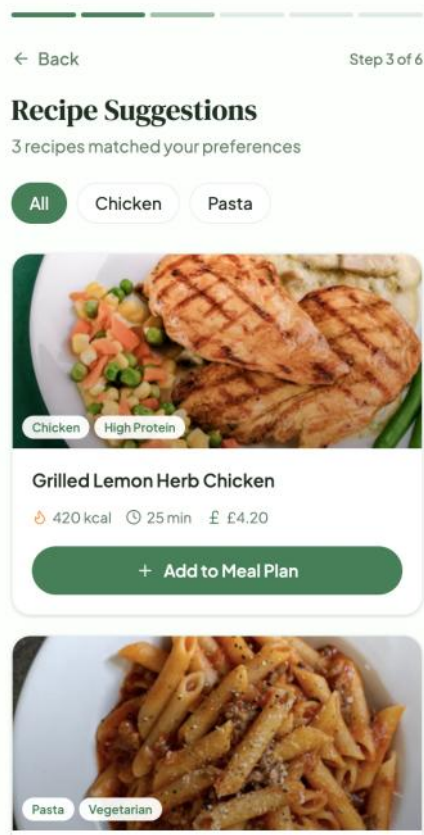
The following screenshots show the completed Figma prototype, they show all the pages talked about in Q2. The screenshots provide a visual understanding of how the user can navigate through the application.



Starting page



Craving page



Recipe page

Your Weekly Plan

3 of 7 days planned

MON

Spiced Chicken Rice ...

🔥 520 kcal

£ £3.90

✎

🗑

TUE

Creamy Mushroom P...

🔥 580 kcal

£ £3.10

✎

🗑

WED

Grilled Lemon Herb C...

🔥 420 kcal

£ £4.20

✎

🗑

THU

No meal planned

FRI

No meal planned

SAT

No meal planned

SUN

No meal planned

🛒 Generate Shopping List

Weekly plan page

Shopping List

0/18 items checked

Estimated Total

● Tesco prices

● Asda comparison

£9.75

* Prices retrieved from Tesco & Asda supermarket APIs

PRODUCE

6 items

☐

Cucumber
½

£0.30

☐

Chestnut mushrooms
200g

£1.00

☐

Shallot
1

£0.20

☐

Lemon
1

£0.40

☐

Fresh rosemary
2 sprigs

£0.60

☐

Garlic
3 cloves

£0.20

MEAT & FISH

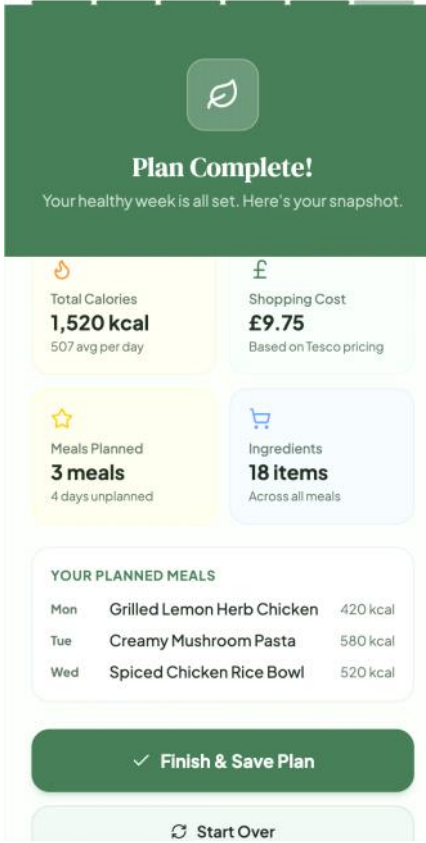
2 items

☐

Chicken thigh

£1.80

Shopping list page



Summary page

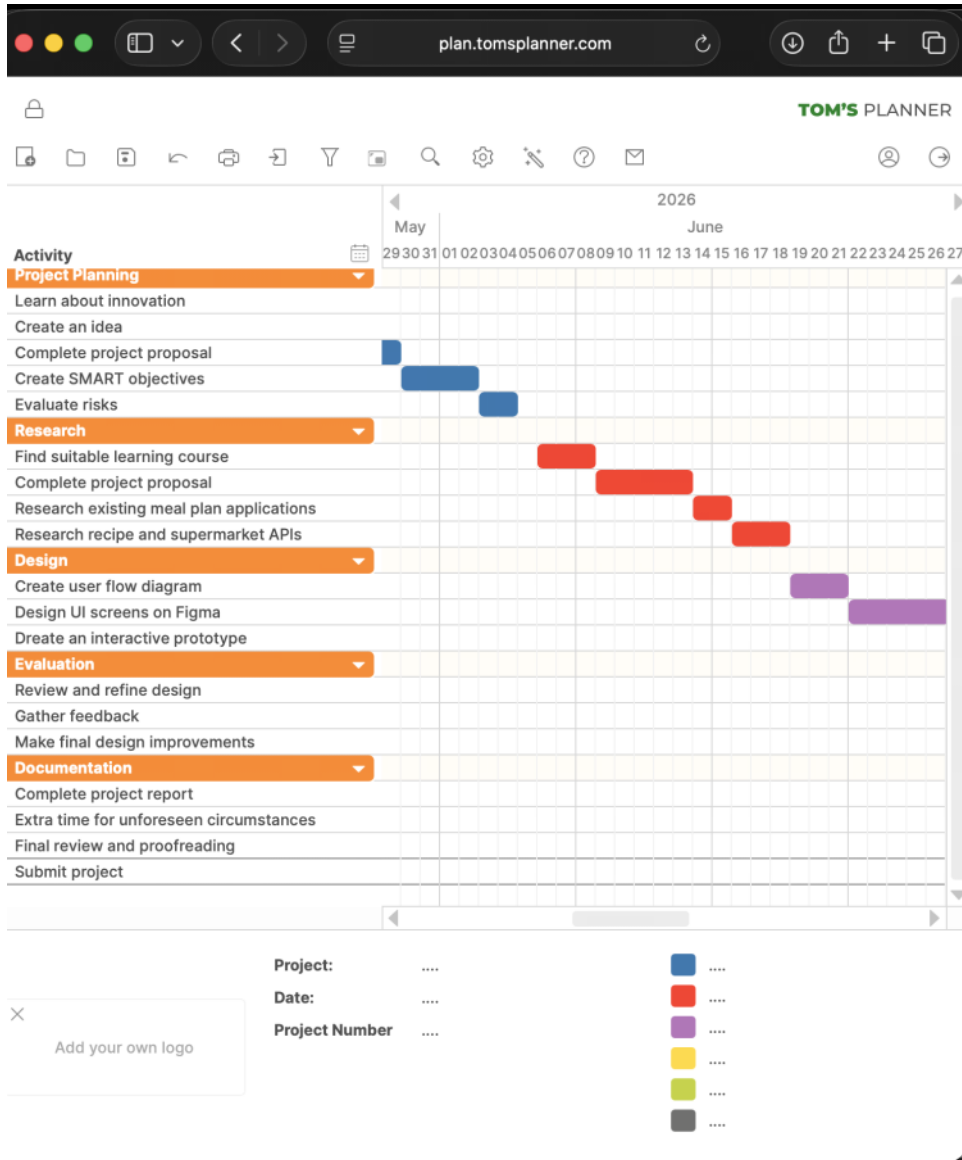
All references

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- [1] “innovate verb - Definition, pictures, pronunciation and usage notes | Oxford Advanced Learner’s Dictionary at OxfordLearnersDictionaries.com,” *Oxfordlearnersdictionaries.com*, 2024. <https://www.oxfordlearnersdictionaries.com/definition/english/innovate?q=innovate>
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- [3] K. Robinson, “Do schools kill creativity?,” *TED*. Feb. 2006. Accessed: June 20, 2026. [Online]. Available: https://www.ted.com/talks/sir_ken_robinson_do_schools_kill_creativity
- [4] Topperworld, “Software Engineering ©Topperworld,” 2024. Accessed: July 10, 2026. [Online]. Available: <https://topperworld.in/media/2024/04/Classical-Waterfall-Models.pdf>
- [5] geeksforgeeks, *Waterfall SDLC Modles*. 2026. [Website]. Available: <https://www.geeksforgeeks.org/software-engineering/sdlc-models-types-phases-use/>
- [6] G. Kumar and P. K. Bhatia, “Impact of Agile Methodology on Software Development Process,” *International Journal of Computer Technology and Electronics Engineering* , vol. 2, no. 4, pp. 46–50, Aug. 2012, Accessed: July 01, 2026. [Online]. Available: https://www.researchgate.net/profile/Gaurav-Kumar-175/publication/255707851_Impact_of_Agile_Methodology_on_Software_Development_Process/links/00b49520489442e12d000000/Impact-of-Agile-Methodology-on-Software-Development-Process.pdf
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- [8] tomsPlanner, *Tomsplanner.com*, 2021. <https://plan.tomsplanner.com> (accessed July 10, 2026).

Evidence of project management tools

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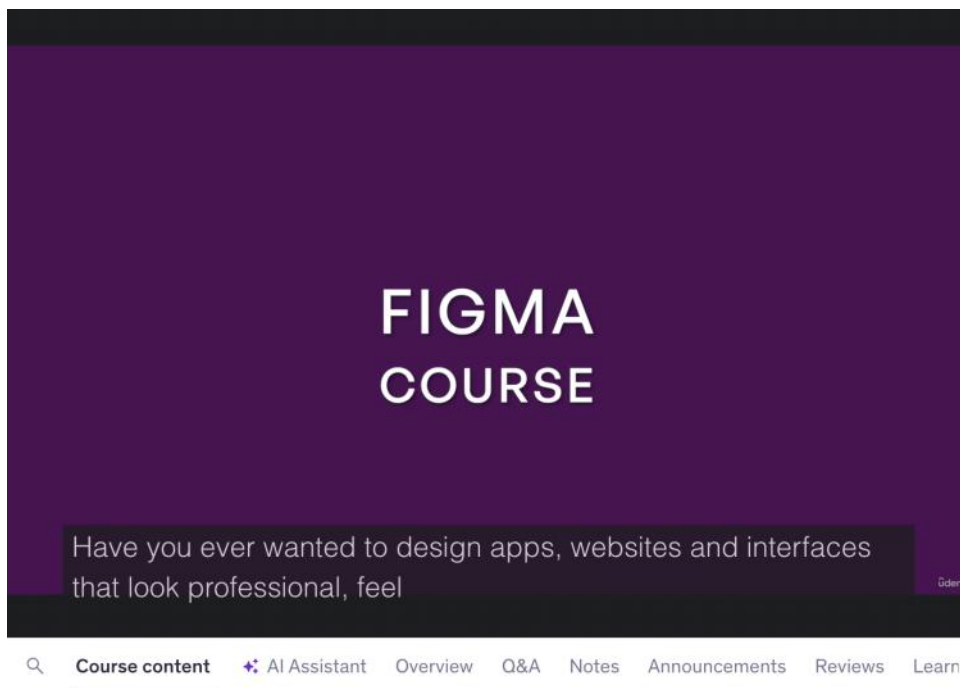


Toms planner was used as a project management tool.

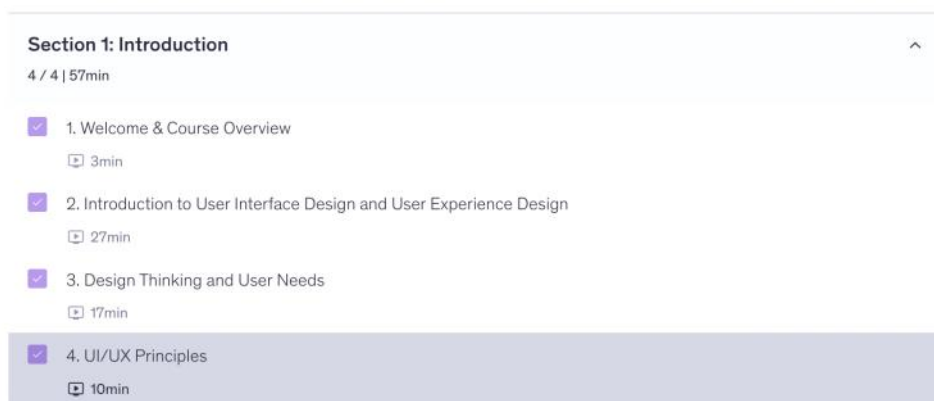
Screenshots for course engagment

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Starting the course



Completion of introduction



Completion of Important section for the project.

Section 3: Prototyping

11 / 11 | 2hr 25min

- ✓ 12. Color Theory in Practice
8min
- ✓ 13. Creating a Moodboard
20min
- ✓ 14. Typography Made Simple
10min
- ✓ 15. Smart Design: Auto-Layouts
10min
- ✓ 16. Components
7min
- ✓ 17. UI Kits
8min
- ✓ 18. Guides
8min
- ✓ 19. Tools: Pen & Brush
12min
- ✓ 20. Navigation Interactions
10min
- ✓ 21. Setting Up Flows
6min
- ✓ 22. Prototyping: High-fidelity
47min

Completion of section interested in

Section 8: Bonus: Learn about UX

7 / 7 | 2hr 25min

- ✓ 53. Introduction to the Content
3min
- ✓ 54. Overview of UX Design
41min
- ✓ 55. 7 Key Factors of User Experience
36min
- ✓ 56. Mind the Empathy Gap
33min
- ✓ 57. Research Overview
7min
- ✓ 58. Conducting Surveys
12min
- ✓ 59. Conducting Interviews
12min

