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COURSE:COMPUTING LVL 5
MODULE NAME:CHANGEMAKERS
CREATIVITY AND VALUE
CREATION

Assignment 1 :Creativity
and value creation.

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TASK 1: IDEATION & MIND MAP (≈ 600 WORDS)

Mind Map Explanation: Creativity,
Innovation and Project Ideation



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TASK:1 MIND MAP AND IDEAS

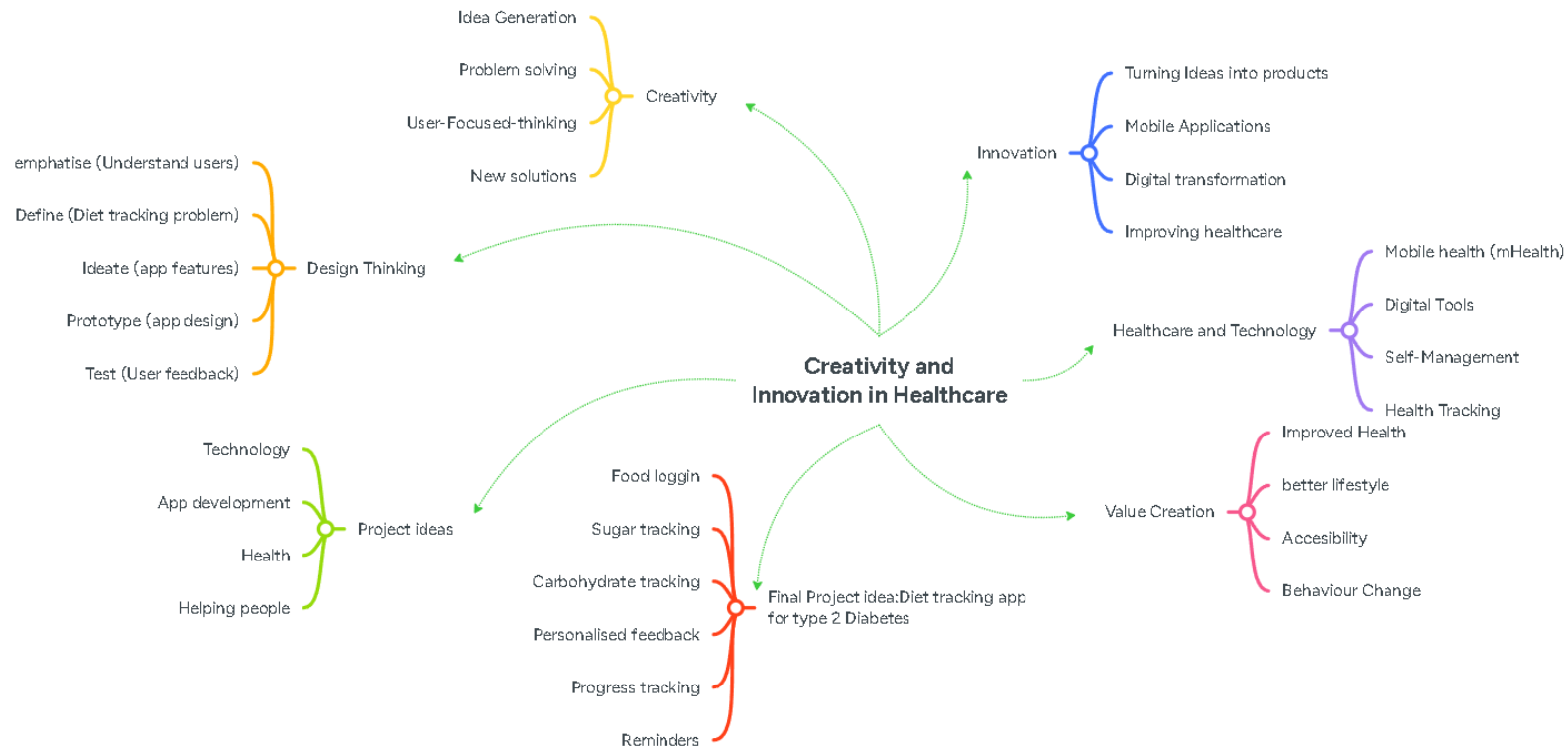
Link to the Mind

Map: <https://mm.tt/map/3970571885?t=cH5pelki1z> (mindmeister)

[Creativity and Innovation in Healthcare.rtf](#) (OneDrive)

Google Drive link:

<https://drive.google.com/file/d/1gKCjqqdynOI6kG7zdiawCz>



TASK 2: AIM, OBJECTIVES & RESEARCH AREA (≈ 600 WORDS)

- Aim and Objectives
- The aim of this project is to design and evaluate a mobile application that supports individuals with Type 2 Diabetes in improving their dietary habits through effective tracking and personalised feedback. The project focuses on addressing the challenges users face in managing their diet and maintaining consistent healthy eating behaviours.
- To achieve this aim, several objectives have been identified. Firstly, the project will investigate the key challenges faced by individuals with Type 2 diabetes in managing their diet, including difficulties in tracking food intake and understanding nutritional values. Secondly, it will analyse existing diet tracking and health-related applications to identify strengths, weaknesses, and gaps in current solutions. Thirdly, the project will design a user-friendly mobile application prototype that incorporates essential features such as food logging, nutritional analysis, and personalised recommendations. Additionally, the project will collect user feedback through surveys or interviews to better understand user needs and preferences. Finally, the effectiveness and usability of the proposed solution will be evaluated to determine its potential impact on improving dietary habits.

TASK 2: AIM, OBJECTIVES & RESEARCH AREA

- **Research Philosophy**

- This project adopts an **interpretivist research philosophy**, which focuses on understanding human experiences and behaviours. Interpretivism is particularly suitable for this project because it aims to explore how individuals with Type 2 diabetes perceive diet management and the challenges they encounter in their daily lives. Unlike positivism, which relies on objective measurements and numerical data, interpretivism allows for deeper insights into user experiences through qualitative data such as interviews and open-ended survey responses (Saunders et al., 2019).
- By applying this philosophy, the research will prioritise user perspectives and subjective experiences. This approach is important when designing a user-centred application, as it ensures that the final product aligns with the real needs of its target audience. Understanding user behaviour is essential for developing features that encourage long-term engagement and behavioural change.

- **Research Tools and Search Strategies**

- To support this project, a range of academic research tools and databases will be used to identify relevant literature and existing studies. Key sources include **Google Scholar**, **IEEE Xplore**, **ScienceDirect**, and the university's online library. These platforms provide access to peer-reviewed journal articles, conference papers, and academic publications related to mobile health applications, diabetes management, and behaviour change technologies.
- Effective search strategies will be applied to ensure relevant and high-quality sources are identified. This includes the use of specific keywords such as "Type 2 diabetes diet management," "mobile health applications," and "diet tracking apps." Boolean operators such as AND, OR, and NOT will be used to refine search results and combine multiple concepts. For example, searches such as "diabetes AND diet tracking AND mobile app" can help narrow down relevant studies.

TASK: 2 AIM, OBJECTIVES & RESEARCH AREA

- In addition, filters such as publication date and relevance will be applied to ensure that the research is current and credible. Priority will be given to recent studies and peer-reviewed sources to maintain academic quality. The concept of “known knowns” will also be applied, where existing knowledge is used as a foundation to identify gaps in current research and inform the development of the project.
- Conclusion
- In conclusion, this project establishes a clear aim and set of objectives focused on developing a diet tracking application for individuals with Type 2 diabetes. By adopting an interpretivist research philosophy and utilising appropriate research tools and strategies, the project ensures a strong academic foundation. This approach will support the development of a user-centred solution that addresses real-world challenges and contributes to improved health outcomes.

TASK 3: RESEARCH STRATEGIES AND DATA COLLECTION METHODS

- This project will use a combination of **quantitative and qualitative research methods** to gather comprehensive data.
- A **survey** will be used as the primary quantitative data collection method. The survey will include closed-ended questions such as multiple-choice and rating scale questions to gather measurable data about users' diet tracking habits, challenges, and preferences. This method allows for the collection of data from multiple participants efficiently and enables statistical analysis.
- In addition, **semi-structured interviews** will be used as a qualitative method to gain deeper insights into user experiences. Interviews allow participants to express their thoughts in more detail, providing valuable information about their behaviours, motivations, and challenges in managing their diet.
- A **pilot study** will be conducted to test the effectiveness of the survey questions. The survey will be distributed to a small group of participants (e.g., 2–3 individuals) to gather initial feedback. Based on this feedback, any unclear or ambiguous questions will be revised. For example, if participants find certain questions confusing or too complex, they will be simplified to improve clarity. Evidence of the pilot study, including sample questions and feedback, will be included in the appendix and referenced in the main proposal.

TASK 3: DATA ANALYSIS METHODS

- Both **quantitative and qualitative data analysis techniques** will be applied in this project.
- For quantitative data, basic statistical analysis will be used. This includes calculating percentages, averages, and presenting data using charts or graphs. For example, survey results may show the percentage of users who currently track their diet or the most common challenges they face. This type of analysis helps identify trends and patterns in user behaviour.
- For qualitative data, **thematic analysis** will be used. This involves reviewing interview responses and identifying common themes or patterns. For instance, recurring themes such as “lack of time,” “difficulty understanding nutrition labels,” or “lack of motivation” may emerge. These insights will help inform the design of the application and ensure it addresses real user needs.

CONCLUSION+ CITATIONS USED FOR THIS WORK

- In conclusion, this project adopts a structured research strategy that combines both quantitative and qualitative methods to ensure a comprehensive understanding of user needs. By addressing validity, reliability, generalisability, and ethical considerations, the research maintains a high standard of quality. The use of surveys, interviews, and pilot testing ensures that the data collected is both meaningful and reliable. Ultimately, these strategies will support the development of an effective diet tracking application that meets the needs of individuals with Type 2 diabetes.
- Citations for this assignment: Brown, T. (2008). *Design thinking*. Harvard Business Review.
- Saunders, M., Lewis, P. & Thornhill, A. (2019). *Research Methods for Business Students*. Pearson.
- Wang, Y. et al. (2020). *Effectiveness of mobile health interventions on diabetes management*. JMIR mHealth and uHealth.
- He, Q. et al. (2022). *Smartphone applications in Type 2 diabetes management*. Journal of Advanced Nursing.
- World Health Organization (2021). *Diabetes Overview*.