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Course: BSC computing

Module: Creativity And value Creation

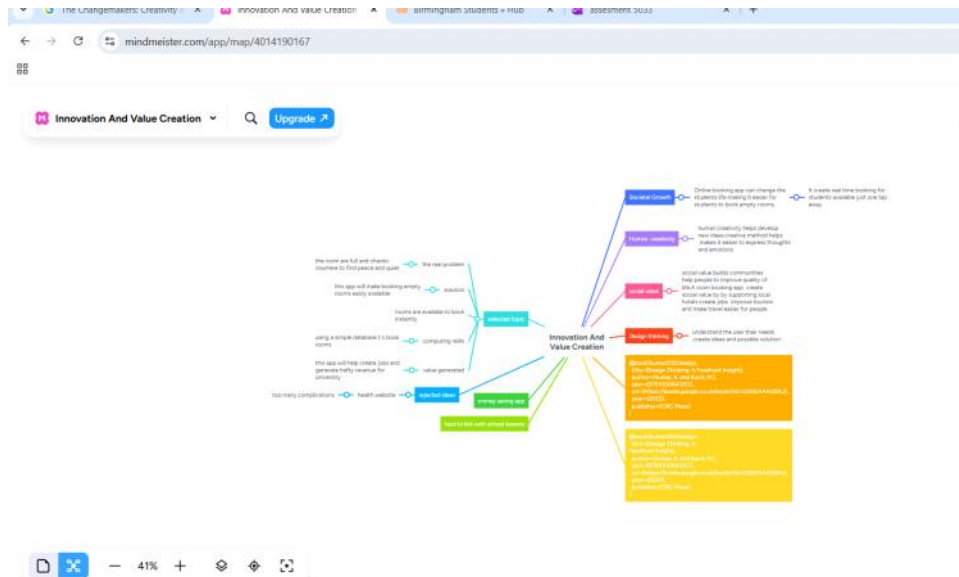
Submission Date:3rd July 2026

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Ideation and Mind Map

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A mind map is a visual diagram used to organise ideas around a central project. A mind map helps improve brainstorming and creativity. helps organise complex projects into an easy visual form. A mind map is more than just a graphic organiser. It is a visual representation of how our brain processes information[4].



This mind map is about innovation and the creation of ideas. The main idea of this mind map is to develop a room booking app for students that allows them to find empty rooms. This mind map shows how the idea was created, how it will solve problems and how it can become a profitable business.

The problem identified

One branch of the map is the real problem. It explains how often university rooms are full, chaotic and noisy make it difficult for students to study in a peaceful environment.

The proposed solution

The next branch is showing the solution to the problem. The proposed solution is to create an app which allows students to book empty rooms at their fingertips. The app will show available rooms in real time, allow them to book instantly, and reduce the time spent on finding one.

Compute effective

Another branch is showing computer skills used to create an app, which include data management, development of software and how to process and store data. These skills are required to build an effective

Value generated

The next branch is showing how this app have a potential to generate revenue in the near future. This project could create jobs for its developer. therefore the innovation creates both educational and economic values

Rejected ideas

The main aspect of innovation is to consider different ideas. The map shows the rejected ideas too. One rejected idea was creating a healthcare website. the its got rejected is that it involves too many problems. It requires deep knowledge and strict regulations.

Social growth

One branch of the map explains social growth. It will improve student life. It will help students find rooms quickly. This app will also encourage students to have better performance in their studies. This app also mentions that students can book rooms with one tap.

Human creativity

Human creativity is another branch in the mind map[14]. It shows the development of new ideas, solving problems and improve system. This shows that creativity can help turn everyday problems into opportunities.

Socio-thinking[15]..

Mind maps also refer to social values. This app creates social values like making campus resources more successful, helping build stronger thinking

Framework linking

A very important point in mind mapping is design thinking. The design thinking involves understanding what users want to address their needs and problems, and develop possible solutions to them. The design thinking scale has promising reliability and validity[16]. There are many understandings of design thinking out there, some people call it mind set other call it framework [17].

Challenges and limitations

This mind map also talks about challenges and problems. While the application is useful, it is hard to directly connect it to the academic course. Despite having limitations, this app is still useful as it addresses real problems and provides useful solutions.

Innovation helps societal shaping.

Innovation changes our world daily. It will make daily life much easier for people. True innovation means finding new ways to solve problems. This helps people stop doing boring tasks and lets them focus on better things. Rogers (1995) defines innovation as an idea or practice that is perceived.[1][2] Today, making something valuable is not just about making money. It is about helping people. Design thinking helps us do this by using empathy. It teaches us to listen to real people and build tools that they actually need. Good technology must solve real problems to be useful. Innovation and creativity are important for society to grow and improve. Creativity is the ability to think different have new ideas, while on the other hand, innovation is the process of putting those ideas into use. Together, these two factors will bring positive change in people's lives and society. The biggest way these two factors will change in society is through technology. Creative people invented mobile phones, the internet and many other things to make life easy. They also improve health care.

Doctors use creative thinking to develop new medicines, health care equipment, etc. In the economy, innovation creates new businesses and jobs for people. Education also benefits from innovation and creativity. teachers adopting new teaching methods through the internet and smart devices. Innovation and creativity are essential for society. They will improve technology, healthcare, education, the economy and the environment by encouraging creative thinking and innovations. Society can solve a lot of problems and challenges, improve the quality of life and help towards building a better future for people and everyone. Creativity also helps culture and entertainment. artists, writers and musicians use creative ideas to produce work which will entertain people and society[3].helps and programmes

As a computing student, I can fix problems using simple software. I looked into three ideas for my course. The first idea was a website to keep track of student health, but it was hard to manage due to the rules involved around medical field. The second idea was a mobile game for kids to teach them how to save money, but it was hard to connect with school lessons. The third idea was to create an app for students to book study rooms on campus. This idea is simple to build and helps students a lot.

Selected project

I chose to work on a room booking app called Spare Rooms. It will help many student to find quiet places for their study who struggle to find somewhere peaceful and quiet. This app helps students to find rooms on campus. usually campus rooms are full and very chaotic. My app will solve the problem. This app will let students see empty rooms and will be easily able to book them. It is a great choice for my project in computing.

Aim and Objectives

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Task 2

Aim and Objectives

.once you have developed a project aim, you can start to develop objectives[5]. The main goal of this project is to build and test the app called Spare Rooms. This app will help university students to find and book rooms quickly through the app. My main objectives for this app are to see current university website why they are slow and hard to use.

I will consult with students about what feature they want in the app. I will create an app using a simple database and keep it very simple to use. I will send the app link to a few students to check its reliability and its easy-to-use feature. This project aims to check the effectiveness of the app Spare Room to help find university students find suitable rooms for study purposes.

Objective 1:To review current strategies on the user interface and evaluate the common mistakes found in the existing university booking system.

Objective 2 :

To gather all the information by putting out surveys within different universities regarding their daily habits and booking preferences

Objective 3 :

To make and develop a fully functional app feature user interface, and easy to use booking system for students

Objective 4:to carry out necessary testing of the app to measure speed, task completion, reliability and user satisfaction

Research Philosophy

.the term research philosophy relates to the development and nature of knowledge[6]. This project will use a problem-solving method. This means I will choose the best method to solve all the problems. Some research will focus on number and the other part will focus on students' opinions. To build an app, I need both styles. I need to keep an eye on the loading speed and how fast students can navigate through the app. I also need to know about the students' opinions about the app. For human software is useless if it is too hard to use and understand. So I am trying not to make it hard and confusing. I also must gather enough data and student opinion for user trust. a problem solving view allows me to merge these two to create a database that works perfectly while achieving student needs.

Search tools and strategies

To build a proper foundation for this project, I will use online search tools to conduct high-quality research reviews. I will do my research on Google Scholar and Google Books, as these platforms have amazing information about Strategies

Search Strategies

.search strategies are the approaches people take when conducting searches[7].To define search strategies, it is convenient to define the notion of order; an order is a relation that is both irreflexive and transitive[8]. My search strategies will involve using precise keywords. I will also use special characters to end short words, like typing errors. This ensures a database search for all the versions of those words automatically. This simple search helped me find good coding, database layout and good user design for my app. The literature will focus on recent research within books and journals over the last ten years to ensure the information remains up to date. Priority will be given to reviewed journals and peer-reviewed, conference and academic books.

Overall, this research aims to contribute to a better understanding of how innovative booking room apps support university students. The search will improve the application feature and assist students in booking the rooms through spare room app.

Research Strategies

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1. Ethical strategies

Validity means a study measure which actually promises to deliver. To make sure spare rooms are valid, I will use a questionnaire system called system usability scale to get the score on how easy the app is to use. This scale is proven by computer scientists to get user satisfaction. I will also keep testing the speed and durability of the app.

Reliability

mean that the study can be repeated by other users to get the same results. I will achieve reliability by keeping a record of the database, software coding and step-by-step testing. A reliability engineer involves an iterative process of reliability assessment and improvement[10].

Generalisability

Generalisability is also called the extent to which data can be generated of the research[9]. The final result of the study can be applied to different locations and situations of students. I am testing the spare room app on a small group of students at my university. This means the coding and database we will use is simple, so it can be copied by different students for their use and to manage their own schools, universities or organisations.

Ethics

Ethics is about providing safety and privacy rights to the students whose taking part in the survey. Before I make the app live and share the link with students, I will ask permission from the university and make sure the data is secure and private and will not be shared. I will completely protect user data by storing it on the platform, and I will protect their privacy, including their student name, emails, and student number. I will take consent from all the students to use their data just for booking purpose so they can choose to participate and leave whenever they want.

Pilot data collection

A pilot deployment of a small group of users in a limited and close environment is quite appealing[11]. The project will use a research strategy. which means I will make a dummy app and test it with real users to gather their experience and feedback. Then I will access the data to make my app better for users. To test my ideas, I will send a questionnaire to 10 students to review their experience. The feedback from users indicate problem with the booking calendar, so I fixed it quickly and added the visual calendar for easy booking to my spare room app. Surveys are suitable because they allow data to be collected from a large number of participants within a small amount of time.

Data analytics

The data I collect during the project will be analysed using two different methods.

Quantitative Data

This part of the data will include number for example, how many seconds the app will take to load and the time for the app response to any inquiry. And I will collect ratings from user experience. The use of any quantitative data analyses require the measurement and quantification of observations and information[13].

Qualitative Data

Qualitative data tends to be inductive. The analyst identifies important categories in the data[12]. I will analyse written opinions and speak to users to collect feedback. I will use method theme analysis to collect feedback in written form. I will read through their comments and form a single group to gather real-time information. This will help me find what features students find problematic and help me make the spare room app software easier to use.

Conclusion

The selected research methods will help ensure that the project is trustworthy and will achieve the related aims. The study will maintain a high quality of research. Combining qualitative and quantitative analysis will provide an understanding of how effective the spare room application is for university students seeking a spare room.

Appendix Survey Data

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Pilot survey questionnaire

This short questionnaire will help to collect feedback for my spare room app.

1. On a scale of 1 to 5 how easy it is to navigate through the app (1=difficult to, 5= very easy)
2. How long does it take app for the first ad (to under 20 sessions)
3. What is the most frustrating feature on spare room app system
4. What extra feature would students like in a spare room to make it beneficial

Summary of pilot data and results

A total of 10 students participated in this survey.

App usage: The average score given by testers was 4.2 out of 5, showing the app is simple to use

Website load time: 60% of students said the app takes longer than 20 seconds to load, which needs to be fixed.

Extra features: 6 out of 10 students said it needs a virtual calendar

Action taken from quickly.

According to the survey, we have made some changes to the app by adding a live calendar to see dates easily, and made some changes to load the app more quickly

References

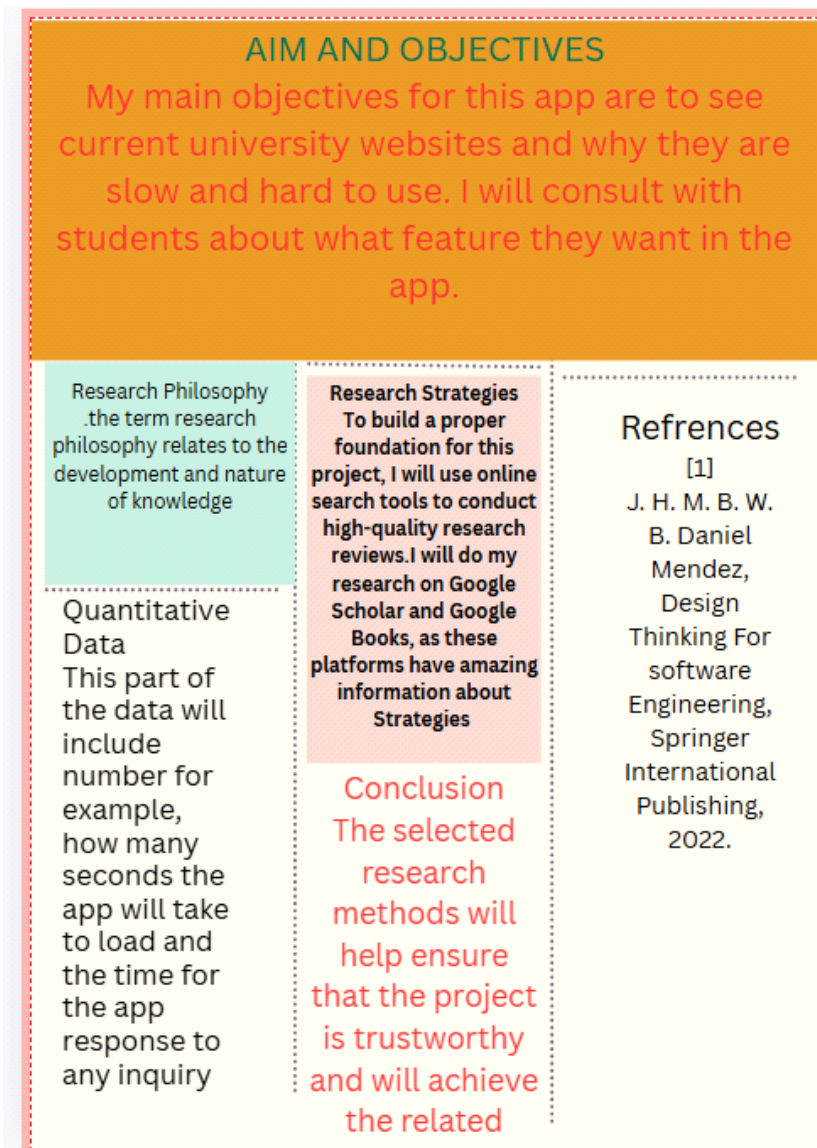
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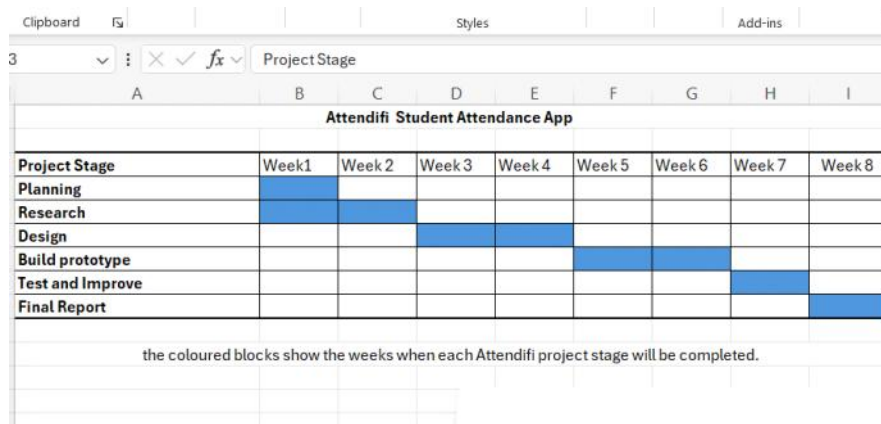
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Academic Poster



Gantt chart



Data Base	Purpose
Google Scholar	General information and Literature
Google Books	References to Text
IEEE	Technology Research
University Library resources	Academic Literature

Area of Innovation	Example	Benefit for students
Mobile application	Spare Rooms	Easier Room Search
Online Communication	Message	Faster Communication
Digital Interface	Accommodation App	More Rooms to Book
Data Analytic	Search Tool	Better Choice For Booking