Interface Innovators: Project Proposal

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Contents

Theme: Academic Support

The overarching theme of the academic support web app is to empower students at the University of Pretoria to excel in their studies by providing them with a comprehensive and personalised platform for academic success.

At its core, the web app centres around the concept of holistic academic support by including module-specific advice from previous students and also study groups for students to utilise. It recognizes that students' success is not only dependent on classroom learning but also on their ability to effectively manage different aspects of their academic life. Each student can curate their own academic journey based on their enrolled modules and preferences.

Key features of the application:

1. User Authentication and Profiles:

Students can create accounts, log in, and manage their profiles. Each student should have a personalised dashboard where they can select their enrolled modules, and access relevant advice and resources.

2. Module Selection and Information:

Students can select their enrolled modules for the current semester. They can then see detailed information about each selected module, including the module title, description, and recommended resources.

3. Advice and Guidance Sections:

There will be dedicated sections for each of the main topics in each module: Semester Tests, Exams, Tutorials, and Practicals. Each section should provide tailored advice and guidance to help students navigate these specific aspects of their modules effectively.

4. Resource Repository and Materials:

Develop a comprehensive resource repository within each module. This repository should contain a variety of materials like study guides that students can access to enhance their understanding and preparation for a module.

5. Group study sessions:

The Group Study Sessions feature offers an inclusive online space for students to collaborate, learn from one another, and maximise their study efforts. By promoting cooperative learning and fostering a sense of community, this feature contributes to a well-rounded and effective academic support experience within the app.

Functional requirements:

R1. User Authentication and Profiles:

Implement a user authentication system that allows students to create accounts, log in securely, and manage their profiles. Each student should have a personalised dashboard where they can select their enrolled modules, and access relevant advice and resources.

R2. Module Selection and Information:

Provide a feature that allows students to select their enrolled modules for the current semester. The app should display detailed information about each selected module, including the module title, description, assessment breakdown (e.g., percentage for semester tests, exams, tutorials, and practicals), and recommended resources.

R3. Advice and Guidance Sections:

Within the website, create dedicated sections for each of the main topics: Semester Tests, Exams, Tutorials, and Practicals. Each section should provide tailored advice and guidance to help students navigate these specific aspects of their modules effectively.

R4. Resource Repository and Materials:

Develop a comprehensive resource repository within each nodule. This repository should contain a variety of materials like study guides that students can access to enhance their understanding and preparation for a module.

R5. Group study sessions:

The Group Study Sessions feature offers an inclusive and dynamic online space for students to collaborate, learn from one another, and maximise their study efforts. By promoting cooperative learning and fostering a sense of community, this feature contributes to a well-rounded and effective academic support experience within our app.

These functional requirements and key features were decided upon after carrying out our survey and analysing the data, an overview of this analysis can be found at the end of the document, or jump straight to it by clicking here.

Our Brand

INTERFACE INNOVATORS

Our brand is all about student success through innovation and empathy. We create student-centred solutions that enhance their learning journeys. Our aim is to foster collaboration and promote lifelong learning. We recognize the power of collective learning and facilitate connections among students, encouraging shared insights and mutual growth. We are driven by a deep understanding of the challenges students face in their academic journeys and are dedicated to creating solutions that empower them to succeed. We're dedicated to making education accessible, inspiring, and empowering for all students, contributing to their academic success and personal growth.

Based on the survey, research, and analysis that our team has carried out, the following persona encapsulates the type of students our website aims to cater for:

Tony Schnagl

"I want to excel in my studies and manage my coursework efficiently."

Key goals:

- Score high grades in all assessments.
- Stay organised and on top of coursework.
- Connect with peers for collaborative study.

Behaviours:

- Motivated by achieving academic success and maintaining a high GPA.
- Enjoys a structured approach to learning and values time management.
- Seeks out additional resources beyond lectures to deepen understanding.
- Finds motivation in connecting with like-minded peers for study sessions.
- Easily demotivated by disorganised study materials and lack of clarity in assessment breakdowns.

Must do:

- Easily select and manage enrolled modules for the semester.
- Access detailed information about each module's assessments and resources
- Find tailored advice for different academic challenges (exams, tests, tutorials)
- Participate in Group Study Sessions to collaborate with peers.

Must never:

- Overcomplicate the user interface with unnecessary features.
- Provide vague or incomplete assessment breakdowns.
- Neglect to offer clear instructions on accessing resources or participating in study sessions.
- Disregard the need for responsive design and mobile accessibility.
- Assume that one-size-fits-all advice and resources will cater to all users' needs, hence providing advice from multiple different users.

Features and Design Choices

1. User Authentication and Profiles:

Design Choice:

We selected a colour scheme dominated by calming shades of blue and green. These colours were chosen to promote a sense of focus, concentration, and tranquillity while using the app, fostering an optimal learning environment.

Reasons and Considerations:
The colour blue is associated with calmness, reliability, and trustworthiness (Hemphill, 1996), while green symbolises growth, renewal, and harmony (Mahnke, 1996). By incorporating these colours, we create a visually soothing experience that aligns with the app's educational purpose and encourages students to engage in a focused manner.

Buttons and Components:
We implemented a clear and intuitive button design inspired by the principles of "Don't Make Me Think" by Steve Krug. Buttons are designed with contrasting colours, appropriate sizing, and concise labels to ensure ease of use and quick navigation.

Reasons and Considerations:
Following the principles of usability outlined by Steve Krug, our button design prioritises clarity and simplicity. The use of contrasting colours and appropriate sizing helps users easily identify interactive elements and encourages them to take desired actions. Concise labels further enhance the user's understanding of the app's features and functionalities.

Interaction Components:
Our app features interactive components such as collapsible sections and tooltips. Collapsible sections allow users to expand and collapse content, enhancing information organisation. Tooltips provide on-demand explanations for unfamiliar terms or features.

Reasons and Considerations:
Collapsible sections help users manage content overload and navigate the app efficiently, taking inspiration from modern web design practices. Tooltips provide contextual guidance without overwhelming the user interface, promoting a seamless learning experience and reducing cognitive load.

Visual Hierarchy:
We established a clear visual hierarchy by using typography and spacing to emphasise important information, while body text is legible and consistent, contributing to effective content consumption.

Reasons and Considerations:
A well-defined visual hierarchy guides users' attention to key information, supporting efficient information absorption. This approach aligns with the principles of information design (Tufte, 2001) and ensures that users can easily distinguish between headings and content, enhancing the overall user experience.

Incorporating these design choices for colour schemes, buttons, components, and visual hierarchy contributes to an educational app that is visually appealing, user-friendly, and conducive to effective learning. The chosen elements are informed by established design principles and psychological associations, ensuring a harmonious and engaging user experience.

2. Module Selection and Information:

Design Choice:

We have chosen a harmonious colour palette centred around deep blues and soft greys. These colours create a sense of focus and professionalism, fostering a conducive environment for academic decision-making.

Buttons and Components:
Buttons in shades of blue with subtle gradients are placed strategically for easy interaction. The buttons use concise labels and feature rounded edges, ensuring a clean and approachable design.

Interaction Components:
Accordion-style sections use a combination of blue and grey hues, allowing users to expand and collapse content effortlessly. These sections create a well-organised layout, mirroring the structure of a textbook for intuitive navigation.

Visual Hierarchy:
Typography follows a consistent pattern, with bold blue titles commanding attention. Descriptions and details are presented in legible grey text, ensuring easy readability and a clear hierarchy.

3. Advice and Guidance Sections:

Design Choice:

Continuing with the established colour palette, advice and guidance sections feature muted blues and subtle warm accents. This combination maintains a cohesive design while infusing a sense of approachable warmth.

Buttons and Components:
Iconography resembling road signs adopts the colour palette, using variations of blue and warm accents. These icons are strategically placed to indicate each advice section, enhancing visual guidance.

Interaction Components:
Collapsible sections continue the colour palette, using blues and greys. The design emulates the experience of turning pages in a manual, encouraging users to explore advice topics at their own pace.

Visual Hierarchy:
Engaging visuals, such as soft animations, complement the colour palette and add a touch of interactivity. Larger font sizes in muted blues highlight key advice points, ensuring easy identification.

By maintaining a consistent colour palette throughout the design, our educational app creates a unified and visually pleasing experience for users. The chosen colour scheme of deep blues, greys, and subtle warm accents conveys professionalism, approachability, and focus, aligning with the app's educational purpose.

4. Resource Repository and Materials:

Design Choice:

The colour palette seamlessly integrates deep blues, muted greys, and subtle greens. This combination creates a balanced and harmonious visual experience, enhancing focus and organisation while accessing learning materials.

Buttons and Components:
Buttons and interactive elements maintain the established colour palette, featuring shades of blue and green. These elements are designed with simplicity in mind, utilising clear labels and intuitive placement for seamless navigation.

Interaction Components:
A grid layout, using shades of blue, grey, and green, organises the resource repository. Grid tiles resemble book covers, creating a visual connection to academic materials. Clicking on a tile opens a modal window with a preview and download option.

Visual Hierarchy:
Typography adheres to the consistent colour scheme, with prominent titles in bold blues. Material descriptions are presented in legible grey text, ensuring a clear hierarchy and easy access to information.

5. Group Study Sessions:

Design Choice:

Continuing the colour palette, group study sessions feature variations of deep blues, light greys, and subtle greens. This ensures a seamless transition while maintaining a cohesive design language.

Buttons and Components:
Buttons utilise shades of blue and green, maintaining a consistent look and feel. Clear labels and subtle hover effects invite interaction, while a friendly "Join" button signifies participation in study sessions.

Interaction Components:
Group study rooms feature a virtual space where avatars of participants are positioned around a shared whiteboard. The design resembles a cosy study lounge, fostering a sense of community and collaboration.

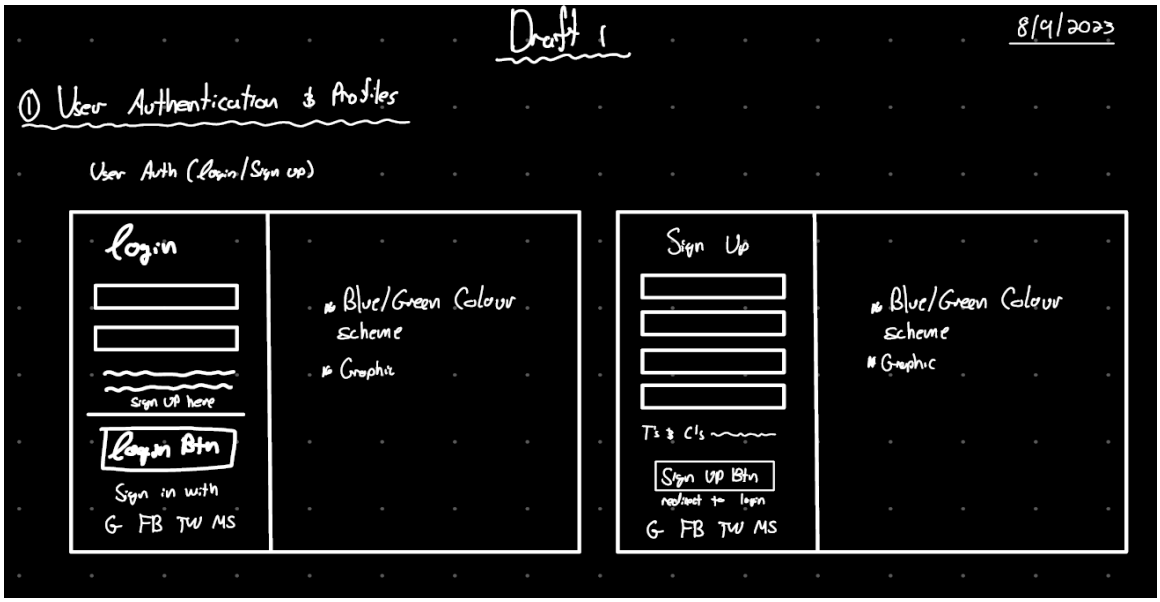
Visual Hierarchy:
Visual cues, such as avatars with different sizes based on activity, guide attention. The main study area is highlighted with a soft glow, ensuring users know where to focus during collaborative sessions.

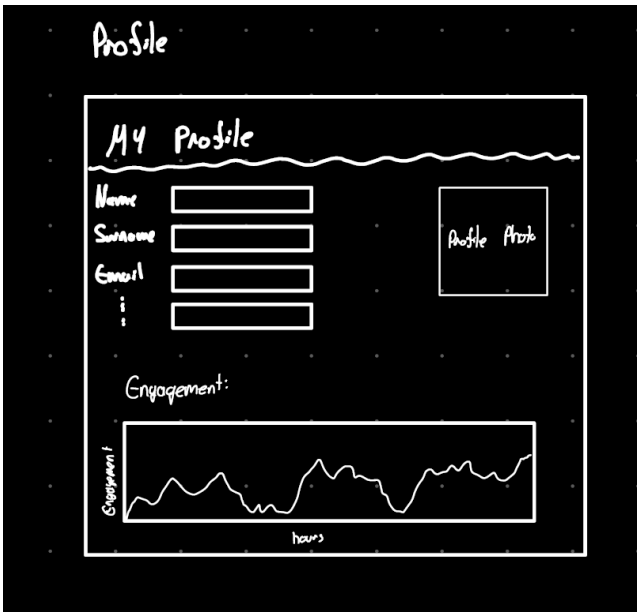
Site Structure

Students will first have to create an account and login to begin using the website. They will then have the ability to customise their profile and choose different module spaces, where they can receive tips/guidance for different aspects of the selected module. You can see in the sketch below labelled 3, that after selecting a module that they need assistance with, the student will be able to choose whether they need help with semester tests, class tests etc. They can gain access to tips and resources for these different aspects of a module and enter group study sessions to collaborate and work with other students within that module.

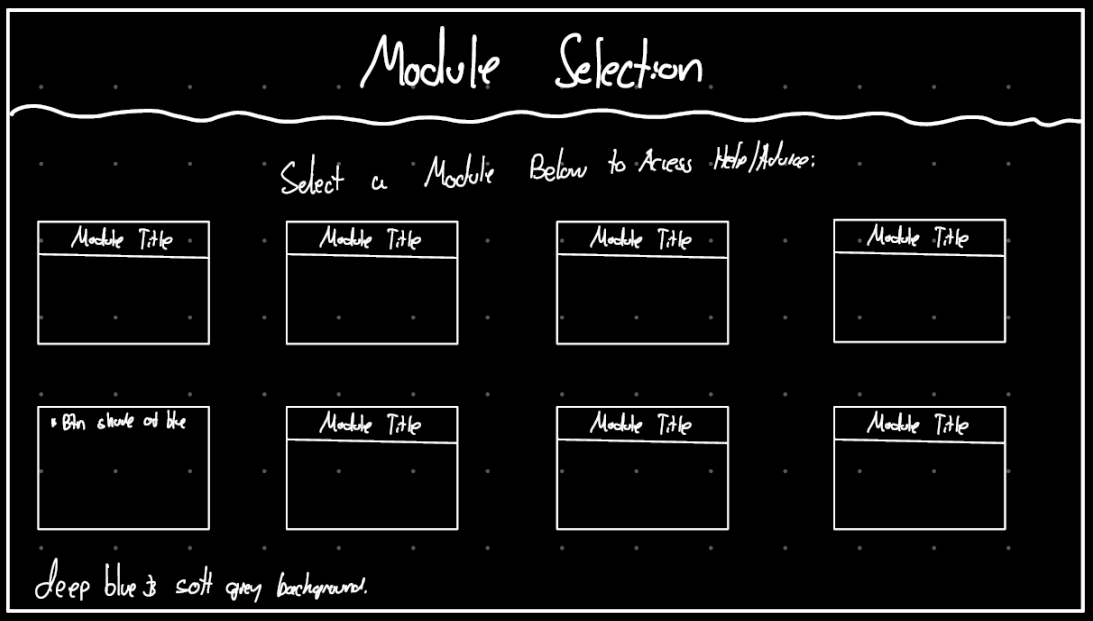
Sketches

The following images are our initial ideas/sketches for the website, according to our design choices and features highlighted above.

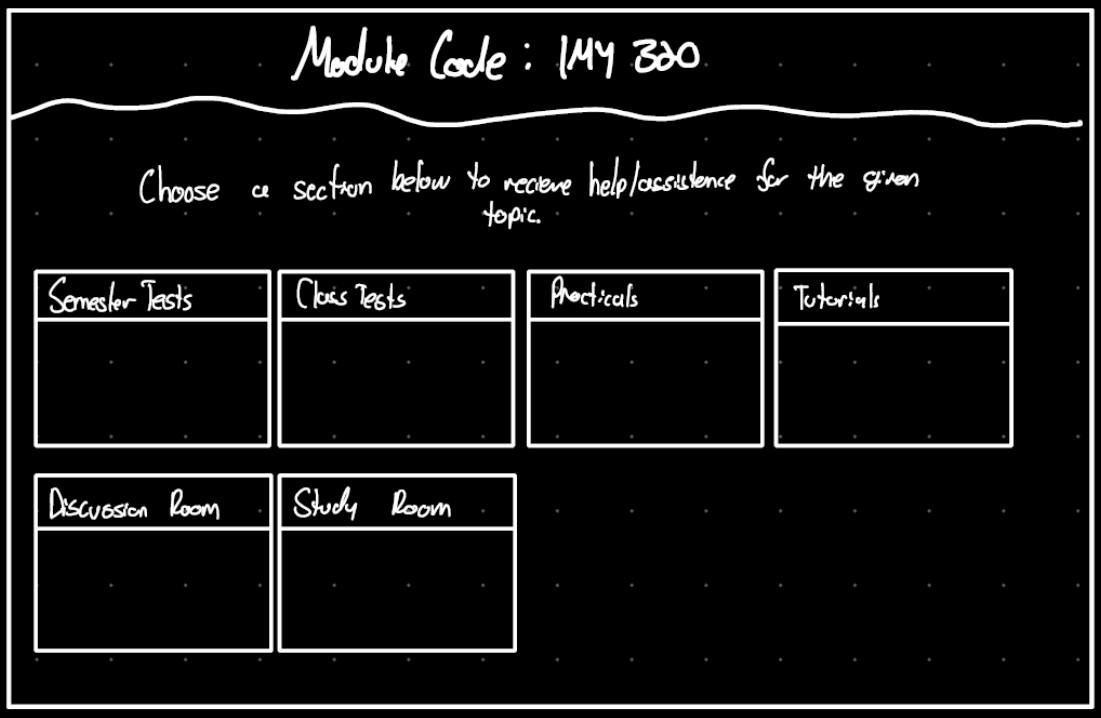


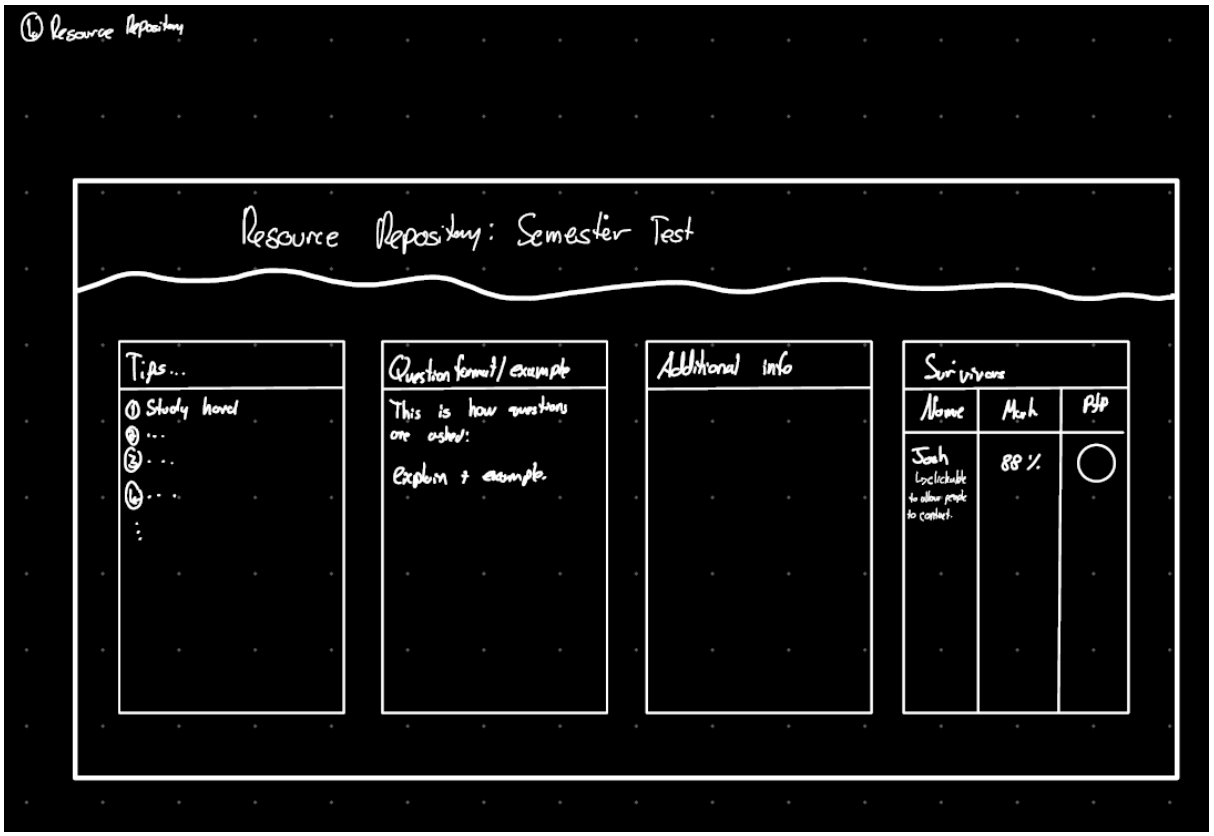


② Module Selection & Information



③ Advice & Guidance Sections




Ⓛ Resource Repository
Resource Repository: Semester Test
Tips...
① Study hard
② ...
③ ...
④ ...
Question format/ example
This is how questions are asked:
Explain + example.
Additional info
Survivors
Name
Math
PHP
Josh
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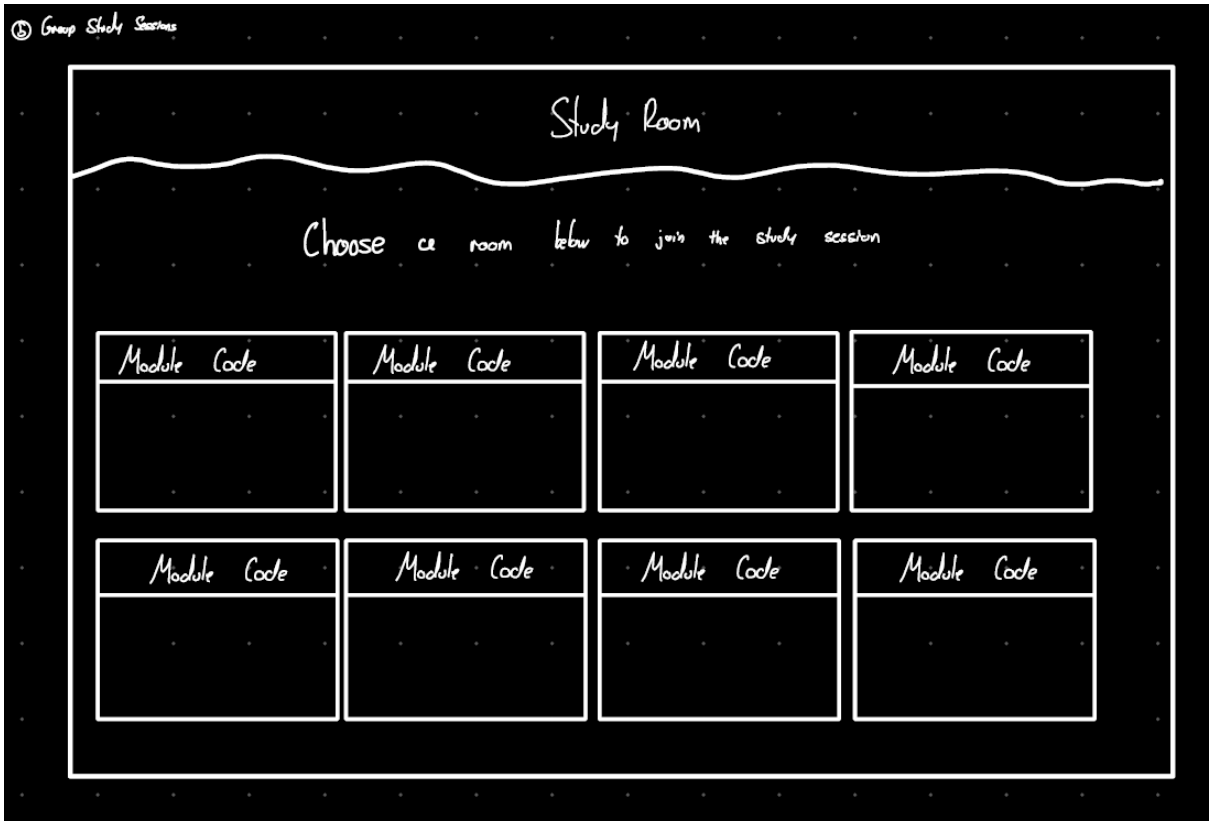
88%


Ⓑ Group Study Sessions
Study Room
Choose a room below to join the study session
Module Code
Module Code
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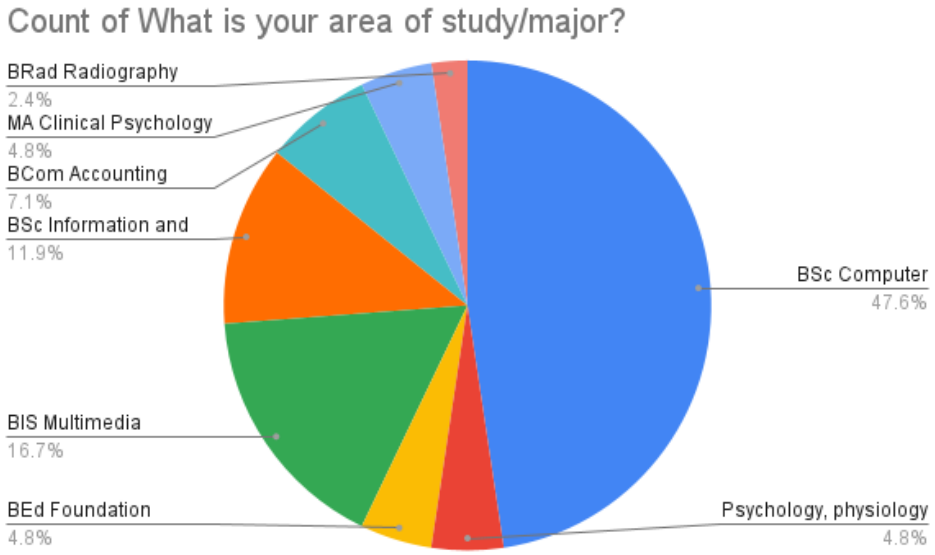
Survey analysis overview

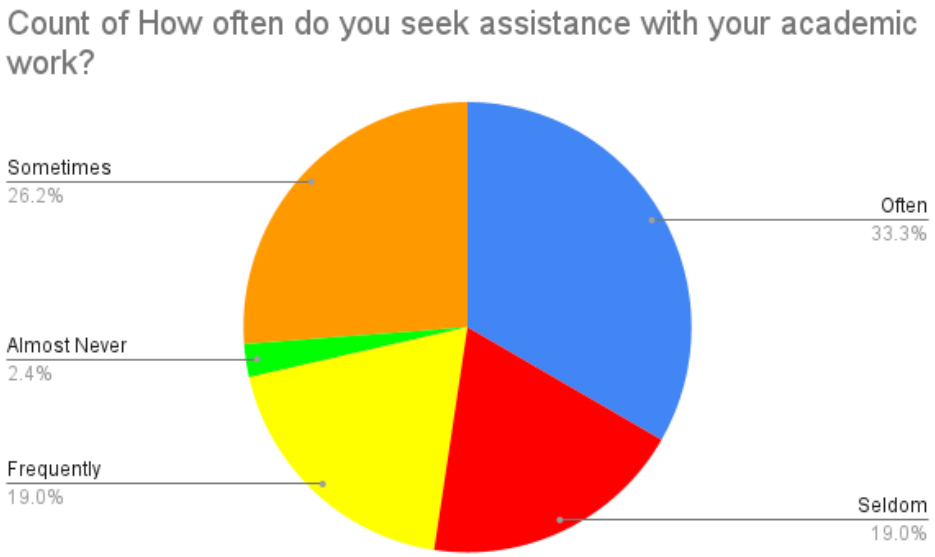
The dataset pertains to Respondents' Academic Specializations or Fields of Study



In this case, the dataset comprised responses from 42 participants across eight distinct degree fields. Among the respondents, BSc Computer Science students constituted the largest segment, accounting for 47.6% of the total. Following closely were BIS Multimedia students, representing 16.7% of the participants, and BSc IKS (Information and Knowledge Systems) students, making up 11.9% of the sample.

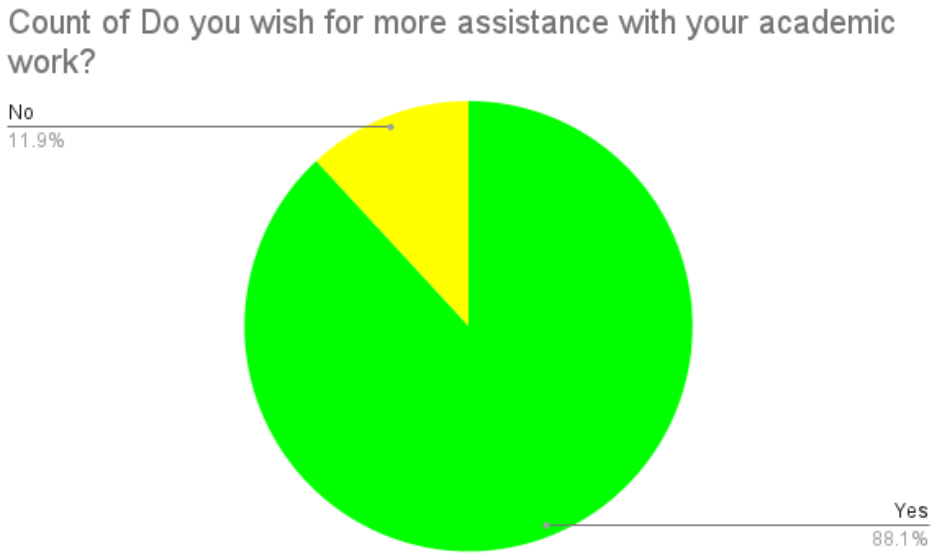
The diversity of degree fields suggests a broad representation of academic disciplines within the survey.

The dataset pertains to the frequency with which respondents seek assistance for their work.



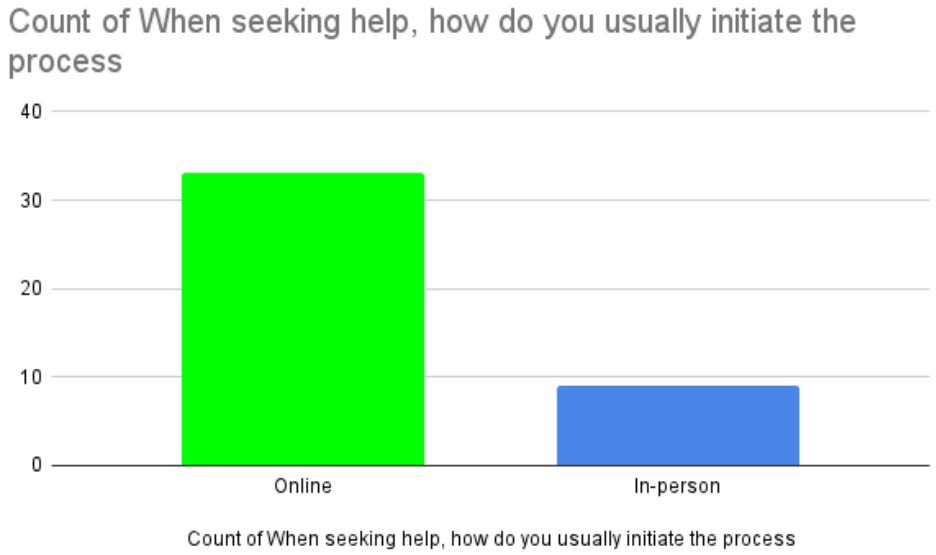
The data indicates that a significant portion of respondents seek academic assistance.
The general trend from the surveyed individuals is that the students of seeking more academic assistance.

The dataset explores whether respondents desire more assistance with their academic work.



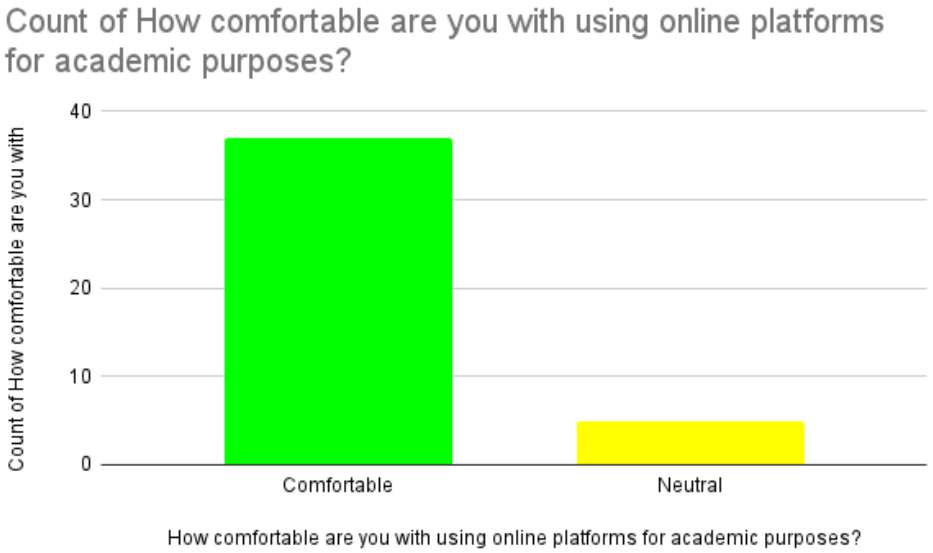
The data highlights a strong inclination among respondents to seek more assistance with their academic work, with a substantial majority (88.1%) expressing a desire for additional support. Conversely, a relatively small proportion (11.9%) indicated that they do not wish for more assistance as they feel they already have adequate support. These results underscore the perceived need for increased academic support among the surveyed individuals.

The dataset explores the methods that respondents typically initiate the process of seeking help.



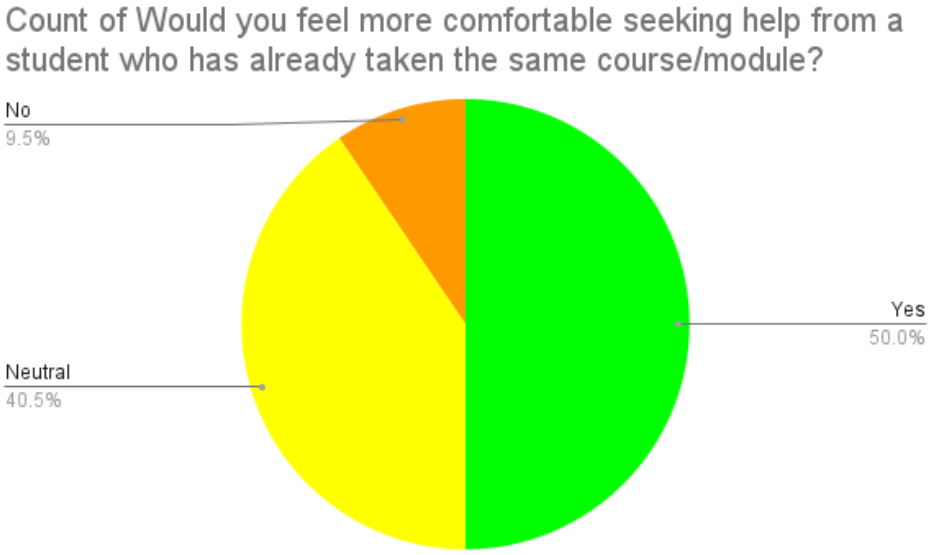
The data indicates a clear preference for initiating the process of seeking academic help online, with a significant majority (78.6%) of respondents favouring this method. In contrast, a smaller proportion (21.4%) indicated a preference for initiating help-seeking in-person. The dominant preference for online initiation suggests that digital platforms and resources play a substantial role in facilitating academic assistance.

The dataset examines the comfort level of respondents when using online platforms.



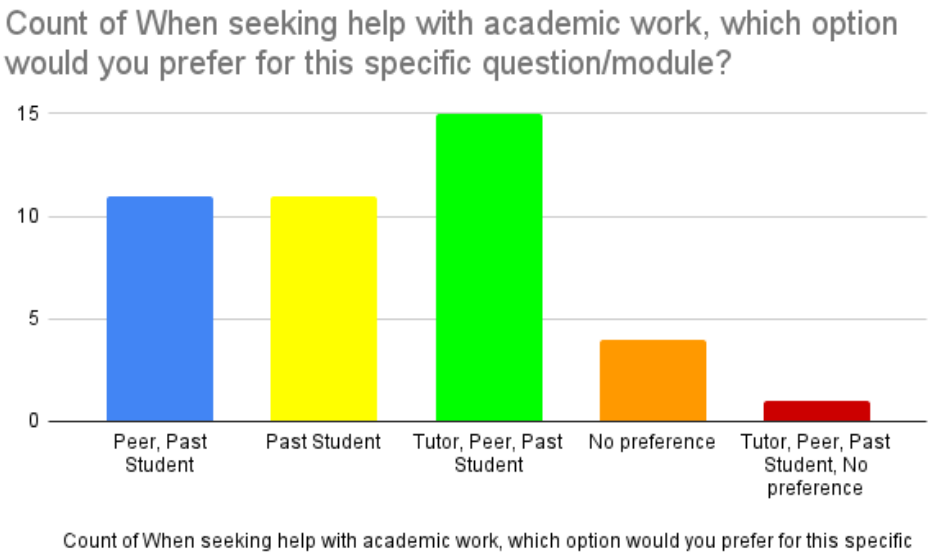
The data reveals that a significant majority (88.1%) of respondents reported feeling comfortable using online platforms for their academic needs. None of the respondents indicated discomfort in utilizing online resources for academic purposes, and only a small proportion (11.9%) expressed a neutral stance. These results suggest a high degree of acceptance and confidence in using digital platforms for academic tasks.

The dataset explores the comfort level when seeking help from peers who have already taken the module.



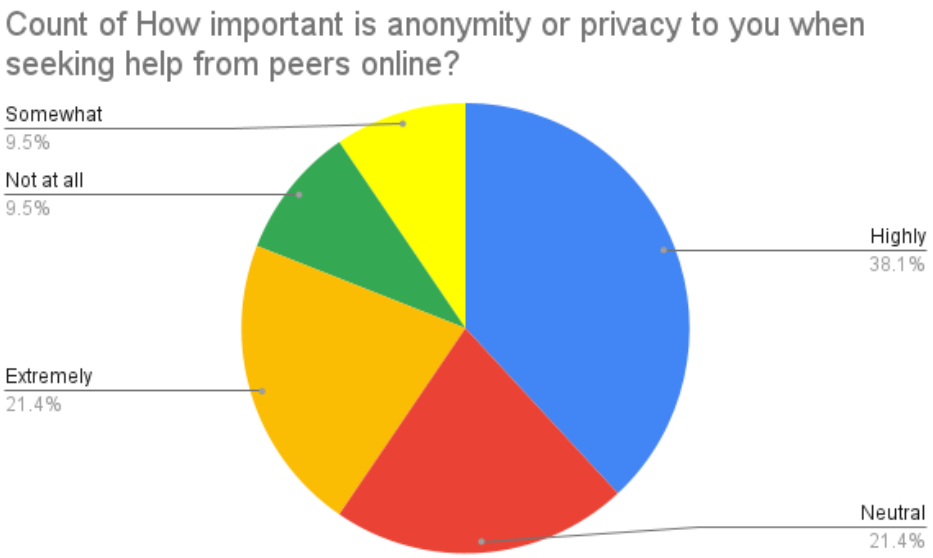
Half of the respondents (50%) expressed a willingness to seek help from peers who have already taken the same module. A substantial proportion (40.5%) remained neutral on this matter, while a smaller percentage (9.5%) indicated that they would not feel comfortable seeking assistance from such peers. The diversity in the results indicates that respondents have varying opinions regarding their preferred approaches. This shows the importance of incorporating a blend of both peers who have completed the modules and those who are currently enrolled.

The dataset presents respondents' preferences for seeking academic help through various options.



The data highlights distinct inclinations among respondents in terms of their preferred sources of academic help. Most respondents indicated a preference for seeking help from past students (88.1%), followed by peers (64.3%). Tutors were preferred by a smaller proportion (38.8%) of respondents. A minority of respondents expressed no preference (11.9%). These results show the significance of peer and past student assistance in the academic support. It's noteworthy that while tutors remain a relevant choice, they were preferred less frequently compared to past students and peers.

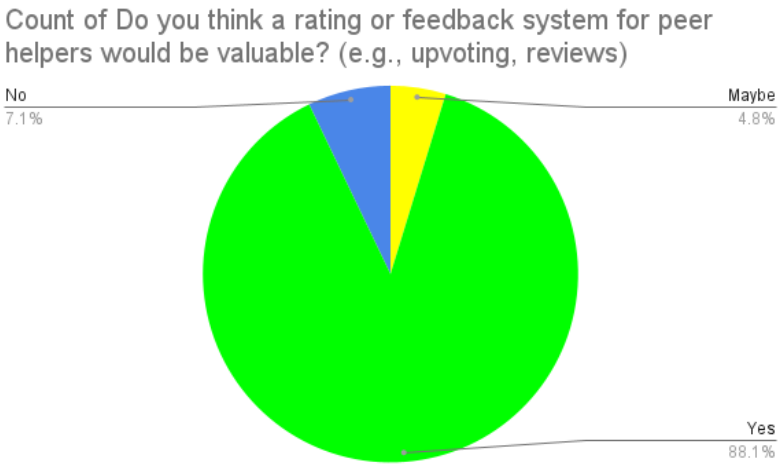
The dataset shows the significance of anonymity to respondents when seeking help online.



The data reveals a range of attitudes toward the importance of anonymity or privacy while seeking assistance from peers online. A notable proportion of respondents indicated a high level of importance (59.5% combined). A considerable segment also expressed neutrality (21.4%), while smaller proportions

leaned towards valuing anonymity to a lesser extent ("Somewhat" - 9.5%) or not valuing it at all ("Not at all" - 9.5%). These results emphasize the varying degrees to which respondents prioritize anonymity or privacy when seeking help online.

The dataset explores if respondents' value of a rating or feedback system for peer responses.



The data indicates a strong consensus regarding the potential benefits of implementing a rating for responses. The majority (88.1%) believe such a system would be valuable. A small proportion (4.8%) expressed a neutral stance, while a small fraction (7.1%) indicated that they do not think such a system would be valuable. These findings show a rating mechanism can contribute to enhancing the quality of peer assistance.

Links

The link to our GitHub Repository is: https://github.com/ShashinGounden/IMY320_InterfaceInnovators

The link to our google form for the questionnaire: https://forms.gle/Qa5GSVwWAHtG9H566

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