



COLLEGE OF COMPUTING AND INFORMATICS PUTRAJAYA CAMPUS

FINAL PROJECT

SEMESTER 2 2023/2024

PROGRAMME	: Bachelor of Computer Science (Software Engineering) (Hons.), Bachelor of Computer Science (Systems and Networking) (Hons.), Bachelor of Computer Science (Cyber Security) (Hons.), Bachelor of Information Technology (Information Systems) (Hons.), Bachelor of Information Technology (Graphics and Multimedia) (Hons.)
SUBJECT CODE	: CSNB544/CSNB5123
SUBJECT	: Mobile Application Development
DATE	: March 2024 (Week 4)
DURATION	: 14 Weeks

INSTRUCTIONS TO CANDIDATES:

1. The total marks for this final project assessment is 100.
 2. There are **TWO (2) SECTIONS** to this assessment: Section A and Section B.
 3. This is an individual assessment.
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***THIS QUESTION PAPER CONSISTS OF TEN (10) PRINTED PAGES
INCLUDING THIS COVER PAGE***

Instructions:

The theme for this semester is **Energetic Lifestyle**

Develop a mobile application according to the theme assigned to you. The mobile application should contain the following components:

- A related icon to represent your application.
- A splash screen to be displayed when the application is launched.
- An about page to describe the application and developer.
- Some pages to present your application features.
- Include storage: File OR Database

You are required to use **Visual Studio Tools for .NET MAUI (Windows)** or **Visual Studio 2022 and above for Mac (macOS)** as the development tool. The application to be developed should be written in a **.NET MAUI framework** and can be deployed on Android, iOS, or both. For the database, if you are using a local database, you need to use **SQLite**. If you are using an online database, you need to use **Google Firebase**.

Your application must be original, not inherited or replicated from any existing application, not inherited from any Final Year Project, and it must be different from each other.

You should submit the following materials before the presentation session:

- **ONE (1)** PDF file - The whole question paper with completed answers in Section A
- **ONE (1)** .zip file that contains the answer for Section A (.pdf file), the Project folder URL containing the Project Files and a video of the project demonstration.

This project is an individual assessment. Any similarity/plagiarism will result in zero mark for the whole project.

You are **NOT ALLOWED** to reuse the BMI calculator as a part of your application since the BMI application was used as part of your lab work.

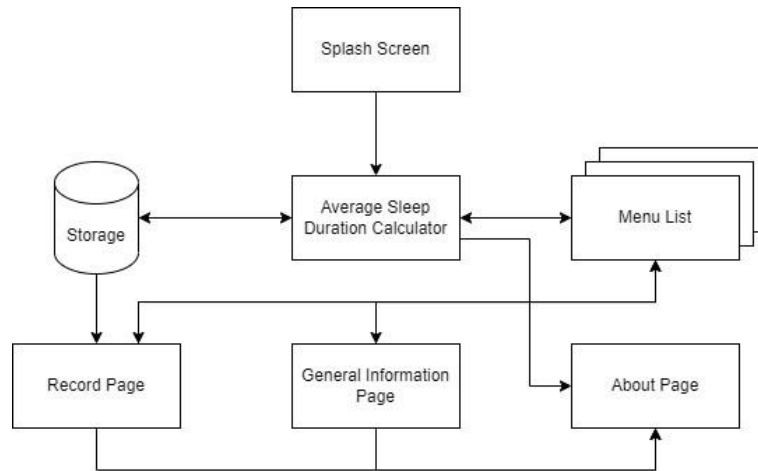
You are required to present your work according to the presentation session assigned to you. Failure to do so would cause you to be considered absent from taking the final presentation and zero mark will be given. The presentation shall be done online using Microsoft Teams and the video camera must be turned on at all times during the demonstration session. Failure to do the presentation will result in failure for the entire portion of the project.

SECTION A: APPLICATION REPORT (7 QUESTIONS, 30 MARKS)**Instruction: Please complete the report.**

Write a report based on the developed application by completing the following table.

1. Application name	ZzzTrack
2. Application description	A mobile application used to track sleep hour patterns to promote overall well-being throughout the day. The user will also receive an indication of whether their average sleep duration for the week suggests them achieving sufficient rest or not.
3. Objectives	<ol style="list-style-type: none"> 1. To calculate average sleep duration by week. 2. To store records of sleep hours and average sleep duration. 3. To display indicator of sleep duration sufficiency. 4. To display general information regarding sleep.
4. Target user	18 years old and above (Adult)
5. List of application features with its description	<ol style="list-style-type: none"> 1. Average sleep duration calculator – The user needs to enter the hours of sleep daily. Then, the current calculated average sleep duration for the week will be displayed. 2. Sleep duration sufficiency indicator– Based on the average sleep duration calculated, the user will receive the indicator whether the user is getting enough sleep or not according to the recommended hours of sleep for adult. 3. General information – The user can view the tips on how to improve sleep quality and fix sleep schedule.

6. Draw a complete overall screens map of your application.

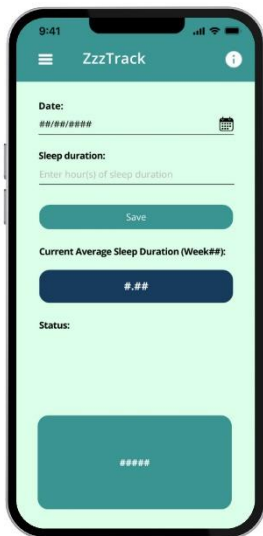


7. Sketch the UI design and wireframe based on the screens map.



1. Splash screen –

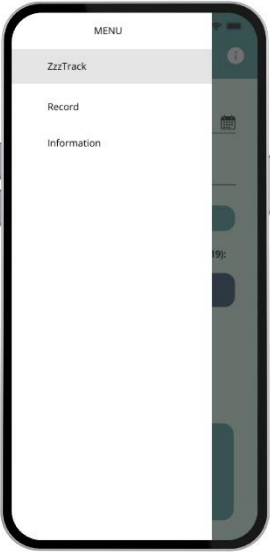

Introductory screen of this application consists of the application's logo (ZzzTrack)



2. Calculator page –

The application bar placed at the top of each page (excluding About Page) consists of menu icon, title, and 'i' icon.

In the content, the first text box with 'Date' label will allow user to select date. The next text box requires user to enter the hours of sleep duration in hour

	<p>format. The save button used to trigger the storing process of both date and sleep duration entered by the user.</p> <p>After clicking the save button, the average sleep duration for the current week and the status for sleep duration sufficiency will be displayed below.</p>
	<p>3. Menu –</p> <p>The clickable menu icon in the application bar provides user with a list of menu to direct to another pages as shown in the screen design.</p>
	<p>4. About page –</p> <p>This page will show the information about the application and the developer.</p>



5. Information page –

This page will show the tips on how to improve sleep quality and fix sleep schedule.

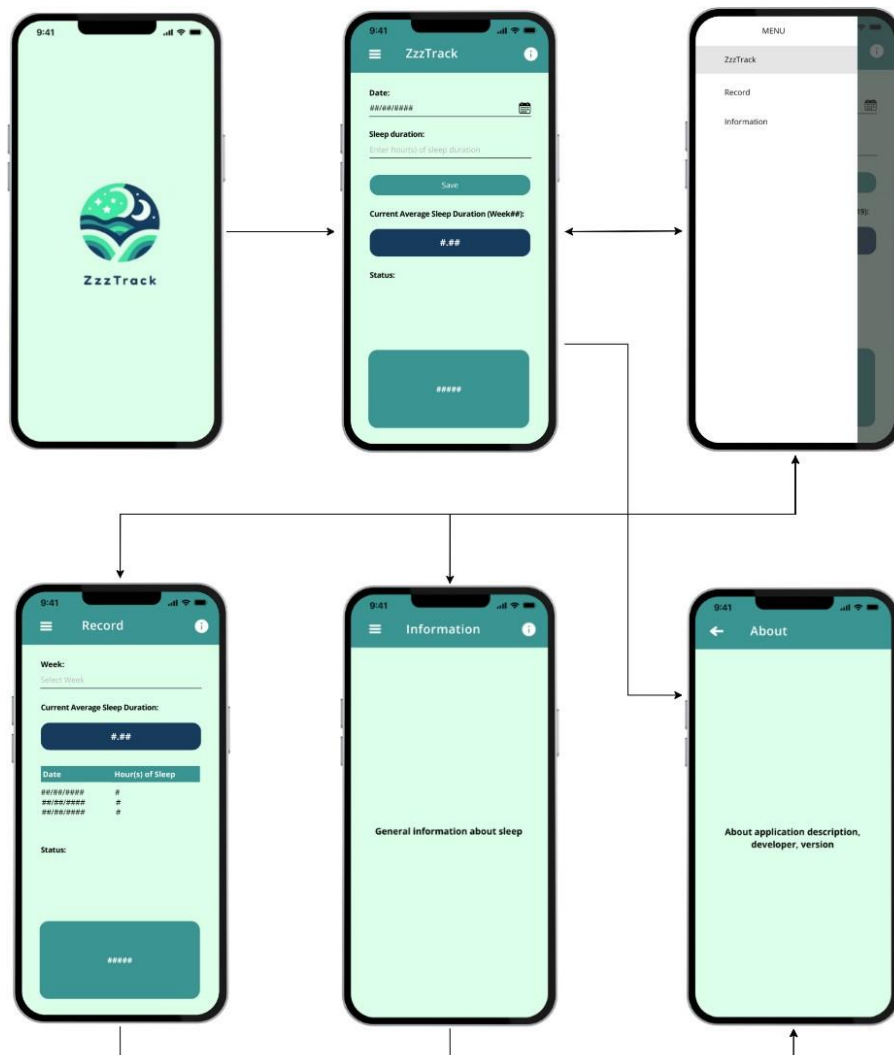


6. Record page –

The first element in this page's content is the dropdown menu which enable the user to select which week they want to view the record.

The average sleep duration, record's table, and status for sleep duration sufficiency for the week selected earlier will be retrieved from the database and displayed.

Complete wireframe:



[30 marks]

SECTION B: APPLICATION DEMONSTRATION (1 QUESTION, 70 MARKS)

Instruction: Please demonstrate the developed application.

Develop a mobile application based on the proposed idea in Milestone 1 (M1) and design idea in Milestone 2 (M2). Demonstrate your application to the lecturer and panel during the session assigned to you. You are required to have the whole project solution during the demonstration session. The demonstration **SHOULD NOT EXCEED** 30 minutes including the question-and-answer session. Failure to demonstrate your mobile application during the allocated time session will cause you to get zero for the demonstration marks and will affect the overall marks for the project evaluation.

[70 marks]

Table 1: Rubric for Report Assessment

SECTION A: REPORT					
Criteria	0	0.5	1	N/A	Marks
1. Application Name	None	Unsuitable name chosen for the app	Suitable name chosen for the app		
Criteria	0	1-2	3-4	5	Marks
2. Application description	None	Minimal or inaccurate statements to describe the application	Only brief description of the application	Detail description of the application	
3. Application Objectives	None	Minimal or inaccurate or unachievable objectives stated for the application	Sufficient objectives but inaccurately stated or not fully achievable	Sufficient objectives, accurately stated and achievable	
Criteria	0	0.5	1	N/A	Marks
4. Application target users	None	Stated the target users but without sufficient description	Well describe the target users		
Criteria	0	1-2	3-4	5	Marks
5. Application features	None	Minimal or not fully supporting objectives or irrelevant features for the application	Sufficient features but some are irrelevant or supporting objectives	Sufficient features, relevant, and supporting objectives	
6. Application screens map	None	Minimal or not fully supporting objectives or irrelevant activities and flow for the application with or without storage.	Sufficient activities and flows but some are irrelevant/ supporting objectives with or without storage.	Sufficient activities, relevant flows, and supporting objectives with storage included.	
Criteria	0	1-3	4-7	8	Marks
7. Application Sketch and Wireframe	None	Minimal sketch or irrelevant elements for the application. Poor navigation or not/partially tally with the screens map.	Sufficient sketch but some are irrelevant elements or supporting objectives. Acceptable navigation or partially tally with the screens map with minor error.	Sufficient activities, relevant elements, and supporting objectives with storage included. Acceptable navigation or tally with the screens map with none or very minimal error.	
			Total Section A [30 Marks]		

Table 2: Rubric for Application Demonstration Assessment (Lecturer)

SECTION B1: APPLICATION DEMONSTRATION (LECTURER)					
Criteria	0	0.5	1	2	Marks
1. Icon	None	Unsuitable icon chosen for the app	Suitable icon chosen for the app		
2. Splash screen	None		Included in the application with no logo	Included in the application with the application logo	
3. About page	None		Partially describe the application and developer	Completely describe the application and developer	
Criteria	0	1-9	10-19	20	Marks
4. Activities completion	None	Less than 50% completion of overall planned activities.	Less than 90% completion of overall planned activities.	Around 90-100% completion of overall planned activities.	
5. Content – Visual Control	None	Most information in the activity is confusing or irrelevant. Some of the activities do not support the objectives of the application.	Most information in the activity is relevant. Only parts of the activities support the objectives of the application.	All information is accurate and was delivered effectively. Objectives achieved.	
Criteria	0	1-2	3-4	5	Marks
6. Application navigation	None	Confusing navigation. Some of it follows the screens map, and wireframe.	Acceptable navigation. Follows the screens map, and wireframe.	Clear and suitable navigation. Follows the screens map, and wireframe.	
7. Application layout	None	Majority of the layout missing from the sketch. Layout designs are confusing.	Some of the layout matched the sketch. Some layout design support user affordance.	Whole layout design is tally with the sketch and support user affordance.	
8. Design Attractiveness	None	Majority activity design looks dull with full of texts. Lack of contrast between background and text colors made text hard to read.	Part of the activity design looks attractive, acceptable contrast, and informative with some suitable images added.	Whole activity design looks attractive, good color choices and informative with suitable images added.	
9. Application of .NET MAUI APIs	None	Applies minimal gestures or .NET MAUI API	Applies sufficient gestures or .NET MAUI API	Applies both gestures and .NET MAUI API	

10. Storage and data binding	None	Poor storage type and management or no data binding.	Suitable storage type chosen but not well organized. Applies data binding.	Suitable storage type chosen and logically organized. Applies data binding.	
			Total Section B1 (Lecturer) [70 Marks]		
			Average Section B1 (Lecturer) Total Section B1 (Lecturer)/2 [35 Marks]		

Table 3: Rubric for Application Demonstration Assessment (Panel)

SECTION B2: APPLICATION DEMONSTRATION (PANEL)					
Criteria	0	0.5	1	2	Marks
1. Icon	None	Unsuitable icon chosen for the app	Suitable icon chosen for the app		
2. Splash screen	None		Included in the application with no logo	Included in the application with the application logo	
3. About page	None		Partially describe the application and developer	Completely describe the application and developer	
Criteria	0	1-9	10-19	20	Marks
4. Activities completion	None	Less than 50% completion of overall planned activities.	Less than 90% completion of overall planned activities.	Around 90-100% completion of overall planned activities.	
5. Content – Visual Control	None	Most information in the activity is confusing or irrelevant. Some of the activities do not support the objectives of the application.	Most information in the activity is relevant. Only parts of the activities support the objectives of the application.	All information is accurate and was delivered effectively. Objectives achieved.	
Criteria	0	1-2	3-4	5	Marks
6. Application navigation	None	Confusing navigation. Some of it follows the screens map, and wireframe.	Acceptable navigation. Follows the screens map, and wireframe.	Clear and suitable navigation. Follows the screens map, and wireframe.	
7. Application layout	None	Majority of the layout missing from the sketch. Layout designs are confusing.	Some of the layout matched the sketch. Some layout design support user affordance.	Whole layout design is tally with the sketch and support user affordance.	
8. Design Attractiveness	None	Majority activity design looks dull with full of texts. Lack of contrast between background and text colors made text hard to read.	Part of the activity design looks attractive, acceptable contrast, and informative with some suitable images added.	Whole activity design looks attractive, good color choices and informative with suitable images added.	
9. Application of .NET MAUI APIs	None	Applies minimal gestures or .NET MAUI API	Applies sufficient gestures or .NET MAUI API	Applies both gestures and .NET MAUI API	

10. Storage and data binding	None	Poor storage type and management or no data binding.	Suitable storage type chosen but not well organized. Applies data binding.	Suitable storage type chosen and logically organized. Applies data binding.	
			Total Section B2 (Panel) [70 Marks]		
			Average Section B2 (Panel) Total Section B2 (Panel)/2 [35 Marks]		

Table 4: Marks Allocation Summary (Section A + Section B1 + Section B2)

Marks Allocation Summary	
	Marks
Section A: Report (Lecturer) [30 Marks]	
Section B1: Application Demonstration (Lecturer) [35 Marks]	
Section B2: Application Demonstration (Panel) [35 Marks]	
Total Marks [100 Marks]	

---End of Questions---