UNIVERSITI TUNKU ABDUL RAHMAN
Faculty of Information and Communication Technology

UCCD3223 Mobile Applications Development
(Jun 2025 Trimester)

Individual Practical Assignment

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Course	**CS**
Practical Group	**5**
Lecturer	

Marking scheme	Marks	Remarks
Correctness	× 2.5	
Design	× 3.5	
User Friendliness	× 2	
Neat Program Documentation		
Report Format		
TOTAL		

UI – Welcome to Mathnic

The menu is just simple with 4 buttons and 1 word each, counting, match, fill, and quit. Counting will be asking the user to do arithmetic between 2 numbers, match is the ability to match the shown letters and recognize its letter, lastly fill as in filing in the blacks of a sequence. The answering will be consisting of 3 buttons like a multiple choice questions, this helps in the children to not get stuck on one question and giving up on it. The app will not in any way to produce an output where the integer is less than 0 and more than 99. The emulator used is the Pixel 4a. There will be a big “x” button at the top left of the screen so that the user can leave anytime, even during the animation.

To encourage the users, the app will output a big tick or a cross when a button is pressed on. It is intentionally to not have a sort of UI after getting it wrong as it was assumed for the user to keep getting the wrong answer and forcing them to always go through the losing UI screen to continue, this app strives for constant engagement by continuously giving the user full focus onto the question. One further detail is that the problems are shown one by one and using fade transition to avoid giving information overflow to the user. Additionally, the status bar that appears on the top will be removed when leaving the menu screen (while still on the app), this is to avoid the user to accidentally interact with the status bar which may cause annoyance. Figure 1 is the main menu of the app.

Figure 1, Main Menu of the Mathnic Application

Part 1 – Counting

The first part of the application is the counting part with small animations included. The calculation does not consist of multiplication and division as it is catered towards kindergarten users and assumes the users does not learn those during their study. The question will consist of 2 numbers which are randomly generated and will show 3 buttons to choose from. While the middle act as an operator which switches from plus to minus randomly in the form of text. Figure 2 shows the counting section of the application.

Figure 2 The Counting Section of the Application

Part 2 – Matching

The matching part consists of one random letter appear on the screen and then the 3 buttons will show 3 random letters in words. One thing that you might notice is even if the input is incorrect, it will still stay to the same problem, this is because there might be problems that the user can't understand for now and move on to easier questions. However, matching is different as the purpose is to encourage and gives time for the user to learn. Figure 3 shows the counting section of the application.

Figure 3 Match Section of the Application

Last Part – Fill (in the Blanks)

This part will be the hardest for the users as they might need to think backwards for the answer. The output will have a sequence of 4 randomized numbers where a one of the 4 will be a blank. The there will be a fixed common order which is also random. This will give a push for the user to think out of the box. Figure 4 shows the fill section of the application.

Figure 4 The Fill Section of the Application