Appendix D

BAIT2073 Mobile Application Development

Task Description

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Programme : RSD Group : 2

Instruction: Answer **ALL** the questions. You may insert extra pages.

1. Please briefly describe the module(s)/function(s) you engaged in the assignment.

I engaged in the stamps and timer module. So, in the stamps module, there is create, view and delete function. In this module it communicates with both the database and local storage. The local storage of the stamp will only store stamps that don't have treeId associated to them. When the user is viewing their stamps in the stamp page, they are viewing the stamps in the local storage and when the stamps in the local storage reaches a number of 25, they will be deleted to create a tree but the data in the database remains. To create a stamp, the user needs to run the timer on the home page of the app. After the timer runs out, a stamp will be created for the user to view.

Next is the timer where the user can start the timer to get their stamp, the timer minimum is 10 minutes and maximum is 120 minutes. The user can increase and decrease the time accordingly. When the timer starts the user can pause or reset the timer. When the timer is paused, the user can either resume or reset the timer. When the timer is reset, the timer goes back to 10 minutes.

2. What are the strengths of the modules/functions created by you?

The create method of stamp is running as transaction, therefore it will ensure data consistency in the database when there are multiple users trying to create a stamp at the same time.

Save storage where all the stamps are not needed to be stored into the local storage, only the ones without a treeId and when it reached 25 stamps, all 25 will be deleted in local storage saving more storage.

3. What are the weaknesses of the modules/functions created by you?

Due to the nature of android lifecycle and the timer, once the app exited, the timer will reset instead of paused.

No foolproof method to determine whether the stamps collected are enough to create a tree and to display the correct pop, if somehow the creation of the new stamp failed, the output of the pop up will be on the tree creation and prompting user to view the tree even though the stamp failed to create and there are only 24 stamps.

When the progress bar is close to finish, there is an extra second to fully reach a full circle and activate the timer runs out.

4. What have you learned in doing this assignment?

I learnt how to incorporate both local storage and database and use it as an advantage to save storage.

I learnt how to make the timer behave according to the lifecycle of the app which helps to

deepen my knowledge of android lifecycle.

5. What are the challenges, if any, faced by you while working on this assignment?

The circular progress bar is hard to work with, especially with how it should progress according to the timer.

To find a reliable way to determine whether the pop up should be stamps created or tree created, as the speed of the data updating and update it in the local storage can vary.

Signature: *LEE* Date: 7/5/2023