Lab 8– Due Thursday Nov. 18 at 11:00pm

In this lab, you will identify potential new/improve features from your affinity diagram (the last lab). Then as a group select three features that your group will evaluate using a low fidelity prototype. These features could be a new feature or to expand/improve an existing feature. For each feature, create a use-case. For each use-case include images of your low-fidelity prototype (noting, which steps of the use-case that each image contains). You will then come up with a task and task scenario to direct users to try each feature on your prototype. The scenario should help motivate the user to know what to do with your prototype. Note, you only have to design the prototype for the Normal Case of your use-cases.

There are two parts to this: I) Use Case and Prototypes and II) Cognitive Walkthrough sheets
Both of these are also appendices for Milestone 2

Project Team Name:	GOLD
Present Members:	Radhey Rupapara, Dharmay Sureja, Sagarkumar Vaghasia, Tejaswini Rallapalli, Jayashree Ramasubramanian
Topic/device:	Banking: Spending / Saving / Bill Tracking (Smartphone)

Part 1 – Use Cases and Prototype

Features from Affinity Diagram

Problem ID from AD	Suggestion	Short new/improved Feature Description
Visualization - Currently, only two types of graphs are available, which provides limited insights for analysis.	More graphs should be presented for analysis. By adding more graphs users can get to know more about their expenses and savings.	With the use of the graphs like pie charts, line charts, bar graphs, histograms, etc., the user will get more insights into their spending habits.
Reminders- At moment, the customized frequency with an interval of reminders is not supported.	Customized interval frequency of reminders should be made available to remind users multiple times to perform a specific transaction (Bill payment, loan payment, etc.)	With the use of improved reminders, users will be notified more frequently according to their pace, which will result in fewer chances of missing payment or a transaction.
Expense Categorization- At moment, the categorization of expenses is supported with pre-existing categories, and creating customized categories is not supported.	Creation of customized parent categories based on child categories should be allowed, to make a group of expenses.	With the use of improved expense categorization, users will be able to create custom categories that can suit their spending habits and easily manage expenditures.
UI Improvements- At moment, some of the labels in the application are puzzling, and a few buttons in the application are hard to touch due to their size and placements.	Labels of the application should be revised to match their content and feature as well as the button size should be increased to match to help the accessibility of the application.	With this improvement in the application, users will have a less cognitive load with revised and correct labels, in addition to that bigger buttons will lead to ease of usage and locating buttons.

Loan Calculator- The feature was found to be a bit complex due to the many options.	The inputs should be easier to understand as the user should not have to spend more time understanding which detail, they need to provide to the application.	The loan calculator will ask for the previous details such as interest rate, amount of monthly installment, amount of loan, and a number of the loan period. At next step user will be asked that how much amount they want to pay now per month. Using these details, the application will provide how much early can the user finish installments and how much money would he save on loan.

Three Features

Feature	Description of the feature
Reminders	This reminder feature will help users to get notified more frequently according to their pace, which will result in less chances of missing of payment or a transaction.
Visualization	This Visualization feature will help users to get more in-depth analysis of their expenditure habits through various visualizations like graphs such as bar graph, pie chart, line graph etc.
Loan Calculator	The loan calculator feature will help user to know that how much he could save on interest if they modify installments amount by increasing or decreasing installment amounts.

Feature1: Setting reminder for custom time interval
Task Name: Set customer interval reminder
Task Scenario: Abby is a PhD student. Due to the busy schedule of her life from conducting classes and delivering seminars, she forgets bill payments a few times earlier. This has affected her credit score. Thus, she set a reminder this time 2 days before the due date to remind her of the bill payment. She found that setting an alert or reminder 2 days earlier is too annoying, so she changed the alert to a day prior to the due date and also changed the frequency of the alarms.
Use-Case
Normal Case 1. The user downloads the application from the play store 2. The user sets the username and password 3. The user logs into the application with a username and password 4. The user specifies the type of category for which the reminder needs to be set. 5. The user clicks on the reminder section. 6. The system displays the options to give the reminder by date, weekly, biweekly, monthly, etc. 7. The user specifies the due date for the bill payment. 8. The user specifies the date for the reminder. 9. The user specifies three reminders, with time intervals in terms of hours. 10. The system displays all the information.

11. The system prompts the user to accept the information.
12. The user accepts and logs out.

Alternative Case

The dates entered by the user are incorrect. The system asks the user to re-enter the date.

Prototype Images (you may have more or fewer images than rows – add and delete as necessary)

Image 1: User opens reminder menu and selects bill category to set a reminder

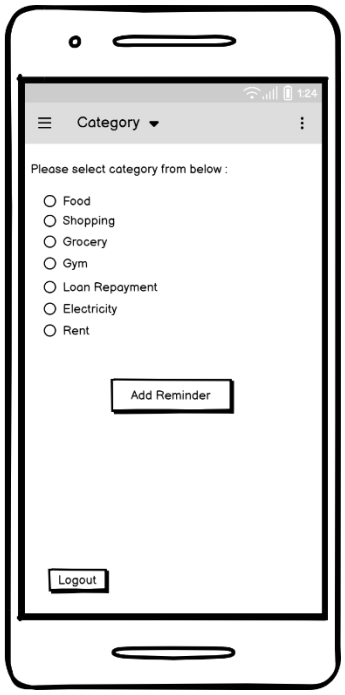

Figure 1

Image 2: User selects frequency and all required information

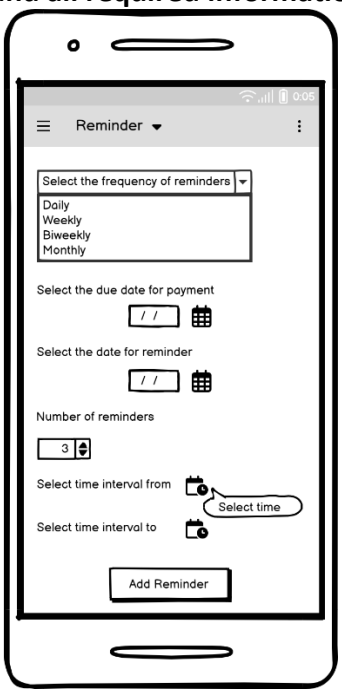

Figure 2

Image 3: User clicks add reminder button and confirm all details

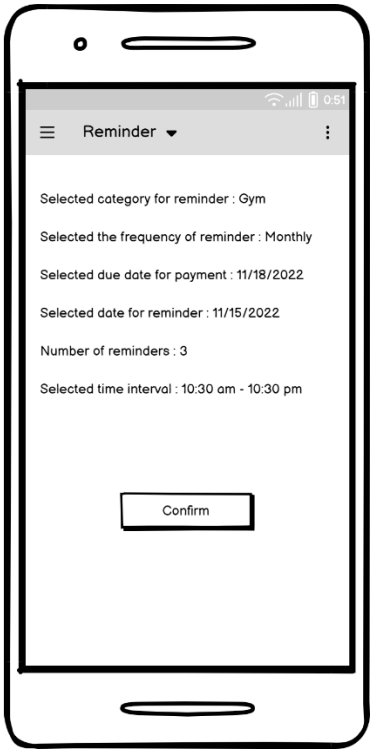

Figure 3

Image 4: System asks for confirmation

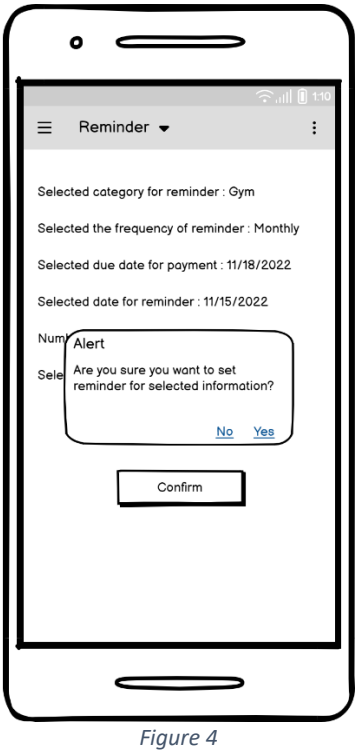

Figure 4

Image 5: System shows success message and redirects to reminder menu

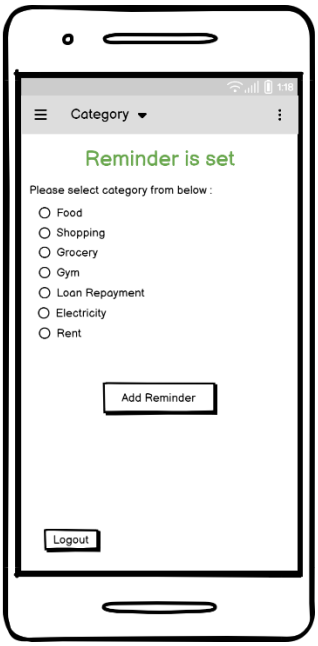

Figure 5

Feature2: Analysing the data of expenditure using graphs.

Task Name: Expense summary using charts.

Task Scenario:

Abby is a PhD student in biology. She had spent 800 dollars on her recent trip to Germany and prior to that, she spent more than 2870 on various categories which she did not remember where she spent. She is struggling when dealing with multiple calculations and numbers. Thus, she needs some way to summarize of the expenses in the form of charts and graphs. Hence, she used the report and analysis section to summarize her spending of hers in terms of various graphs and categories which helps her to visualize her expenses

Use-Case

Normal Case

1. The user downloads the application from the play store
2. The user sets the username and password
3. The user logs into the application with a username and password
4. The user sees the home screen
5. The user opens the visualization section.
6. The user selects the expense category.
7. The user sees statistical information for that expense category based on child and parent categories for the most recent time.
8. The user changes month to get specific months' expense details.
9. The user changes month rage to get information within bound months.
10. The user changes month to see daily based expense habit for a specific category.

Alternative Case

The month selected by the user has no expense information stored or range selected by the user is incompatible (eg. September to July which is in reverse). The system prompts user with an appropriate message and asks to perform action again.

Prototype Images (you may have more or fewer images that rows – add and delete as necessary)

Image 1: The user opens app and sees the home screen

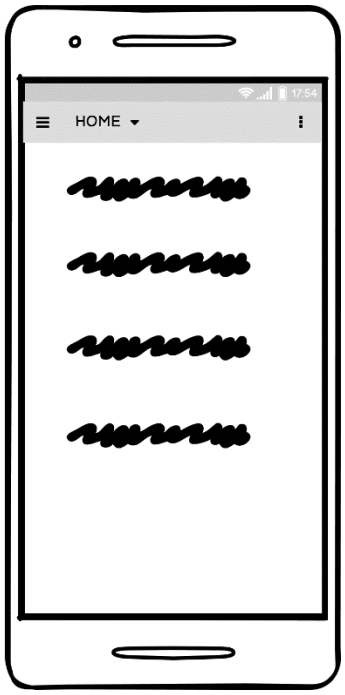

Figure 6

Image 2: User selects visualization

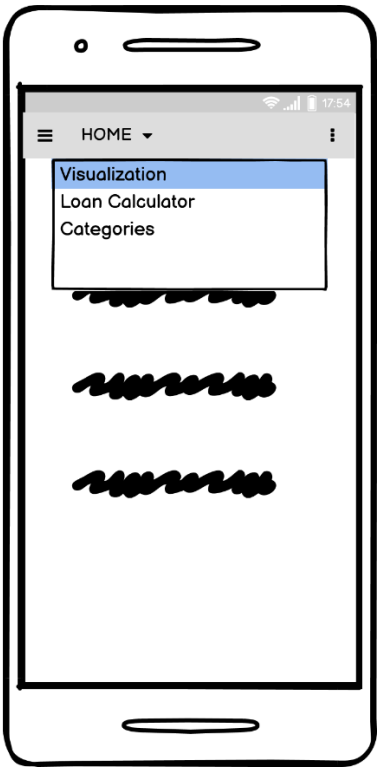

Figure 7

Image 3: Visualization menu is shown

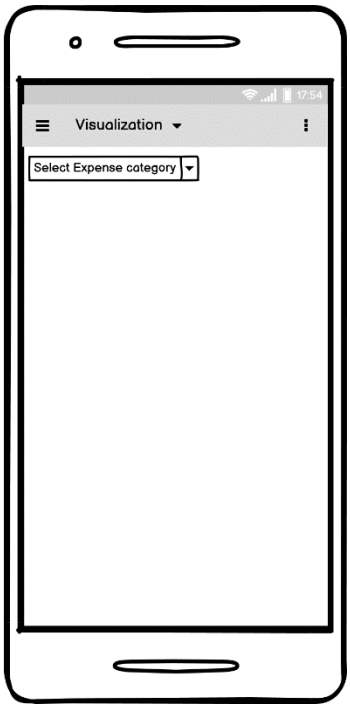

Figure 8

Image 4: The expense category is selected

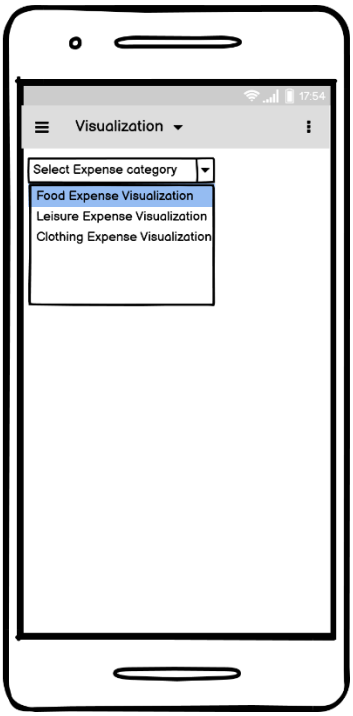

Figure 9

Image 5: Most recent data visualization is shown

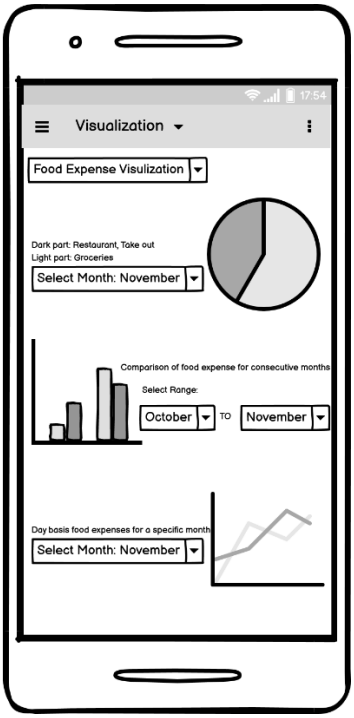

Figure 10

Image 6: Another expense category is selected

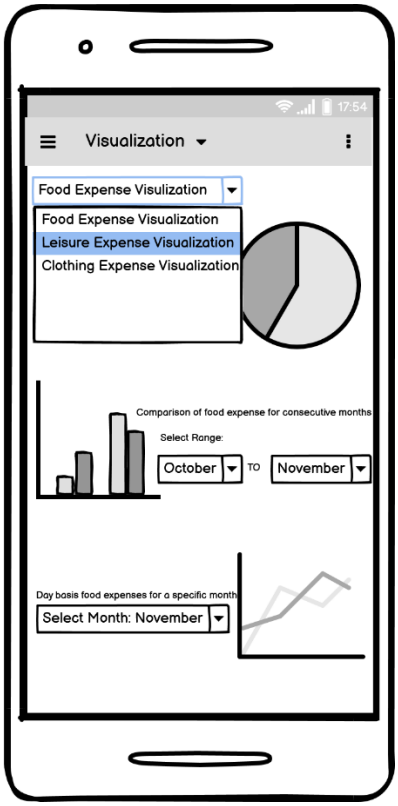

Figure 11

Image 7: Subcategory's month is changed

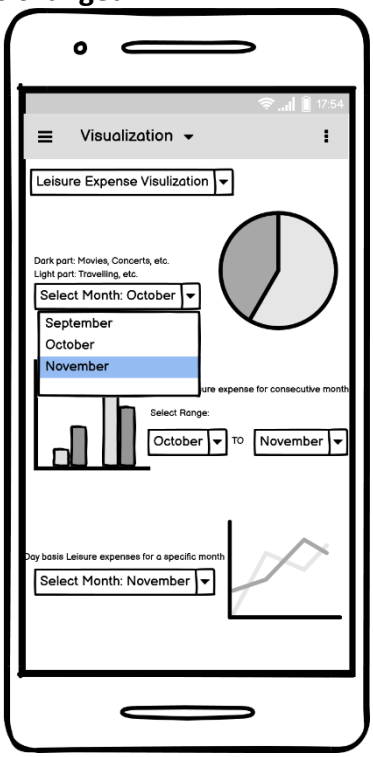

Figure 12

Image 8: The month range for comparison is changed.

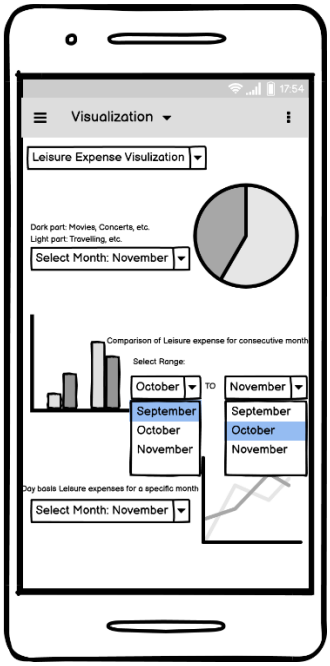

Figure 13

Image 9: Daily based line graph's month is changed.

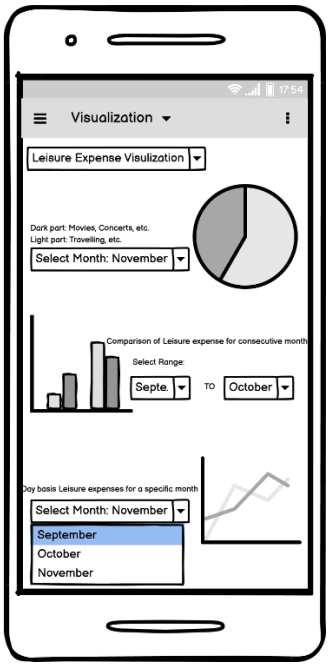

Figure 14

Image 10: The system shows all visualization as per user's requirements.

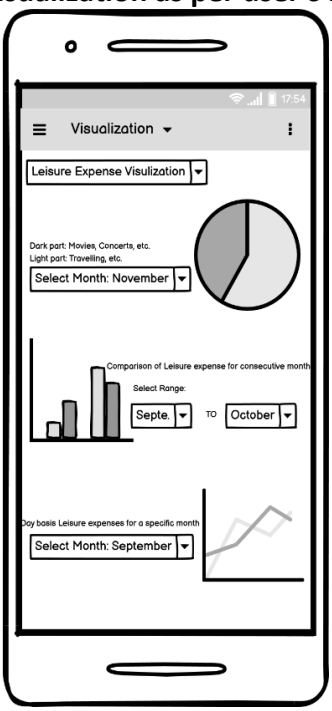

Figure 15

Feature3: Loan calculator

Task Name: Prediction for early loan payoff for interest saving

Task Scenario:

Abby is a PhD student, and she bought a house 5 and half years ago. She was paying installments of the house regularly but recently rights of her 2 patents were purchased by the multi-national company so her income increased. Now, she wanted to increase the amount of installment as she can pay more than she previously used to pay. Thus, she used loan calculator feature which took a few inputs from her such as principal amount, rate of interest, duration, EMI installment, and many more. Once she entered new installment value which she affords, now the updated tenure of the loan and interest that she will save is predicted

Use-Case

Normal Case

1. The user downloads the application from the play store
2. The user sets the username and password
3. The user logs into the application with a username and password
4. The user clicks on the loan icon
5. The system prompts the user to enter the loan amount, principal, rate of interest, duration, and EMI installment.
6. The user enters the details like loan amount, principal, rate of interest, duration, and EMI installment in the appropriate places in the UI.
7. The system displays all the information.
8. The system prompts the user to accept the information.
9. The system shows the number of years within which the loan payment will be completed for the EMI
10. The system prompts the user to enter the EMI amount,
11. The user enters the new EMI installment
12. The system shows the number of years within which the new loan payment will be completed
13. The system displays all the information.
14. The system prompts the user to accept the new information.
15. The system shows the number of years within which the new loan payment will be completed for the new EMI.
16. The user can see the number of years within which the loan payment will be completed for the new EMI and existing EMI
17. The user accepts and logs out.

Alternative Case

The user enters multiple EMIs (more than 3) and wants to see when the loan payment period will complete for them simultaneously.

Prototype Images **(you may have more or fewer images that rows – add and delete as necessary)**

Image 1: User open loan calculator menu

Figure 16

Image 2: User enters all necessary information and presses next and confirms details

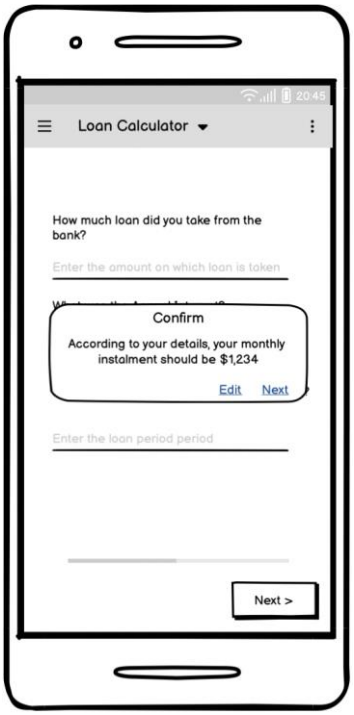

Figure 17

Image 3: User enter additional information regarding loan payment.

Figure 18

Image 4: The system calculates savings as per information entered by user and user sees savings

Figure 19

Lab 8 Part II - Cognitive Walkthrough Sheets

Date of Evaluation: _____

Name of Evaluator: _____

Instructions:
In small groups (2-3), the evaluators will be walkthrough the system for each task. For each step of the use-case the evaluators will answer three questions on their own copy (without talking to each other) – if Abby will know what action to take, how to do the action, and then if Abby can tell if the actions taken is correct (yes, no or maybe with a short reasons). Give any problems (a "No" or "Maybe") a severity rating from 1 to 5 (where 1 is minor and 5 is critical.) After all the steps in each task are complete, the evaluators will meet to discuss issues found in each task (that evaluate a feature) to come up with 2-3 Must changes (change your severity rating to M in the table) for each task.

Description of System:
[main goals and objectives of the system, what type of system, e.g., mobile, web, etc]

Typical Users: Abby [*include the personas that you created]*

Typical Tasks: *[List the main uses and tasks of the system]*

_____ [NEW PAGE]
_____

Cognitive Walkthrough Sheet [**Evaluation Sheet/s – one set per task**]
Task Title:
Task Scenario:
[Short description of the scenario]

Step 1: [add]

Question	Yes (reason/s)	No (reason/s)	Maybe (reason/s)	Severity Rating (1-5)
Will the correct action be sufficiently evident to Abby? ("Know what to do?" -Will the Abby know what to do to achieve the task?)				
Will the Abby notice that the correct action is available? ("See how to do it" - Can users see the button or menu item that they should use for the next action? Is it apparent when needed?)				
Will the Abby associate and interpret the response from the action correctly ("Understand correct action/not correction" - will users know from the feedback that they have made a correct or incorrect choice of action?)				