Name____Baoying Lou________   Mark ______________________/50

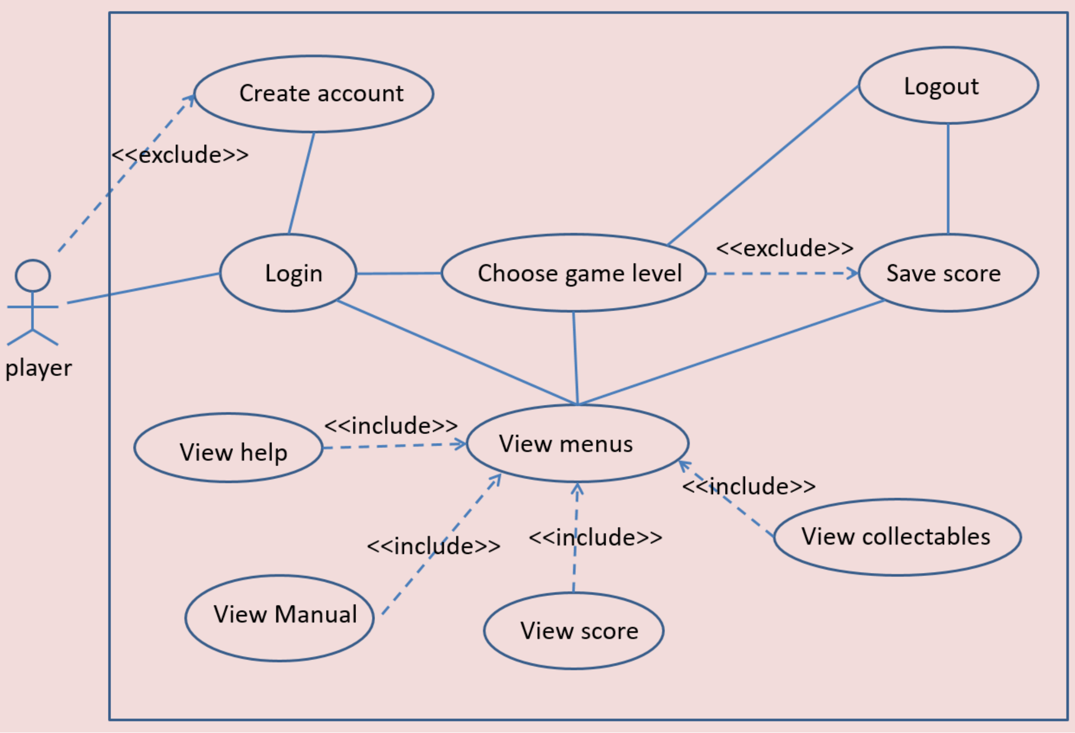
[**Instructions**: Remove everything that is not a heading below and fill in with your own diagrams, etc.]

1. Brief introduction __/3

I am responsible for the user interface design, which is mainly about the interaction between the software and user. It includes login, logout, view help, view manual, choose game level, view score, view collectables, save score.

2. Use case diagram with scenario __14

Use Case Diagrams



Scenarios

[You will need a scenario for each use case]

Name: Login

Summary: The user uses the Login button to login

Actors: Player

Preconditions: Game has been initialized

Basic sequence:

Step 1: Enter user name.

Step 2: Enter password.

Step 3: Click login button

Exceptions:

Step 1: Wrong user name or password: invalid user.

Post conditions: Game screen is displayed.

Priority: 3*

ID: C01

*The priorities are 1 = must have, 2 = essential, 3 = nice to have.

Name: Logout

Summary: The user uses the Logout button to login

Actors: Player

Preconditions: Game has been initialized

Basic sequence:

Step 1: Click the logout button

Post conditions: Game window is closed.

Priority: 3*

ID: C02

*The priorities are 1 = must have, 2 = essential, 3 = nice to have.

Name: View Help

Summary: The user uses Help button to see basic operation of the game.

Actors: Player.

Preconditions: Game has been initialized.

Basic sequence:

Step 1: Click help button.

Step 2: View the information.

Step 3: Close help window.

Exceptions:

Step 1: The help window is closed by mistake: open it again.

Step 2: User can't find the information he/she wants: try manual.

Post conditions: Help window is closed.

Priority: 2*

ID: C03

*The priorities are 1 = must have, 2 = essential, 3 = nice to have.

Name: View Manual

Summary: The user use Manual button to see the detail information of the game.

Actors: User.

Preconditions: Calculator has been initialized.

Basic sequence:

Step 1: Click Manual button.

Step 2: View manual information.

Step 3: Close manual window.

Exceptions:

Step 1: The manual window is closed by mistake: open it again.

Step 2: User can't find the information he/she wants: Give feedback to developer.

Post conditions: Manual window is closed.

Priority: 3*

ID: C04

*The priorities are 1 = must have, 2 = essential, 3 = nice to have.

Name: Choose game level

Summary: The user can choose a game level he/she wants from home menu.

Actors: User.

Preconditions: Game has been initialized.

Basic sequence:

Step 1: Click the home menu.

Step 2: Click game level.

Step 3: Choose a level from 1 to 3 from the pull-down menu.

Exceptions:

Step 1: User choose a wrong level: choose it again.

Post conditions: The corresponding level of the game is displayed.

Priority: 3*

ID: C05

*The priorities are 1 = must have, 2 = essential, 3 = nice to have.

Name: View score

Summary: The user could see what score he/she gets.

Actors: Player.

Preconditions: Game has been initialized.

Basic sequence:

Step 1: The score is displayed in the up left corner all the time.

Post conditions:

Priority: 3*

ID: C06

*The priorities are 1 = must have, 2 = essential, 3 = nice to have.

Name: View collectables

Summary: The use could see what collectables and how much of them he/she has collected.

Actors: player.

Preconditions: Game has been initialized.

Basic sequence:

Step 1: Click the collectables button.

Step 2: See the type and number of the collectables.

Step 3: Close the collectables window.

Exceptions:

Step 1: No collectables is collected: Display 0.

Post conditions: The information about the collectables is displayed.

Priority: 3*

ID: C07

*The priorities are 1 = must have, 2 = essential, 3 = nice to have.

Name: Save score

Summary: The user uses the save score button to save the score.

Actors: Player.

Preconditions: Game has been initialized.

Basic sequence:

Step 1: Click the save score button.

Exceptions:

Step 1: User gets 0 score: Store 0 to the user-score database.

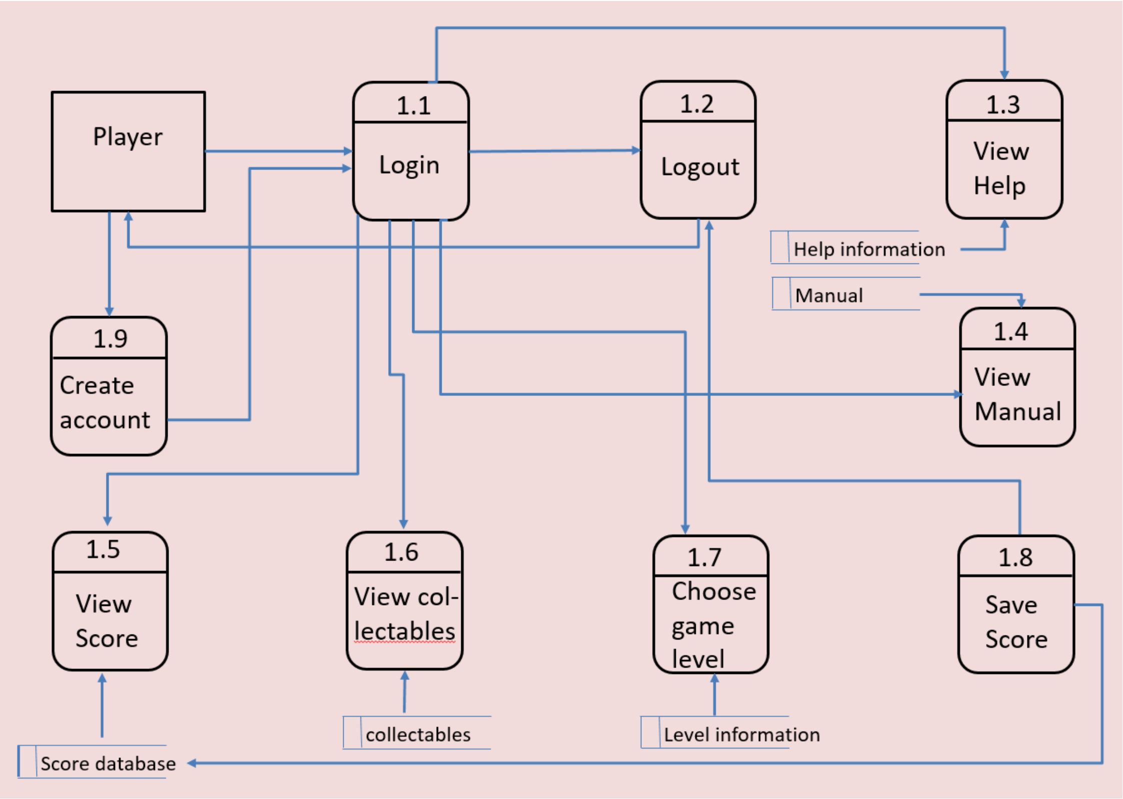
Post conditions: Calculated value is displayed.
Priority: 3*
ID: C08
*The priorities are 1 = must have, 2 = essential, 3 = nice to have.

3. Data Flow diagram(s) from Level 0 to process description for your feature ______14

[Get the Level 0 from your team. Highlight the path to your feature]

Example:

Data Flow Diagrams



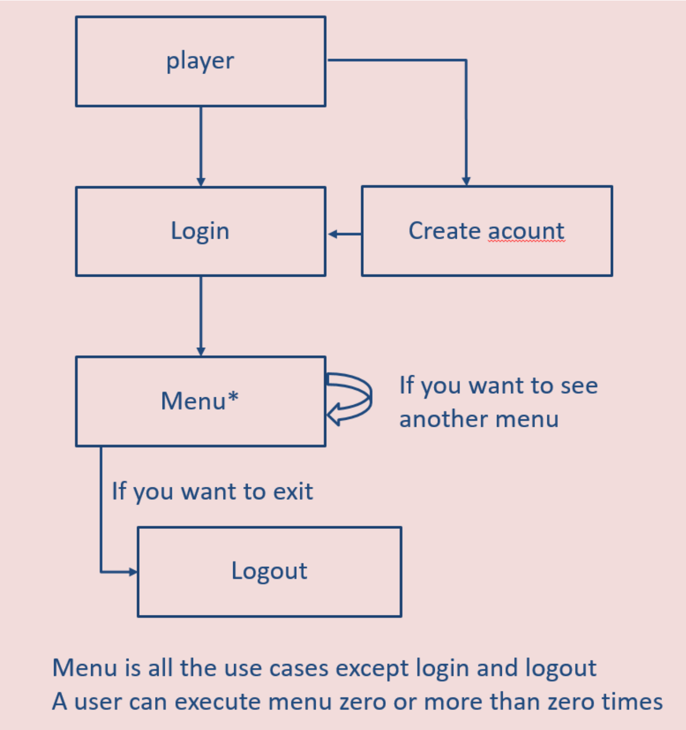
Process Descriptions

Login:

IF user enter an username and passwprd which can be matched in user database, login successfully

```
    End IF
Create account:
    IF it’s a new user, create a new account and add it to user database
    END IF
Logout:
    IF logout is clicked, logout the game
    END iF
View Help:
    IF Help menu is clicked, display the help information on the screen
    END IF
View Manual:
    IF Manual menu is clicked, display the manual information on the screen
    END IF
Save Score:
    IF user wants to save score, update the score in user database
    END IF
Choose game level:
    IF user login, he/she selects a game level to play
    END IF
View collectables:
    IF user wants to check collectables information, he/she click the menu to see it
    END IF
View score:
    IF user wants to check his/her score, click the menu
    END IF
```

The logical relationships between all the menus are shown below:


player
Login
Create acount
Menu*
If you want to see another menu
If you want to exit
Logout
Menu is all the use cases except login and logout
A user can execute menu zero or more than zero times

4. Acceptance Tests _______9

[Describe the inputs and outputs of the tests you will run. Ensure you cover all the boundary cases.]

Login

- The user can only use the existing account to login.
- If the account doesn’t exit, show an error message.

Logout

- After logout, the game should be closed normally.

Create account

- User could create a new account if the username is not taken.
- Check the user database if the new account created successfully

View help

- It should display the basic information about how to play this game.

- The menu could be closed.

View manual

- Display all the detail information about the game.
- The menu could be closed

View score

- Display the number that the user wins.

- Check the score whether it is correct.

Manual menu

- It displays all the detail information about the game.

- The window can be closed

View collectables.

- It should display all the collectables, including type and number.

- Check whether the information is correct.

Save score

- Check whether the score is updated in user database

- Check if the score is correct

Choose game level.

- Check if the corresponding scene is displayed.
- Verify that all three levels can be chosen correctly

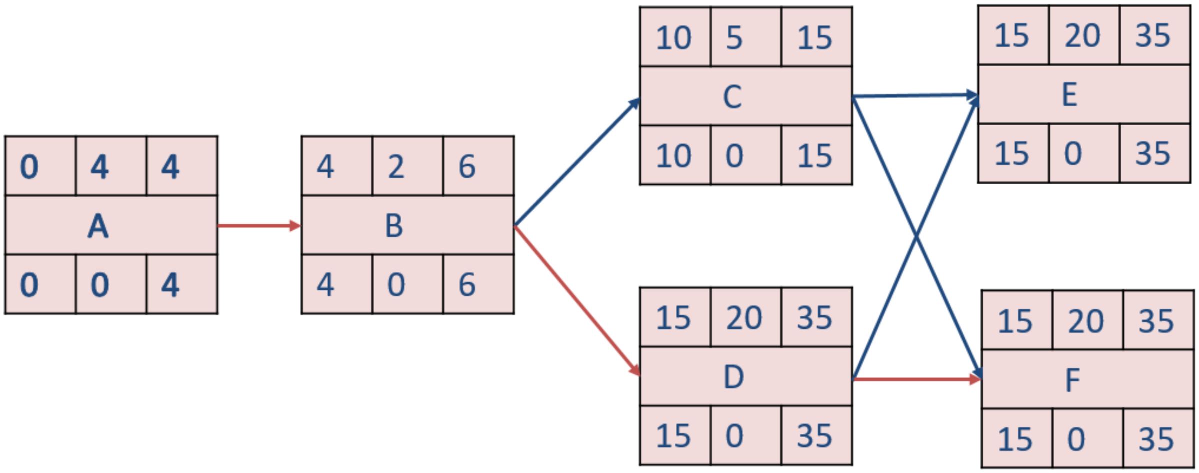
5. Timeline ________/10

[Figure out the tasks required to complete your feature]

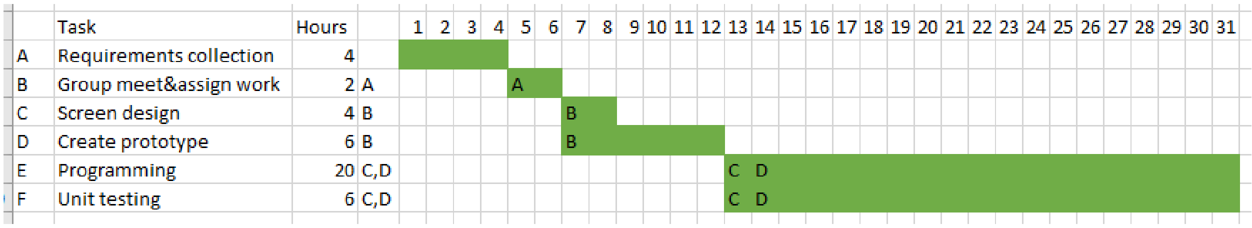
Work items

Task	Duration (hours)	Predecessor Task(s)
A. Requirements Collection	4	-
B. Group meeting & assign work	2	A
C. Screen design	6	B
D. Create prototype	6	B
E. Programming	20	C, D
F. Unit testing	20	C, D

Pert diagram



Gantt timeline



	Task	Hours		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
A	Requirements collection	4		🟩	🟩	🟩	🟩																											
B	Group meet&assign work	2	A					🟩 A	🟩																									
C	Screen design	4	B							🟩 B	🟩																							
D	Create prototype	6	B							🟩 B	🟩	🟩	🟩	🟩	🟩																			
E	Programming	20	C,D													🟩 C	🟩 D	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩
F	Unit testing	6	C,D													🟩 C	🟩 D	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩