Project, Phase 4 – Report

Course: CMPT-276

Group: 27

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1. The Game:

a. Overall Description

The Team has developed an arcade-2D maze game style, named "Tony In need of Pennies" or "TIP. The main context of the game is based on the pandemic. The main character, "Tony", who needs fund to purchase the vaccine. While traveling around the city (map) to collect funds or "Pennies," "Tony" must avoid the enemy, Covid-19 virus, to keep himself alive before getting sufficient prizes.

b. Discussion about the Design

	Original	Actual
Plan		
Meeting	1 per week	1 per 2 weeks
Coding timeline	Meet the deadline requirement	Meet the deadline requirement
Design		
Major class	Game, Map, Wall, activeObject (Character, Enemy), Prize (Reward, Bonus)	Adding new classes: PrizeFactory, PrizeType, Door, AutoFindWay
Minor class	Javax.Swing library (JFrame, JPanel, Runnable)	Adding new classes: WinMessage, Punishment

According to the above table, the team was inexperienced in designing, leading to missing out on relevant features, impacting the game. The team solely focused on fundamental elements of the game such as character or enemy and did not consider the related information such as design structure, game layout, or menu. However, the team has adapted and reacted quickly to the change in requirements for the game design and implementation.

c. Lesson and Evaluation

After the project, the team has gained knowledge about the software development process, exclusively the Waterfall model. Besides, the team also learned and implemented object-oriented programming for the game development context.

The team has successfully developed and delivered the game and the test case. However, there are few targets that team does not meet, such as additional levels, adding soundtracks. In general, team members have closely followed the initial plan, met all deadlines, maintained harmonized team communication, and actively contributed to the success of the project.

2. Tutorial:

a. Compile/Execute Command

Compile/build the game: 'mvn package'
Compile/build the test: 'mvn test'
Execute the game: 'java -cp target/Game-1.0-SNAPSHOT.jar game.Game'

b. Game Features

The game contains 4 main windows:
- Starting Menu: the main menu of the game, user can decide to play or exit the game.
- Main Game Window: display the game map and allow the user to interact with the game.
- Winning Window: display the message when the user successfully finishes the game.
- Punishment Window: display the message if the user fails (being touched by the enemy).

In addition, the game has 3 main features:
- Main character: Tony – Mario picture
- Enemies: virus – flower enemy

- Prize: There 2 type of prize
    - Reward – small blue circle
    - Bonus – large yellow circle

Besides, the game also has other additional features:

- Start button: display at the main menu, enable the user to start the game.
- Exit button: display at the main menu, allow the user to exit the game.
- Reset button: display at the main game window, allow users to reset to initial stage of the game.

c. Game play Instruction

- The player will control the main character, Tony, move around the map to collect as many prizes as possible
    - Prizes will be either bonus or reward:
        - Reward point to open the winning door and increase the total score.
        - Bonus point only increases the total score.
- If the player has enough reward, the door will be displayed
    - The user can either enter the door or continue to collect the remaining prize on the map.
    - If the player decides to enter the door, the wining window will pop up.
        - The user can either choose to quit or continue.
- The enemy will hunt the main character if she stays in the detection range of the enemy
    - If the main character "touch" the enemy, the player will lose the game. The losing window will enable the losing message.
    - The user can either choose to quit or continue.