CS101 PROJECT HELP DOCUMENT

The project is an enhancement of the simple lasso game that was given as the starter code for this project. Before reading this help document, please read the file README.md in the same folder.

The Objective: The objective of the game is to maximise our score by collecting more coins, and avoiding the bombs. We do this with the help of the LASSO.

Getting Started:

1. Compiling the Game:

This project was done on Ubuntu 18.04, and for compiling the game, first navigate to the directory where the zip file has been extracted. From there, run the following command:

s++ -o lasso lasso.cpp coin.cpp MovingObject.cpp bomb.cpp booster.cpp main.cpp

This command will make an executable called lasso.

2. Executing the file:

To execute the file, stay in the same directory and run the command:

./lasso

This will launch and the game will start.

Playing the Game:

1. **Controls:**
    - **'t':** on using this, if the lasso is in a stationary state, then the lasso is launched
    - **'l':** when the lasso is in a moving state, then this will capture all objects in its capture radius and attach it to the lasso.
    - **'y':** if the lasso is in a moving state, then the lasso is yanked. The lasso returns to its original position. All the objects attached to the lasso take their effects (mentioned in subsection "Types Of Objects") and the number of coins and lives are adjusted accordingly.
    - **'q':** This is to be used in the event we need to quit the game. Note that using this will lead to stopping the game and the progress made is lost.
    - **'[':** to rotate the lasso in clockwise direction when the lasso is stationary
    - **']':** to rotate the lasso in anticlockwise direction

2. Types of Objects

- Regular coin: This is golden in colour, and collecting this will increase your points by one. Failing to collect it will lead to the loss of a life. If the number of lives left reach 0, the game ends.
- Bomb: This is red in colour, and collecting this will reduce the score by 1. Hence, these are to be avoided.
- Boosters: There are 2 types of boosters, and any of them can spawn randomly. These boosters are the only way to adjust the speed of the lasso.

a) Type 1: These are blue in colour. On collecting this, we get a bonus of 2 coins and an extra life. However, this also leads to a decrease in the speed of the lasso.

b) Type 2: These are purple in colour. On collecting these, we lose 2 coins. However, the speed of the lasso increases if we collect this.

Note that the game is easier to play with a faster lasso, and a slower lasso means a tougher game, hence collecting boosters have to be done strategically.

3. Gameplay

- The player starts with a certain number of lives, and the game starts at level 0. For level 0, the coin will always spawn fron the same location at the same angle. Boosters can also launch here. We must start by pressing 't' and trying to catch the coin.
- On catching coins, we move ahead in levels. On reaching level 1 onwards, the coins and boosters will spawn from random locations.
- If we fail to catch a coin (gold), then we lose a life.
- The game ends on reaching 0 lives.
- The objective of the game is to maximise our score without losing too many lives. Extra lives can be obtained from boosters.
- The current high score will also be displayed on the screen. The player can try to beat the score and if he/she succeeds, then the high score is updated in the memory, and this will be shown as high score from then onwards.
- After losing all our lives, the game is over. To exit, use the mouse to click on the screen of the game, and the game will end.