CS 396 Project 4

Cannonball Game

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***Summarize and Requirements***

This project wasrequired users control the angle of the cannon to fires the horizontally moving target. If the ball lands on the target, a point is added to the player's score. In this game, you will have 10 cannon balls. When all remaining balls have been fired, the game is over. The number of balls remaining and player’s current score are displayed on the screen.

***Project analysis and design***

The Language in this game is JAVA. Use JAVA swing(Java Platform SE 7) to design the interface, background and draw the graphic.

For our cannonball game we're going to have a main window. The window needs to use accelerated graphics. It also needs to respond to the player's key presses to move the angle of cannon. We call this class Game.

In this window we will see the player’s cannon, moving target and the shots. From this we get 4 classes. GameObject and 3 subclasses, Shot, Cannon and Target.

Finally, we'd like to have an image displayed. So we add a pair of classes to our design, Sprite and SpriteLoader.

***Special Info***

None.

***List of key features***

Use Keyboard to change the angle of cannon.

Use “space” to fire the bullet.

Automatic moving target.

Display the score, the remaining bullets and cannon angle on the top-right corner.

When go out all the shots, the game is over.

***Basic instructions on usage***

When you open the game, press any key to start the game.

Use “right” and ”left” to change the angle of cannon.

When you locked on the target, press “space” to fire.

When you go out all the bullet, the game is over.

The score will display on the main windows.

Press any key to start the new game.

***Bugs/Problems***

When change the angle of cannon, the cannon will not be roteted.

***Limitations***

Cannon balls for each player is ten.

Later can add more moving target. Also can add some AI function in target such as dodge, fire.

Create a mouse click instead of keyboard enter.

***Acknowledgements***

Creating a GUI With JFC/Swing

https://docs.oracle.com/javase/tutorial/uiswing/

Math-Calculate coordinates (x,y) of a ball

Java projectile tutorial

https://www.youtube.com/watch?v=sQ9c\_c19\_bw&index=67&list=PLlrATfBNZ98eOOCk2fOFg7Qg5yoQfFAdf