PROJECT REPORT

Title: CANNON SHOOTER

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Objective:

The purpose of this project is to formulate a program that simulates a ***Cannon Shooter*** game using accessible functions in openGL.

Description:

The game allows user to take control of a ***cannon*** and attempt to ***bomb*** the moving ***ship***.

The cannon is controllable by the ***keyboard***, and arrow keys will adjust the ***power bar (****speedometer****)*** and ***angle of trajectory***, while a ***space bar*** entry will trigger the cannon and fire the bomb whose path is calculated by ***equations of trajectory***.

The equations of trajectory used are

$S_x = u*\sin(\emptyset)*t;$

$S_y = u*\cos(\emptyset)*t - 4.9*t*t;$

Technologies Used:

The code for this project is built in C using openGL library. The type of study in this project is to use animations and getting inputs into the game using various functions and algorithms available in openGL in order to make the game more interactive.

Keyboard Interaction:

- **Up arrow key –** *increase the power.*
- **Down arrow key –** *decrease the power.*
- **Right arrow key –** *increase the angle.*
- **Left arrow key –** *decrease the angle.*
- **Space bar key –** *fire the bomb.*
- **Esc key –** *exit the window.*

Scope: The program that is to design will render the users an interactive Cannon Shooter game, which can be played in a standalone system. The keyboard event is made available to control the game using arrow keys. The main objective of the project is to render a highly interactive Game to the end-users.