Oblig

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# Introduction

I have made a game about shooting a ball at an object with a speed and angle.

# Physics

## Forces

Gravity =

## Solution

To move the ball the Newton’s law is applied in the Y axis since this is the only axis we have working forces

Constant acceleration

The angle is set by setting Y and Z values to the balls start speed.

By setting a Z speed the ball will move forward as long as it is in the air. The air time will depend on the Y speed, so to hit the target the Z speed need to be greater than 0 as and the Y need to give enough air time for the ball to move forward to the wanted destination.

# Implementation

## setPosition

This is the method that moves the ball, depending on the velocity of it. Each time it updates it will add the distance moved (velocity\*update time) since last update to the current location

## setVeloccity

setVelocity is changing the velocity of the ball depending on the forces working on the ball. Each update this will calculate the new speed with Newton’s law.

# References