**Ray Casting Using Pygame**

**Project by:**

Vishal K

Grade XI

September 2021

**Project Details:**

**Programming Language:** Python (Pygame)

**Code editor:** Visual Studio Code

**Project Statement:  
 ‘Ray casting’** is a popular technique in video game development for pseudo 3D games that use 2D graphics but want to create the illusion of depth and dimensionality of objects that are present within the view of the player.

By using mathematical formulas that take into account the position of the player and the camera angle, the game can determine which walls or obstacles to display and how to adjust their appearance to create the illusion of depth and perspective.

One of the advantages of ray casting is that it can create a realistic-looking world without compromising the game's performance or speed. Using actual 3D simulation environments can be resource-intensive and require more processing power, which can slow down the game's performance. Ray casting, on the other hand, can create the illusion of depth and dimensionality without requiring as many resources.

**My GitHub Repository:**

<https://github.com/IAmACodeGeek/Ray-Casting-Pygame-Python>