

# Kinect Based Exercise Game

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# What is it about?

- *This project is designed for heart patients , people who want to do physical exercises as well as for gaming enthusiasts.*
- *It is based on Kinect Skeleton Tracking.*
- *You have to control the body of the game character with your body as a joystick ! Sounds fun right !*



- *This game gives all the advantages of cardiovascular exercises.*
- *Apart from heart patients, anyone can play this Game and enjoy.*
- *There are no strings/controllers/headset attached to the player hence really comfortable to use. All you have to do is to perform free actions according to the game.*
- *The obstacles are designed in such a way that the user automatically performs cardiovascular exercises without even noticing.*



# Welcome to the game.

- *On starting the game, we have the Main menu .*
- *There are 3 option buttons available namely- ‘ New Game, Options and Quit.’*
- *Clicking on New Game we go straight to level 1. The Kinect maps the limbs , head , torso and shoulders of the real person with the game character automatically .*
- *Person needs to dodge the obstacles coming at him by doing appropriate actions. In level 1, he has to walk past the obstacles. Thus level 1 is a basic warm up but with a whole new Experience of walking /running ! It is quite enjoyable and beneficial ! Level 2 is a bit more difficult and is designed for exercise of upper body and neck.*



Let's Dive into it !



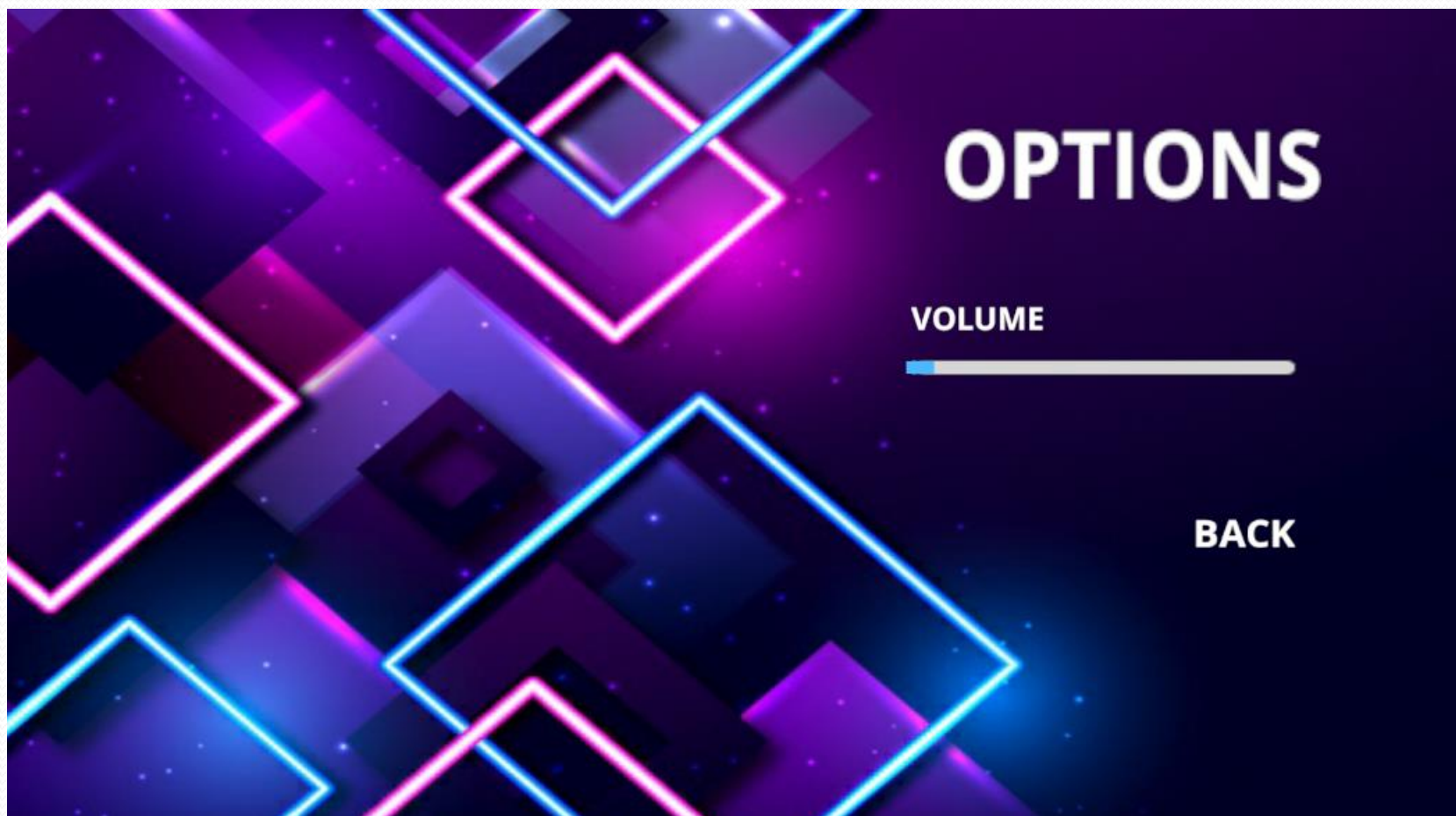


Game starts with this menu.





You can set Game Volume in OPTIONS Menu

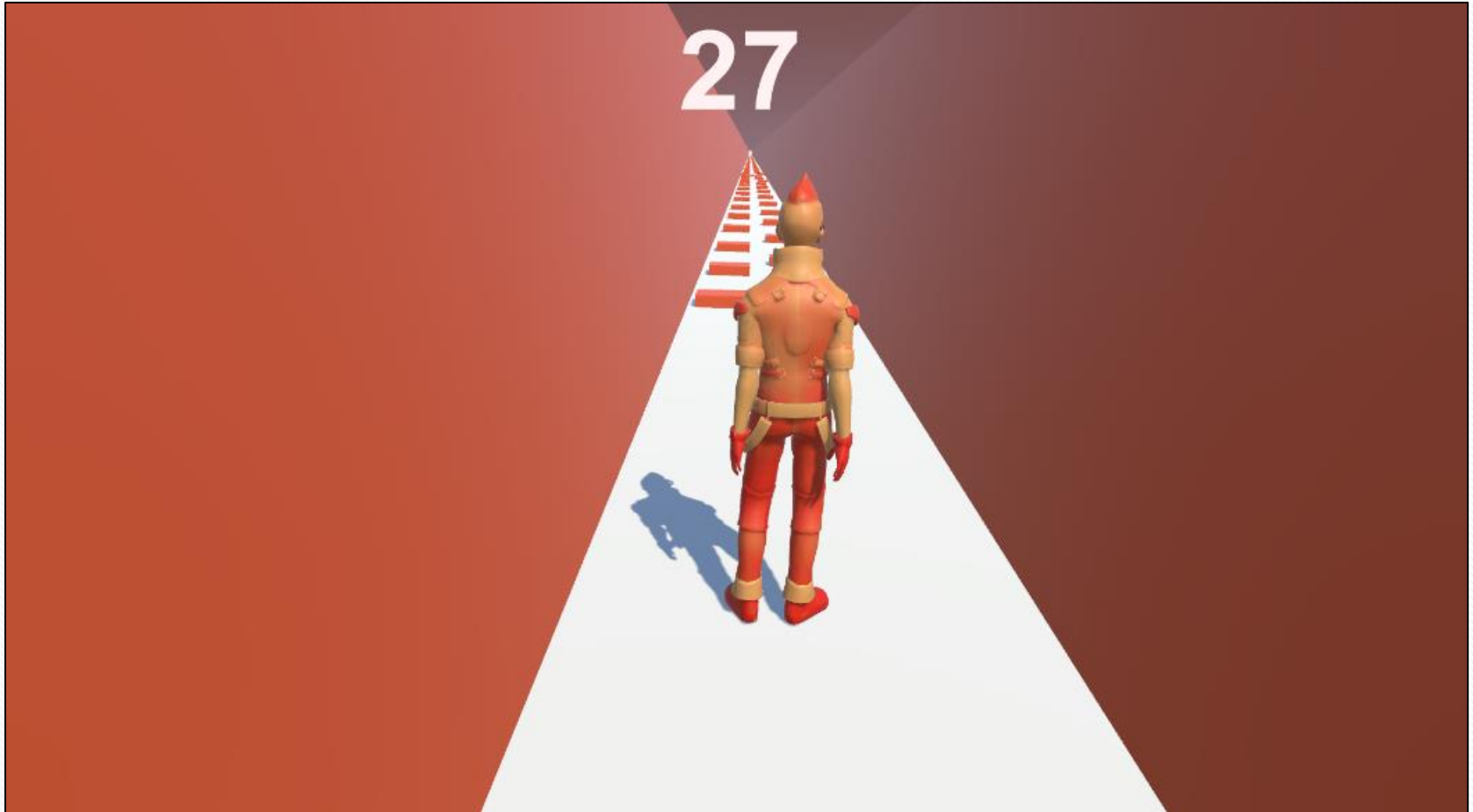


# Pressing 'New Game'





# Level 1



Obstacles are coming at feet , left and right one by one , you need to lift your legs in order to dodge them



You need to dodge all the obstacles to finish the level

15

***LEVEL***

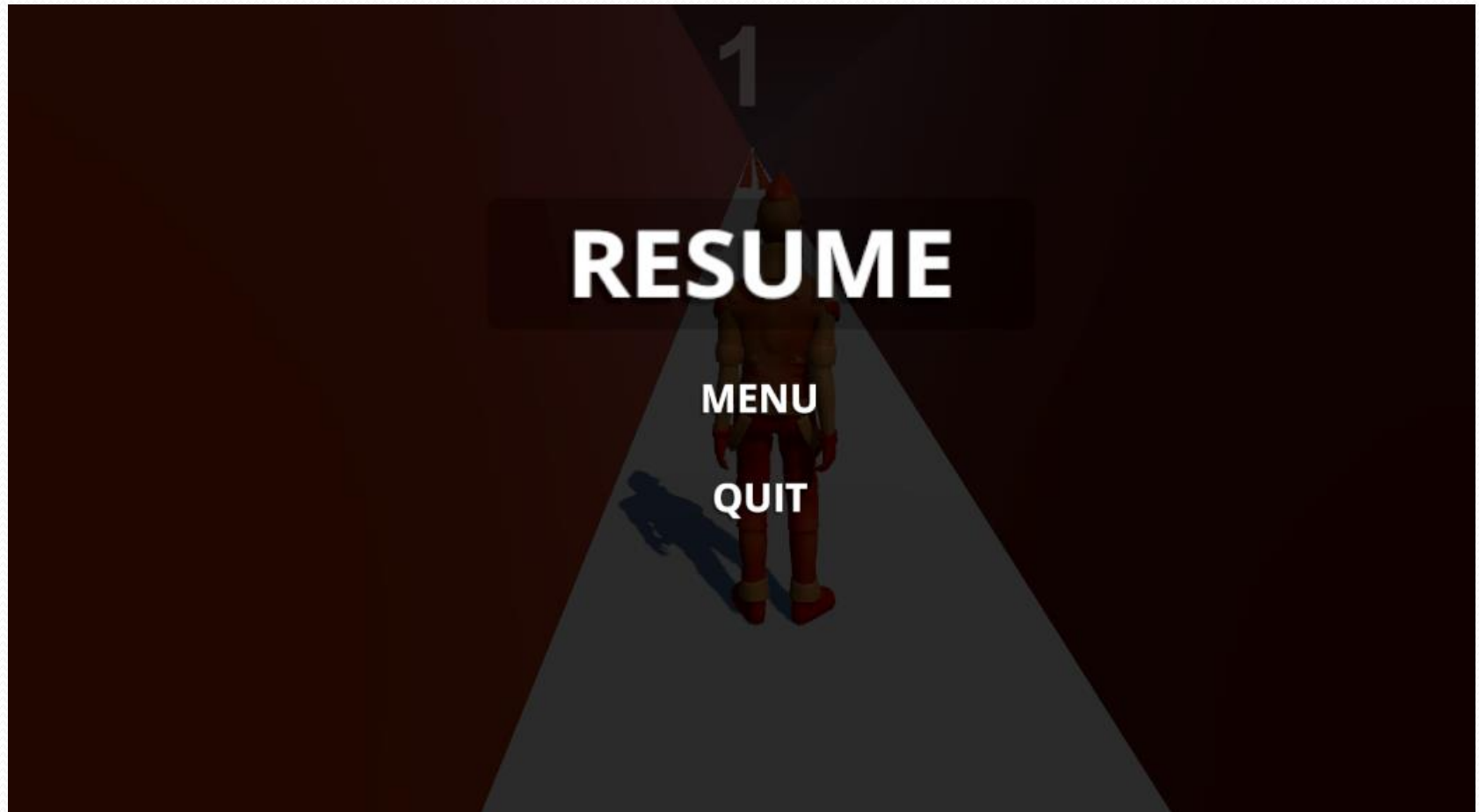
*COMPLETE*



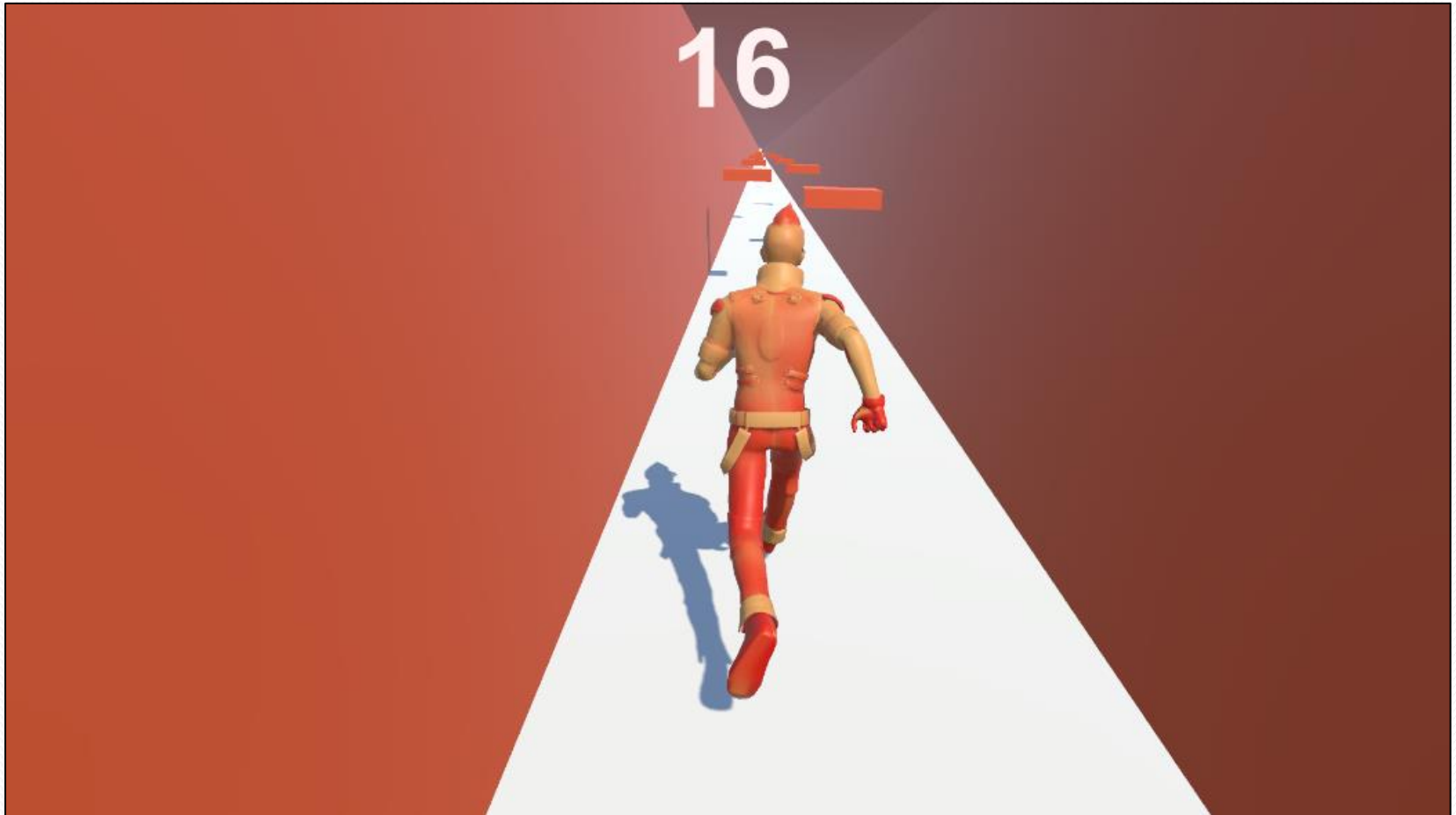
# Pressing 'ESC'



## *Pause Menu*



## Level 2



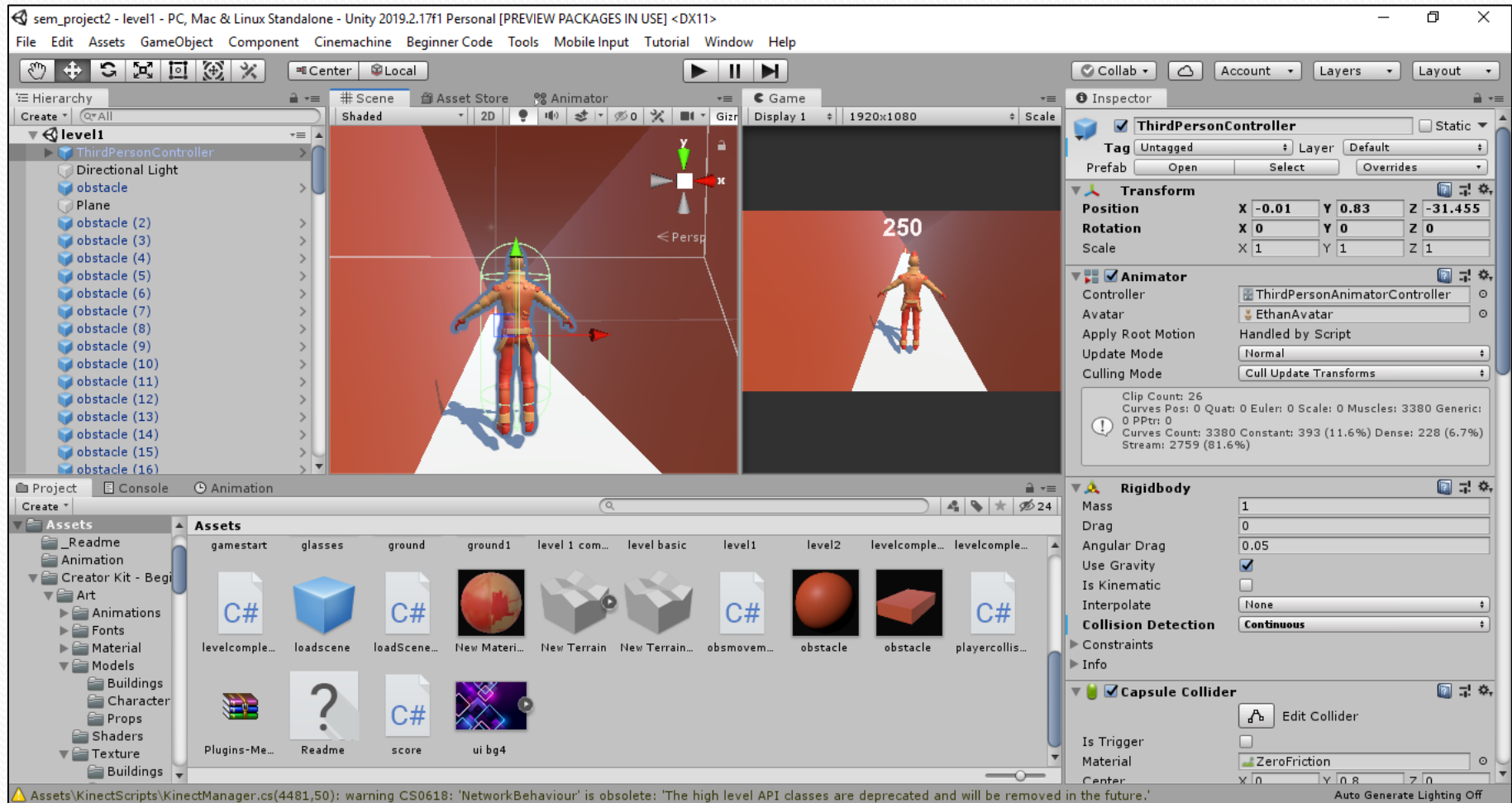
Notice the floating obstacles ,they are coming towards the head from left and right.



This UI is displayed when game is lost. (obstacle hits the player)



# Glimpse of the Unity environment

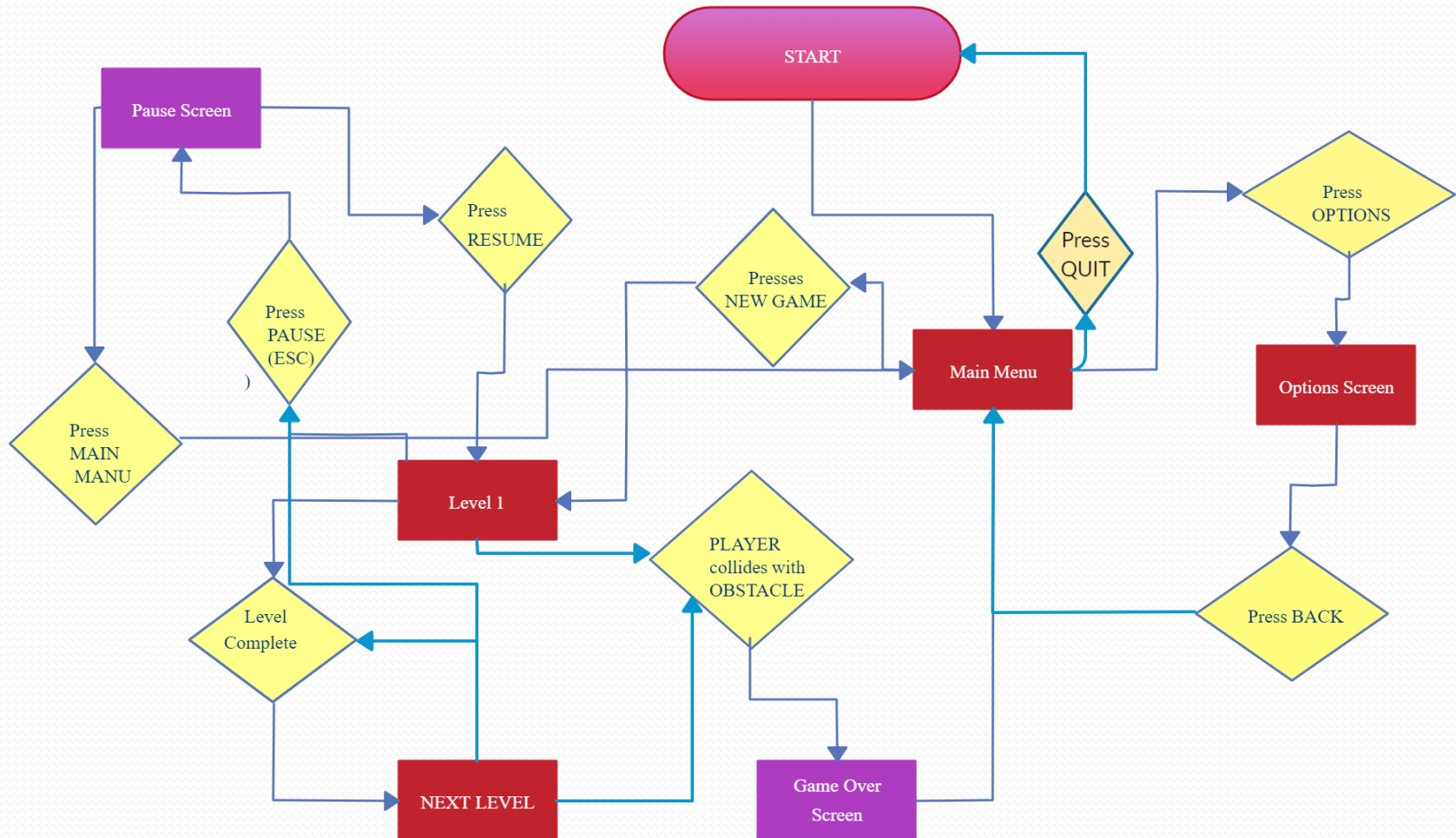




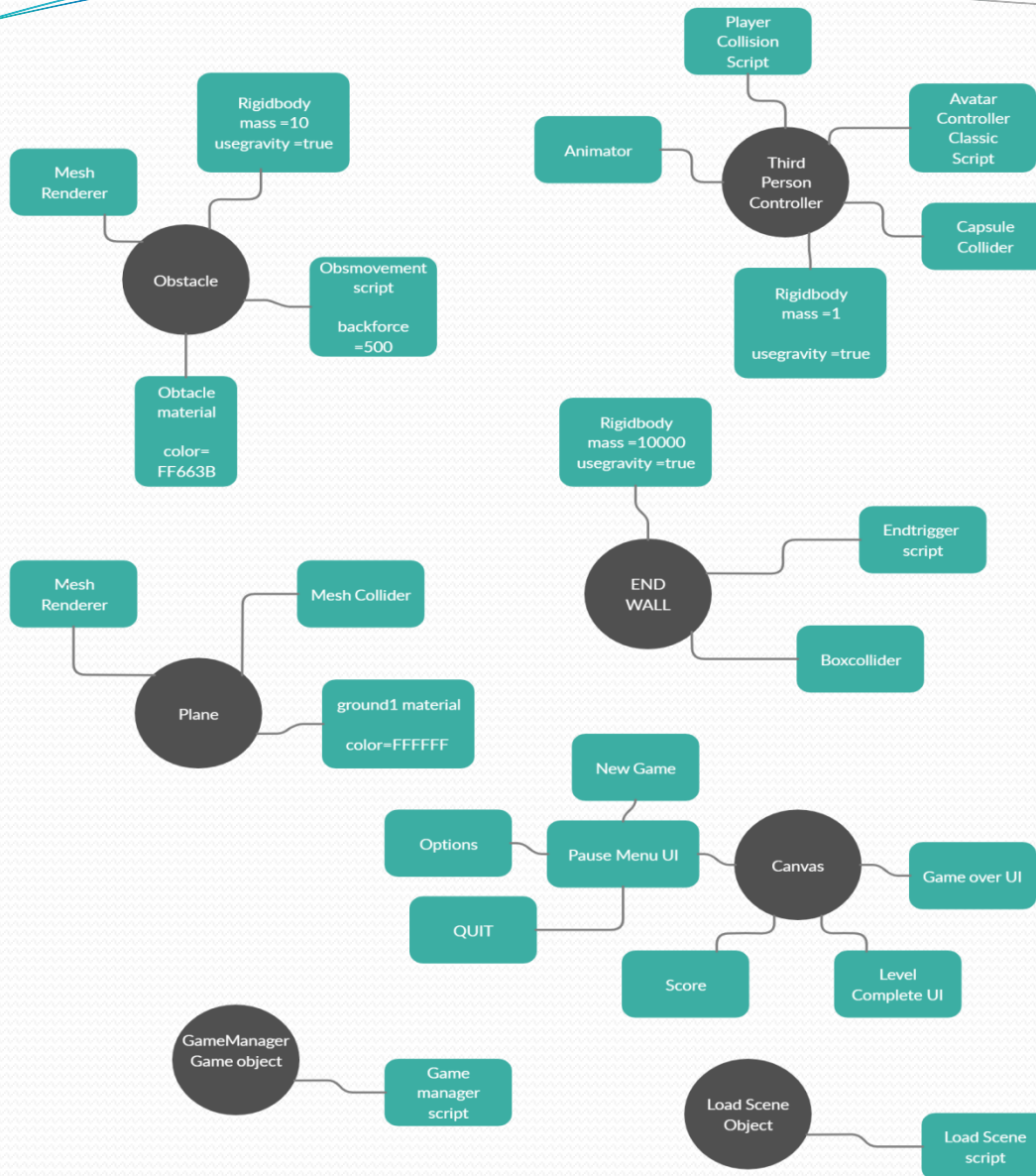
Let's Dive into the structure  
of the game!

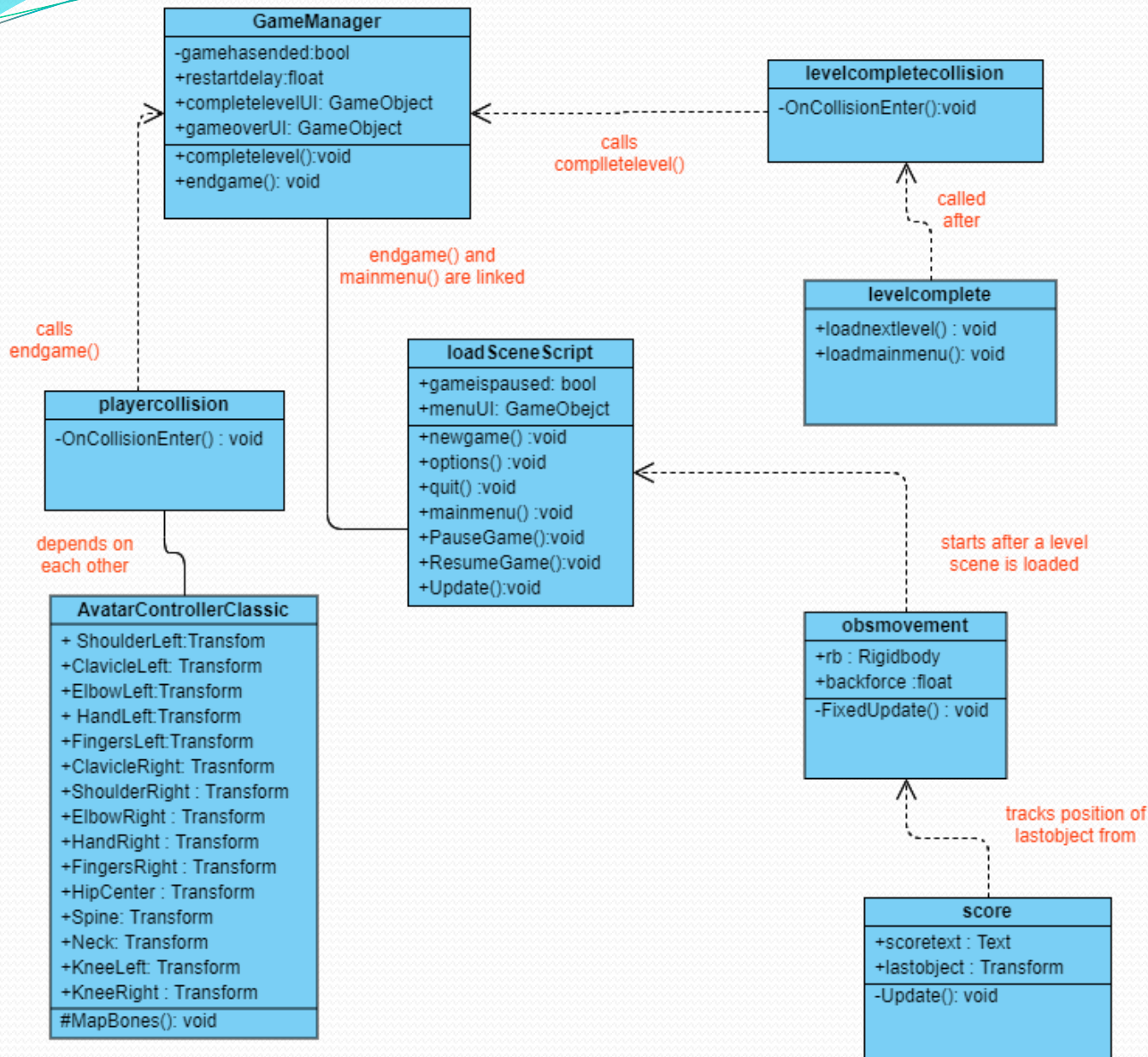


## Control Flow Diagram of the Game



# Objects and their components (in unity project)





## Class Diagram



# Conclusion

- The proposed system can run on any machine supporting Windows OS .
- The Kinect hardware is cheaper than the cost of affording a gym setup at home or having a personal physician thus making it really useful for people who can't afford any of this.
- It is really helpful for patients who are prescribed for daily exercises.
- My application is really enjoyable to use and you are free to use your tactics as well . Also my application is more comfortable to use because of lack of any compulsory gear other than your body to play!



Thank You!

