



Assignment GainPlay Studio

Hi! For this exercise you will make a Block Push game in Unity3D.

The objective of this game is to roll a ball through a vertically scrolling platform. This game should be a 3D game in perspective (as shown in the example image) using native Unity physics. The player can push **positive obstacles** of the same color as themselves around, and must avoid **hazardous obstacles**. If the player touches a hazardous obstacle, or if they are pushed over the edge of the platform, they lose the game. **Neutral obstacles** cannot be pushed by the player but can be pushed indirectly by pushing a positive obstacle into the neutral obstacle. Hazardous obstacles can be pushed the same way. **Fixed obstacles** will not be able to move directly or indirectly. The player collects points from **point pickups** that disappear when touched. The player can sometimes find a **powerup** that, when picked up, will change all obstacles currently on screen to the player's color.

Groups of obstacles are spawned randomly. The player controls the speed and direction of the ball. The player needs to reach a goal area or checkpoint before a timer runs out and picks up points along the way. The difficulty should slowly increase during the level.

Please create about 30 seconds or longer of play with some puzzles using these ingredients to show off the functionality you created.

The game must have a gamecontroller that can start, pause, or end a game. From the pause menu the player can restart the game from the start of the level. If the player goes gameover or finishes the level they need to be prompted to play again. Once the game is ended, the player dies, or the level is finished by the player, the gamecontroller must save a .json file that contains the following information:

- The name of the game
- The time played in seconds

- The timecode of when the score file was generated
- The score the player earned

```
{  
  "timePlayed": 83,  
  "timeJsonMade": 1662035655,  
  "gameName": "blocky-pushy",  
  "score": 1337  
}
```

Bonus:

If you complete the exercise early, you can implement a way to add hand crafted chunks of obstacles to the game.