

Perchang Programming Interview

Please create a demo using the Unity engine. The demo should feature a player character that moves in the x and z plane when the arrow keys are pressed and jumps when the space bar is pressed. The level will be populated with collectible objects. Collectable objects can only be collected once, and a counter displaying the number of collected objects should be updated on the screen. The placement of these collectible objects must be done programmatically, not manually within the Unity editor.

Player Movement

- The player character must move along the x and z plane in response to arrow key inputs.
- The player character must be able to jump when the space bar is pressed.

Collectible Objects

- There should be multiple collectible objects within the level.
- Collectible objects can only be collected once.
- The placement of collectible objects must be handled algorithmically via a script, not manually placed using the Unity editor.

User Interface

- A text element must be present on the screen to show the number of collected objects.
- The text element must update in real-time as objects are collected.

Level Design

- Ensure that the placement algorithm places collectibles in reachable positions within the level.

Design and organise your code as if it were going into production. Feel free to use any resources you like, including old code you have written, third party code and plugins. If you find any of the requirements to be ambiguous, please feel free to interpret them as you wish.

You are not encouraged to add additional features beyond the spec. However, the aim of this exercise is to get a sense of your coding approach - If you think that a feature outside of the spec is the best demonstration of your approach or skills then feel free to incorporate it.

Please commit your changes to the repository that has been assigned to you and email pete@perchang.com when you're done. Shown below is a screen grab of an example implementation, for your reference.

