

Team members:

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Script:

Character\_Controller\_Keyboard.cs:

- There is a function called PlayerMovement() which is called in Update().
- 2 variables horizontal and vertical are used to get Input.GetAxis("Horizontal") and Input.GetAxis("Vertical"); which are mapped to arrow keys and directional keys in joystick.
- A vector is created called direction with y-axis set to 0.
- Velocity is another vector which is direction multiplied by a float variable speed.
- We move the camera and transform direction using Camera.main.transform.TransformDirection(velocity).
- And move the controller using controller.Move(velocity \* Time.deltaTime) where controller is the CharacterController.
- In update we constantly check if Fire1 is pressed, if it is pressed the menu is displayed with reticle pointer as center.

MenuControl.cs:

- Function checkButton checks which button is being hovered on, this sets the global variable i.
- The update function checks for the global variable values and calls other functions, if :  
i=1 MoveMode()  
i=2 RotateMode()  
i=3 ColorMode()  
i=4 clearAll()  
i=5 toggles menu, sets the menu object state as false
- MoveMode() sets all components as false except the event trigger and MoveCube script
- RotateMode() sets all components as false except the event trigger and RotateCube script
- ColorMode() sets all components as false except the event trigger and ColorCube script
- clearAll() sets all components as false except the event trigger.

MoveCube.cs:

- We use a variable called isclicked which is a Boolean, it is changed if submit button is pressed and the reticle pointer is hovered on the Cube.
- We use a function called checkCube to check which cube is being pointed at by the reticle pointer. Based on this the value of global variable i is changed, if i=1 then Cube1, i=2 then Cube2, i=3 then Cube3.
- The function ishover is used to check if the reticle pointer is still on the Cube, it is used to set the Boolean variable hover, only if hover and isclicked is true will the Cube move.
- We check if submit button is being pressed and hover is true this sets isclicked to true thus allowing translation of cube.
- If the submit button is released then isclicked is set to false, stopping the movement of cube.

RotateCube.cs:

- We use a variable called isSpinning which is a Boolean, it is changed if submit button is pressed and the reticle pointer is hovered on the Cube.
- We use a function called checkCube to check which cube is being pointed at by the reticle pointer. Based on this the value of global variable i is changed, if i=1 then Cube1, i=2 then Cube2, i=3 then Cube3.
- The function hover is used to check if the reticle pointer is still on the Cube, it is used to set the Boolean variable ishover, only if ishover and isSpinning is true will the Cube rotate.

- We check if submit button is being pressed and hover is true this sets isClicked to true thus allowing rotation of cube.
- If the submit button is released then isSpinning is set to false, stopping the rotation of cube.

ColorCube.cs:

- We use a variable called clicked which is a Boolean, it is changed if submit button is clicked and the reticle pointer is hovered on the Cube.
- We use a function called checkCube to check which cube is being pointed at by the reticle pointer. Based on this the value of global variable i is changed, if i=1 then Cube1, i=2 then Cube2, i=3 then Cube3.
- This then changes the value to true in the if condition and changes the color to click color which is set in the editor as clickColor.
- Similarly, if the submit button is pressed again, ChangeColor is called changing the variable clicked to false again which allows the else condition to run and set it to the startColor or original color.