[B-1] Move a ball

Objective

Understand and effectively use Unity's 3D coordinate system by creating a simple 3D maze.

Challenge Statement

1. Scripting Movement:
    a. Edit the “Move” script to move the object using vector operations.
    b. The script should allow the object to move in different directions based on user input (e.g., arrow keys or WASD keys).
    c. Use the z-axis for forward and backward movement. Use the x-axis for side movements.

Answer key next page!

Answer Key

```
using UnityEngine;

public class ObjectMovement : MonoBehaviour
{
    public float speed = 5.0f;

    void Update()
    {
        float moveHorizontal = Input.GetAxis("Horizontal");
        float moveVertical = Input.GetAxis("Vertical");

        Vector3 movement = new Vector3(moveHorizontal, 0.0f, moveVertical);
        Vector3 newPosition = transform.position + movement * speed * Time.deltaTime;

        // Ensure the new position is within boundaries
        newPosition.x = Mathf.Clamp(newPosition.x, -10f, 10f);
        newPosition.z = Mathf.Clamp(newPosition.z, -10f, 10f);

        transform.position = newPosition;
    }
}
```

Starter Code

```
using UnityEngine;

public class ObjectMovement : MonoBehaviour
{
    public float speed; // Speed of the object

    void Update()
    {
        // Movement logic to be implemented
    }
}
```