Story Line:

Clean the City:

To keep the city clean, the player will roam around the city and collect all the garbage (milk empty boxes) which is laying on the streets.

Scenario:

Citizen (player) is on the city street and collecting litter (empty boxes). In order to win the game, the player has to collect 12 boxes within in a minute or else game will be over. On each collection, player will be awarded 10 points. Whereas, on collision with a stone 20 points would be detected. Each collision to stone will add up to player's chance to loss the game as on 7^{th} collision the game will be over.

Scripts:

Player Controller

```
using System.Collections;
using UnityEngine.UI;
using System.Collections.Generic;
using UnityEngine;
using TMPro;
using UnityEngine.SceneManagement;
public class playercontroller : MonoBehaviour {
    public float speed;
    public TextMeshProUGUI countText;
    public TextMeshProUGUI scoreText;
    public TextMeshProUGUI timeText;
     public TextMeshProUGUI obsText;
    private Rigidbody rb;
    private int count;
    private int score;
    private int obs;
    public float timeRemaining = 10;
    public bool timerIsRunning = false;


    void Start()
    {
        StartCoroutine(DelayLittle());
        rb = GetComponent<Rigidbody>();
        count = 0;
        score = 0;
```

```
        obs = 0;
        timerIsRunning = true;

        SetCountText();
        countText.text = "";
        SetScoreText();
        scoreText.text = "";
        timeText.text = "";
        SetObsText();
        obsText.text = "";
    }

    void FixedUpdate()
    {
        if (timerIsRunning)
        {
            if (timeRemaining > 0)
            {
                timeRemaining -= Time.deltaTime;
                DisplayTime(timeRemaining);
            }

        float moveHorizontal = Input.GetAxis("Horizontal");
        float moveVertical = Input.GetAxis("Vertical");
        Vector3 movemet = new Vector3(moveHorizontal, 0.0f, moveVertical);
        rb.AddForce(movemet * speed);

    }

    }

    void OnTriggerEnter(Collider other)
    {
        if (other.gameObject.CompareTag("pick up"))
        {
            other.gameObject.SetActive(false);
            count = count + 1;
            score = count * 10;
            SetCountText();
            SetScoreText();
SetObsText();
        }
        if (other.gameObject.CompareTag("obstacle"))
        {
            other.gameObject.SetActive(false);
```

```
            count = count - 2;
            obs = obs + 1;
            score = count * 10;
            SetCountText();
            SetScoreText();
             SetObsText();
        }
    }


    void SetCountText()
    {

         countText.text = "Collected:" + count.ToString();

        if (count>=12)
        {

            SceneManager.LoadScene("gameWin");
        }

        if (obs >= 7)
        {

            SceneManager.LoadScene("gameLoss");
        }
    }

    void SetScoreText()
    { scoreText.text = "Score:" + score.ToString();

    }

    void SetObsText()
    { obsText.text = "Obstacles:" + obs.ToString();

    }


IEnumerator DelayLittle()
    {
        yield return new WaitForSeconds(60); //wait 60 secconds
        if (count<12){
        SceneManager.LoadScene("timeOver");}
    }
```

```
void DisplayTime(float timeToDisplay)
    {
        timeToDisplay += 1;
        float minutes = Mathf.FloorToInt(timeToDisplay / 60);
        float seconds = Mathf.FloorToInt(timeToDisplay % 60);
        timeText.text = string.Format("{0:00}:{1:00}", minutes, seconds);
    }

}
```

Scene Management of Start Menu

```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;
using UnityEngine.SceneManagement;
public class SceneChanger: MonoBehaviour {
    public void Play() {
        SceneManager.LoadScene("game");
    }
    public void GameStart() {
        SceneManager.LoadScene("gameStart");
    }
    public void Quit() {
        SceneManager.LoadScene("gameWin");
    }
}
```

Milk Boxes Rotation

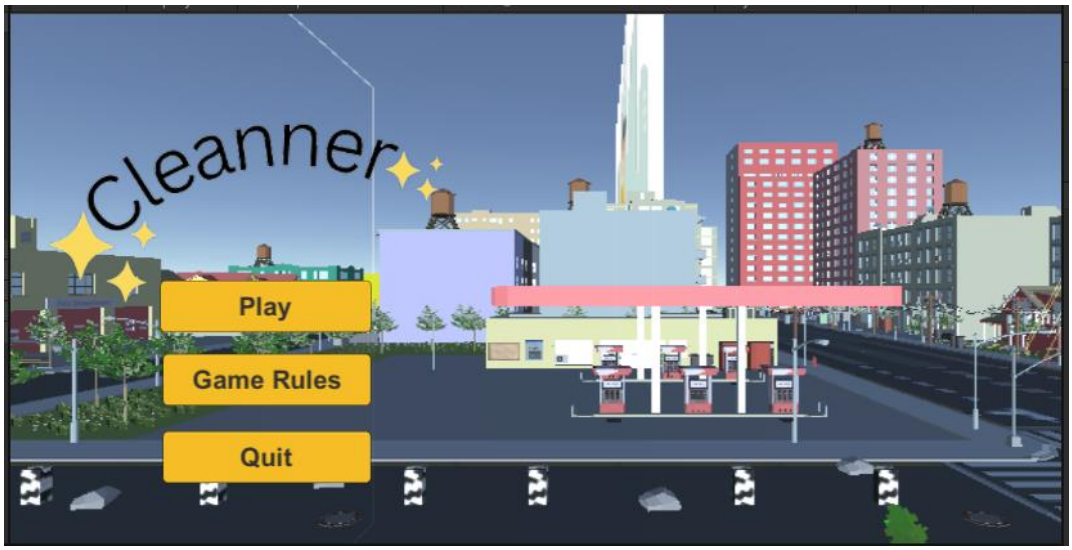
```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;
public class rotator : MonoBehaviour {
// Update is called once per frame
void Update () {
 transform.Rotate(new Vector3(0, 30, 0) * Time.deltaTime);
}
}
```

Camera Controller

```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;
public class cameracontroller : MonoBehaviour {
 public GameObject player;
  public GameObject Camera;
 private Vector3 offset;
  private Vector3 r;
   Vector3 currentEulerAngles;
    float x;
    float y;
    float z;

    const string xAxis = "Horizontal"; //Strings in direct code generate garbage,
storing and re-using them creates no garbage
    const string yAxis = "Vertical";
// Use this for initialization
void Start () {
 offset = transform.position - player.transform.position;

}
// Update is called once per frame
void LateUpdate () {
 transform.position = player.transform.position + offset;

}
}
```

Screenshots:

Main Menu



Game Rules

Game Environment

Winning Screen

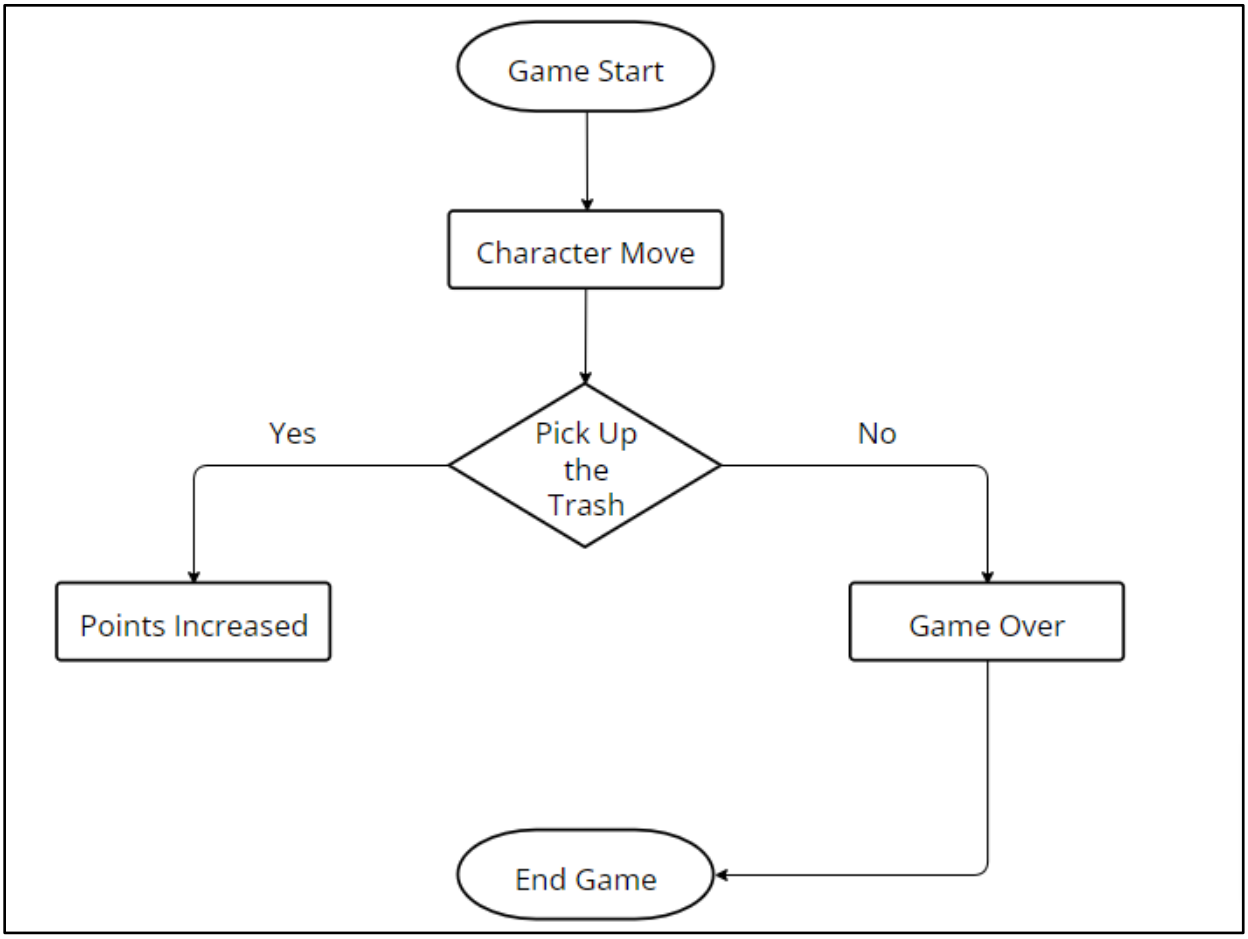
Game Loss Screen

Game Start

Game Scoring, Timing and Counting

Game Over Screen

Flow Chart:


Game Start
Character Move
Pick Up the Trash
Yes
No
Points Increased
Game Over
End Game