**Task #1 – Ball Blast**

**Game Chosen**

**FarhanShafqut\_Ball Blast**

**Reason for Choosing**

I had already made a game with similar mechanics before. Since we only had 7 hours to complete this task, I chose this game because I was confident I could finish it within the time limit.

**Hurdles Faced**

1. **Splitting Logic**
   * It was confusing how to keep splitting the ball until health reached zero.
   * I also needed to manage the health values correctly and update the ball’s size and color each time.
2. **Color and Size Change**
   * I wanted the ball’s color and scale to show the health clearly.
   * At first, it was difficult to decide how to make the color and size look smooth.
3. **Null Reference Errors**
   * While splitting, some references were missing which caused runtime errors.

**Solutions**

* I read Unity documentation and watched tutorials on specific built-in functions like Lerp, Renderer, and Color.
* To solve the splitting confusion, I standardized health as an integer and used a method where new balls always add up to the parent’s health.
* I applied Lerp for smooth color changes and used Mathf.Sqrt to scale the size naturally with health.
* To avoid null reference issues, I reassigned the ball prefab after each split.
* I also checked Stack Overflow for coding solutions.

**Unfinished Requirements (if any)**

* I only used primitive models (Sphere, Cube).
* Could not add level up bonus featue due to time limit

**Bonus / Innovation**

* I added small random impulses after splitting so the child balls move apart naturally.
* A Static script was added to centralize variables like initialBallHealth, making the game easier to balance.

**Folder Checklist**

* Inside root:
  + Assets/ → containing:

Readme/ → Word file with above details

* + - Scripts/
    - Prefabs/
    - Scenes/