8-2 Assignment

For this project, I made several key changes to the code in order to create a dynamic and interactive 2D animation. The main focus was to implement a **Brick** class that represented the walls and the center square of the animation. The bricks are categorized into two types: **reflective** and **destructible**. Reflective bricks reverse the ball's direction when it collides with them, while destructible bricks disappear after being hit, causing the ball to grow in size. This added an extra layer of interactivity to the animation, making it more engaging for the user.

I also created a **Circle** class to represent the balls in the animation. The Circle class includes logic for movement, velocity, and collision detection. The balls bounce off the walls, interact with bricks, and react to changes in direction when colliding with other objects. This behavior made the animation feel alive and realistic. To detect collisions, I used basic geometric principles to calculate the distance between the ball and a brick. If the ball collided with a brick, the appropriate action—whether it be a bounce or the destruction of the brick—was performed.

To improve my workflow, I used **VS Code** with plugins such as **IntelliSense** and debugging tools. These tools helped me spot errors quickly and manage the code more effectively. IntelliSense provided suggestions and code completion, which saved time, while debugging tools allowed me to trace the flow of the program and fix bugs that came up. This setup made coding smoother and helped me maintain a clean, efficient project.

Finally, I added an introductory message to explain the purpose of the animation. This was important because it helped users understand what they were seeing and how the animation was designed to work. The goal was to create an engaging user experience, where the purpose and interactivity of the animation were clear. Through careful planning and strategic coding, I was able to create a functional and visually dynamic animation that meets the project’s goals.

In summary, the changes I made focused on implementing the ball and brick behavior, using effective coding tools to streamline the process, and ensuring the animation was interactive and enjoyable. Each decision I made helped to enhance the complexity and interactivity of the animation, making it a more engaging and dynamic experience for the user.