

File Name: brickgameenhancement.cpp

Programmer: Unique Chambers

Date: April 8, 2024

Version: 2.0

Description: Adding a paddle and lives to a simple brick game using OpenGL and C++ programming.

Narrative:

The artifact that I chose was assignment Module 8 from CS 330 called the Brick Game. The initial code was a simple brick game lacking a paddle, lives system, and proper display. To enhance the code, I started by implementing a new class called Paddle. This class encapsulates the paddle's behavior, enabling horizontal movement and interaction with the ball. This aligns with the course outcome of designing and solving problems using algorithmic principles and computer science practices.

Next, I introduced a lives system to the game. Lives are now reduced when the ball goes below the paddle, and I implemented methods for checking collisions and resetting the ball's position. These additions demonstrate my proficiency in software engineering skills, specifically in designing and managing game elements to accomplish specific goals within a game context.

Finally, I addressed OpenGL display issues that prevented the game from rendering correctly. By debugging and ensuring proper OpenGL initialization, rendering, and window setup, I resolved the display problem. This showcases my ability to use well-founded techniques in computing practices, such as OpenGL rendering, to achieve specific software goals and deliver value through a functional and visually appealing game.

Alignment with Computer Science Program Outcomes:

- Employ strategies for building collaborative environments:

While this specific artifact focuses more on individual coding and enhancement, the skills showcased in collaboration include the ability to understand and work within an existing codebase (collaborating with past programmers) and potentially collaborating with others for testing and feedback on the game.

- Design, develop, and deliver professional-quality communications:

The narrative provided alongside the enhanced code demonstrates the ability to articulate the enhancements made to the brick game. Clear communication is vital in software development, especially when working in teams or presenting projects to stakeholders.

- Design and evaluate computing solutions:

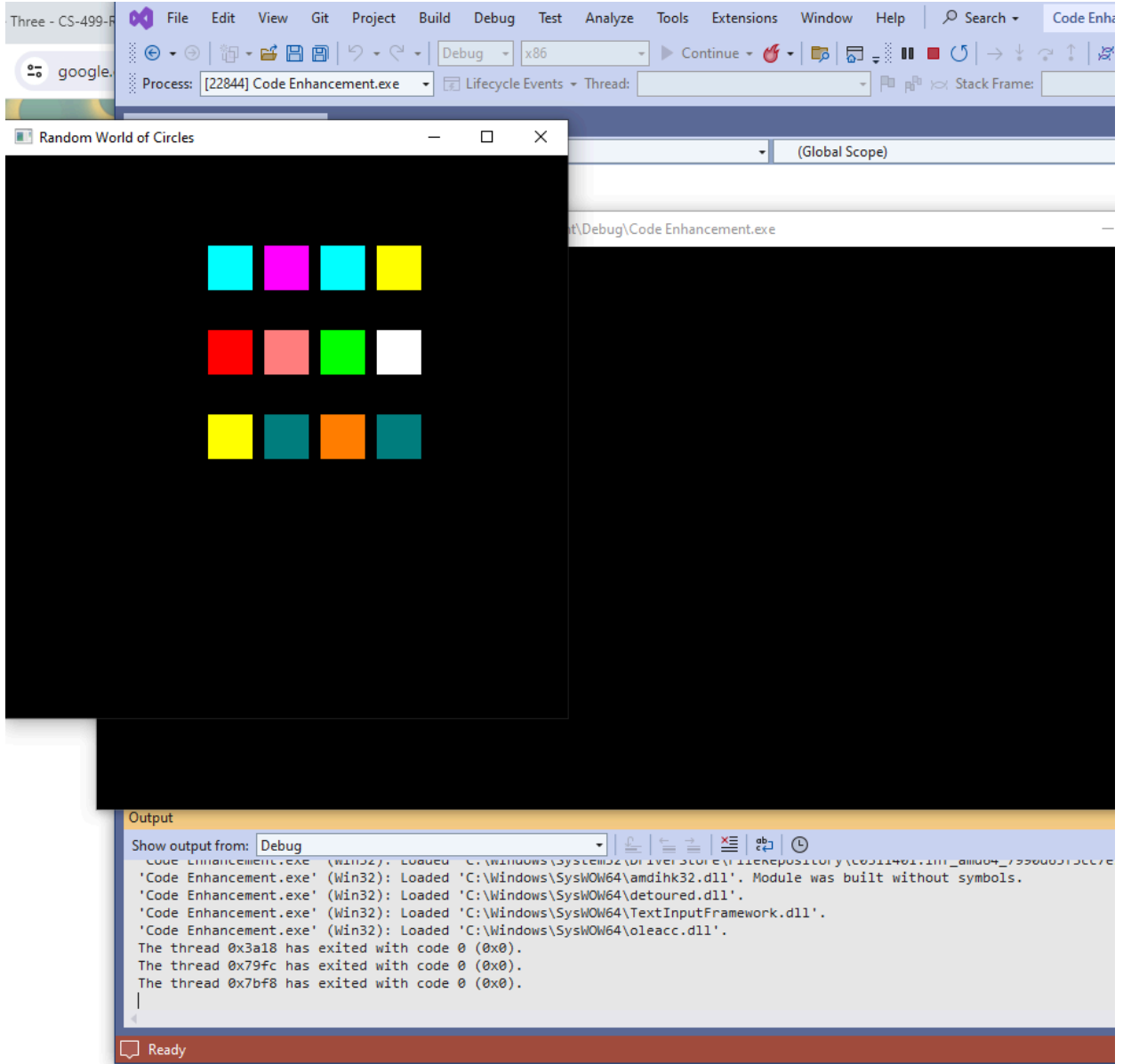
The enhancement of the brick game to include a paddle lives system, and resolving display issues aligns with this outcome. It required designing new classes (like Paddle), evaluating the impact on existing code, and managing trade-offs in design choices (such as collision detection algorithms).

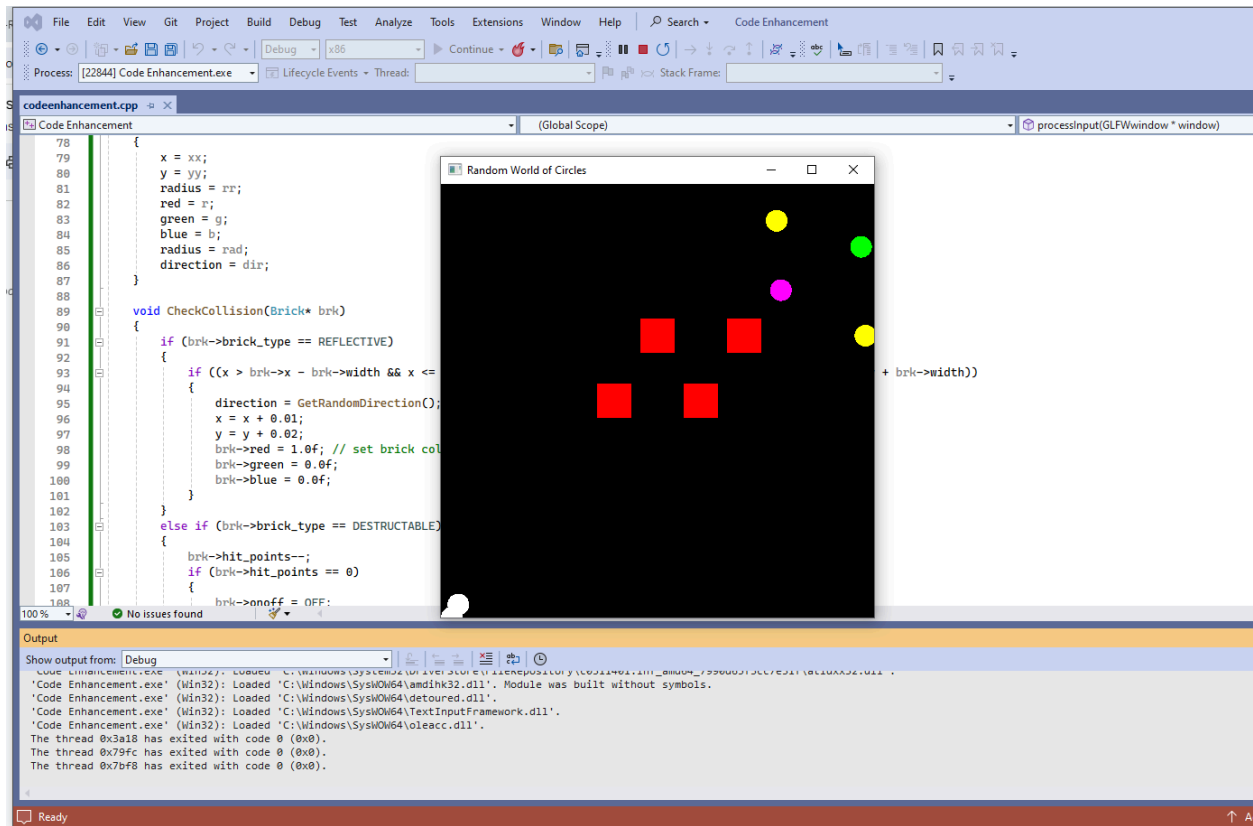
- Use techniques, skills, and tools for implementing computer solutions:

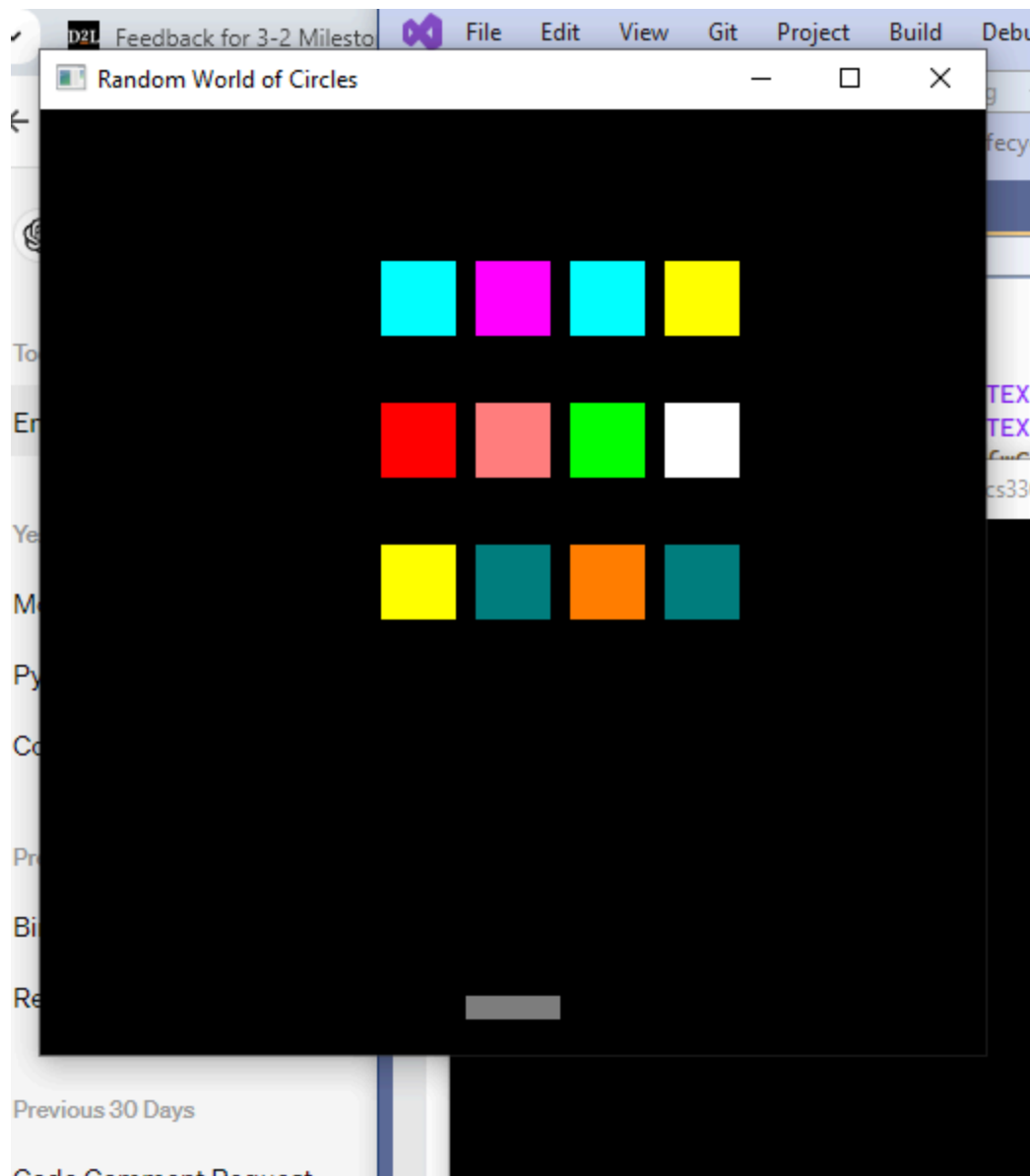
This artifact directly aligns with this outcome by demonstrating the ability to implement new features in a software project. Adding the Paddle class and lives system required using well-founded techniques in game development and managing industry-specific goals of creating an engaging game.

I demonstrated problem-solving, programming, and software engineering skills throughout this process. These enhancements align with the course outcomes of using algorithmic principles, implementing computer solutions, and employing industry-specific techniques to achieve software goals.

The enhanced brick game artifact effectively aligns with the Computer Science program outcomes by demonstrating skills in designing, implementing, and improving software solutions. While the current iteration focuses on game mechanics and rendering, future iterations could integrate security measures to further align with program outcomes. Overall, enhancing this artifact has provided valuable learning experiences and a showcase of skills relevant to the field of computer science.







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rawBrick():
Microsoft Visual Studio Debug Console
Game Over!
C:\Unique Chambers\Code Enhancement\Debug\Code Enhancement.exe (process 27888) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .
```