# Report for game: Helicopter

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During the development process of a game using SFML in Visual Studio, I encountered various challenges, learned new concepts, and discovered exciting features.

One of the key lessons I learned during this project was the importance of planning and organization in game development. Before writing a single line of code, I spent time designing the game mechanics, creating a storyboard, and outlining the game flow. This initial planning phase greatly facilitated the development process and helped in maintaining a clear direction throughout the project.

Additionally, I gained a deeper understanding of object-oriented programming principles while implementing various game components such as player characters, enemies, and game levels. Utilizing classes and inheritance allowed for modular and reusable code, enhancing the overall structure and maintainability of the project.

I discovered the power of Visual Studio's debugging tools in identifying and resolving issues efficiently. Leveraging breakpoints, watch windows, and the call stack helped in pinpointing bugs and understanding program flow, leading to faster debugging cycles and smoother development iterations.

Optimizing game performance was a significant problem I encountered throughout production, especially about resource management and rendering efficiency. I used Visual Studio's performance tools to profile and analyse the code to find bottlenecks. I then applied improvements like batch rendering and texture atlases to increase frame rates and lower memory overhead.

Additionally, I encountered compatibility issues when deploying the game on different platforms. By carefully configuring project settings and ensuring consistent dependencies across environments, I was able to successfully deploy the game on various platforms, including Windows, macOS, and Linux.

In conclusion, developing a game using SFML in Visual Studio was a rewarding learning experience. Through careful planning, experimentation, and problem-solving, I was able to create a polished and enjoyable gaming experience while expanding my skills as a game developer. Moving forward, I look forward to applying the knowledge and techniques gained from this project to future game development endeavours.