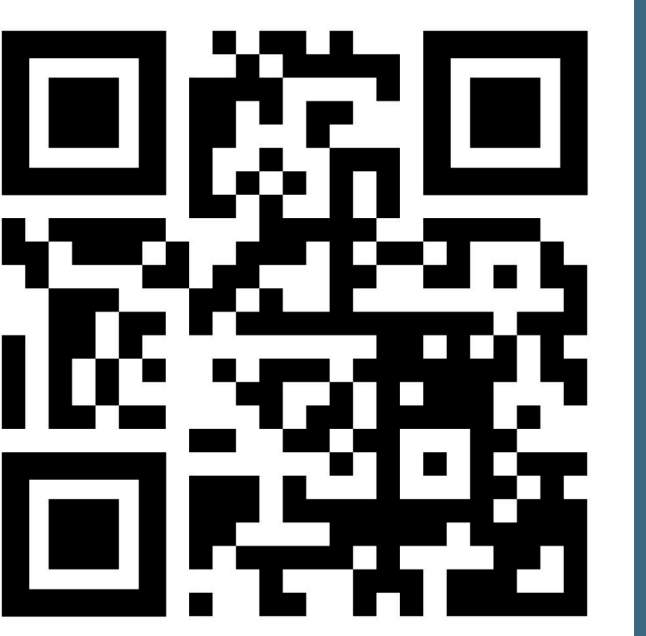




VIDEO GAMES IN EDUCATION

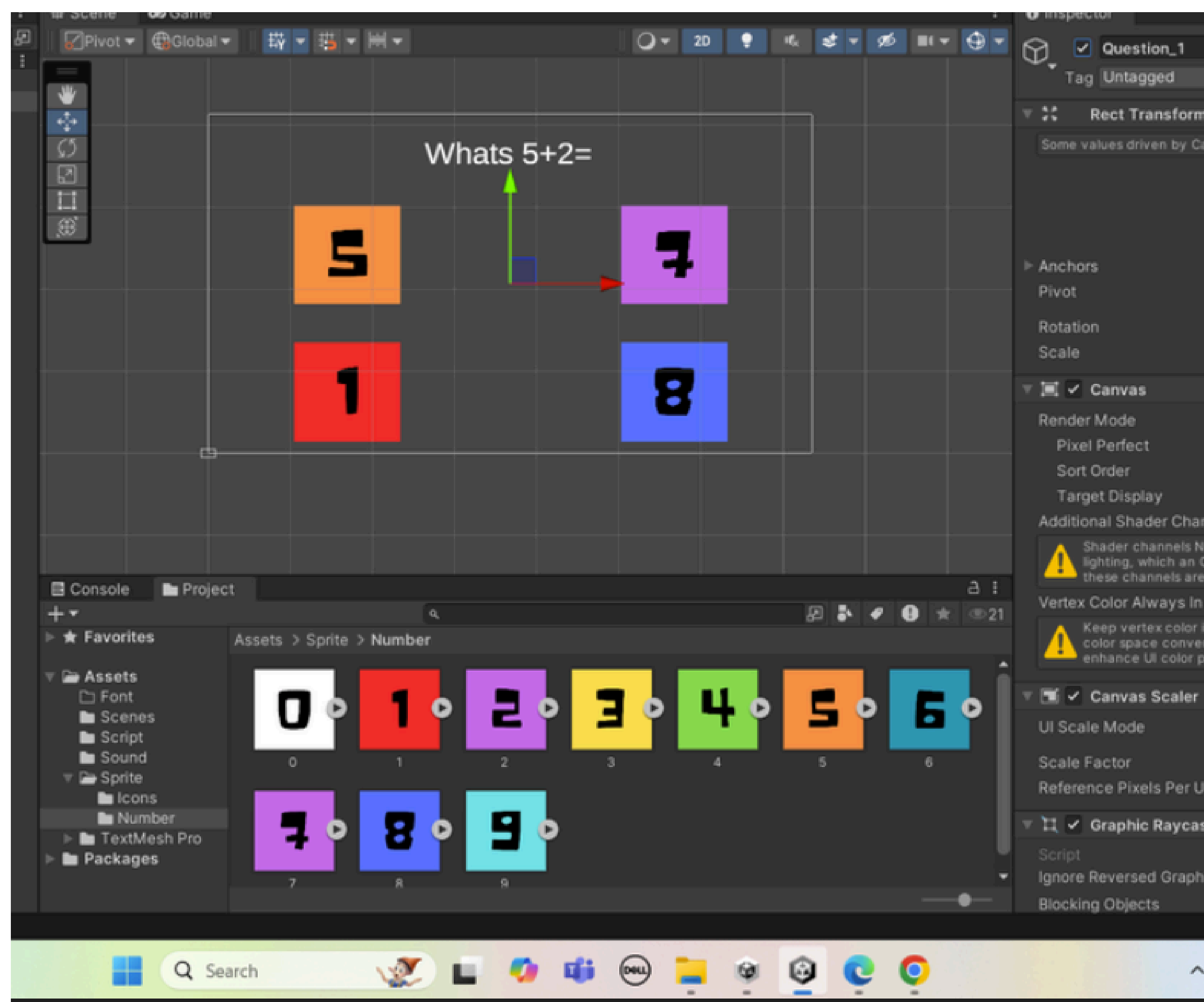
Ethan Tran



Research Question: How can the academic engagement of elementary school students increase by using video games?

HYPOTHESIS:

If the educational game is visually appealing, engaging, and fun to interact with, students will participate more than they would in a typical lecture.



METHOD:

For this research project, I utilized the design thinking method to develop my educational game. The Unity Engine was instrumental in designing and structuring the game. Initially, I researched the type of game I wanted to create. Next, I investigated the subjects that elementary-aged students struggle with the most, as they are my target audience. Throughout the design thinking process, I continuously reevaluated and restructured my game to ensure the final product is user-friendly, easy to understand, and enjoyable for young students.

RESULTS:

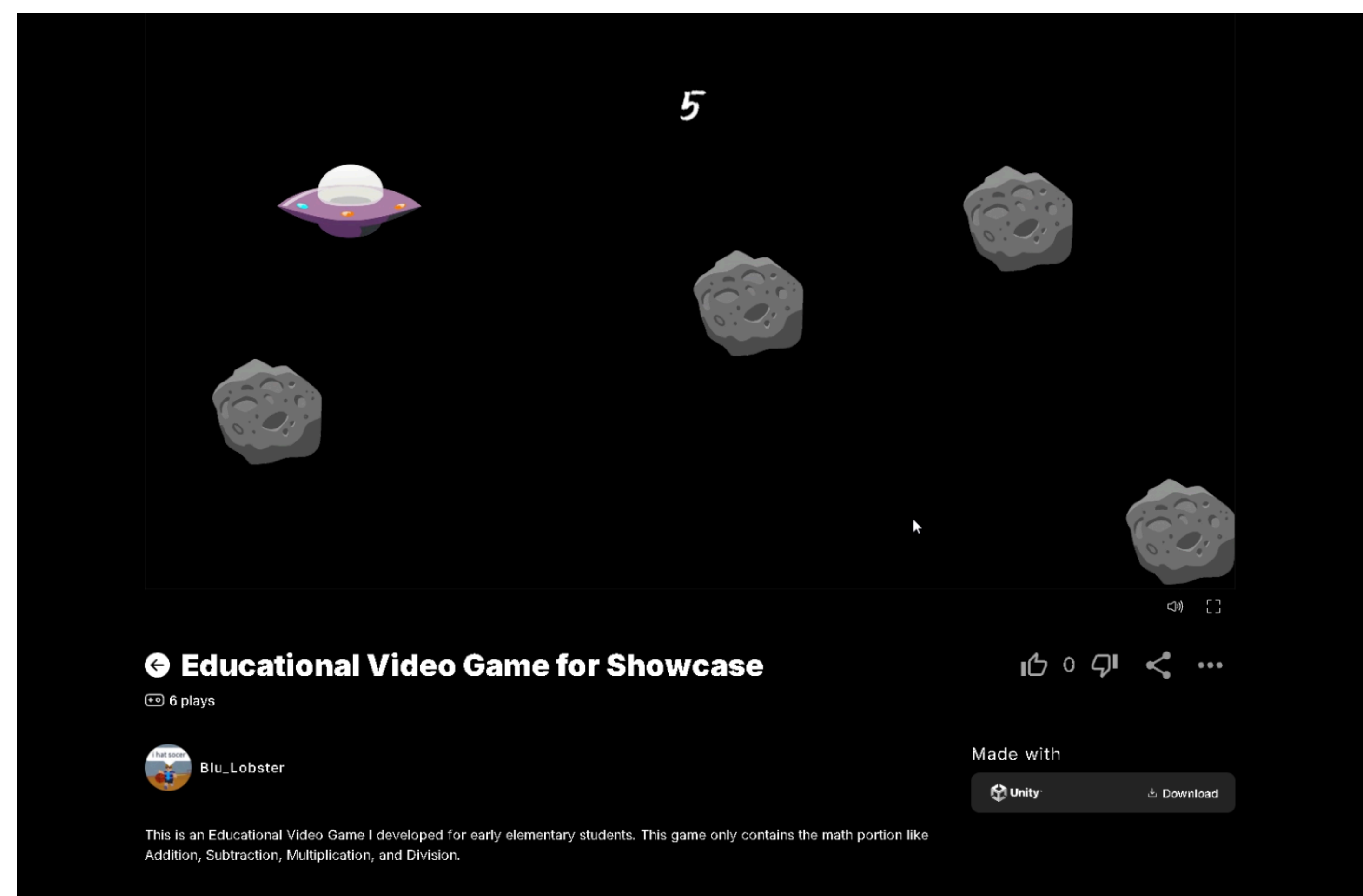
The final product of the game includes quizzes on addition, subtraction, multiplication, and division, each with ten questions. Each quiz features a unique color scheme and background music. The quizzes have colorful multiple-choice options and amusing screens for correct, incorrect, and completion responses. They also include sound effects for correct and incorrect answers. After completing a quiz, players are rewarded with a game to play.

CONCLUSION:

Overall, my research found that making education colorful, fun, and easy increases participation and engagement among younger students. I discovered methods for creating effective educational games and identified their pros and cons. The pros of educational video games include improving younger students' academic skills by making learning more enjoyable. However, the cons are that these games can be very addictive if children play them for too long, just like any other game. My research also showed that gamifying academics can increase student participation more than typical lectures. This project not only taught me how to create an educational video game but also helped me practice and improve my game design skills.

INTRODUCTION:

Educational video games help players learn and develop their academic skills. The current school system has a problem: teachers often give boring lectures, especially to younger students. This makes students unengaged and uninterested in learning, which can lead to poor performance and negative outcomes. My solution is to create an educational quiz game using the Unity engine. By gamifying academics, student participation will increase, and most importantly, their academic performance will improve.



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