London Bridge

Submitted in partial fulfillment of the requirements

of the Mini-Project 1 for Second Year of

Bachelors of Engineering

by

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**CERTIFICATE**

This is to certify that the mini-project entitled **“London Bridge”** is a bonafide work of “Katheem Kizhar Ahmed, Shaikh Mohd Shoeb, Chaitanya Parab,

Amman Akhtar**” (Roll No.:** 11,45,28,35**)** submitted to the University of Mumbai in partial fulfillment of the requirement for the Mini-Project 1 for Second Year of the Bachelor of Engineeringin **“Computer Engineering”**.

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Declaration

I declare that this written submission represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

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**ABSTRACT**

Keywords : Unity Game Engine

This project is a horror game that is to be played on Windows, Linux, macOS. The project primarily involves unity game engine with c# language and various different software. Horror games already haves a huge gaming community. Hence, this project aims to create a survival horror game for entertainment purposes. Users will be able to move and will go through a bridge to experience a horror adventure

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**Chapter 1**

**Introduction**

*Game development has always been a controversial academic topic. The computer gaming industry has grown by leaps and bounds, becoming a mainstream software development sector, and earning billions of dollars in revenue each year. The gaming industry has also been one of the main driving forces behind the development of advanced modern hardware such as multi-core, hyperthreaded processors, high-performance graphics processing units (GPUs), advanced sound processing devices, and extraordinary human-computer interface devices such as virtual reality helmets and brain sensor caps. Computer games are like a book, a movie, or a museum. In this paper we present our experience in creating a game based on the Unity game engine and promoting education via innovation. We want to use this more visual, more easily accepted medium to depict the world through which we can educate the people.*

*Unity3D Game Engine is an integrated development tool used to develop interactive contents like video games, architectural visualization and real-time 3D animations. Its editor runs on Windows and Mac OS X platforms. though it runs on only two platforms, it has the ability of developing applications for multiple platforms which are mentioned as follows – Windows, Windows Phone, Mac OS X, iOS, Linux, Android, Web Player, etc. All we need for it to develop the application on respective platforms is the software development kit (SDK) for it.*

**Chapter 2**

**Review of Literature**

**Paper 1**

**3D Game Development Using Unity Game Engine**

*The objective of the game is to promote education via innovation. They want to use this more visual, more easily accepted medium to depict the world through which they can educate the people. Their game is not just entertainment, it’s a channel that is responsible for promoting education. It gives the feel of intangible treasure through the environment provided. It seems they found that there is a need of a medium that will provide education through entertainment. And this may be a solution for lack of interest as well as getting bored in learning.*

**Paper 2**

**3D Game Development with Unity: A First-Person Shooter (FPS) Game**

The aim of this game was to create a 3D game which was the First-Person Shooter game with the Unity game engine. This required having a fundamental knowledge about the Unity game engine and programming. A game engine is the core of creating a game. The integration of model design, level design and script design is the game engine, which is complex and powerful. The Unity game engine supports visualized design, thus it is a strong game engine which is suitable for a beginner. However, it is not very easy to learn the Unity game engine well. There are various functions to be realized. In order to make the game to be an integrated game, two scenes were designed. One was the game start scene and the other one was the game scene. As a result, the game start scene was achieved with 15 textures and pictures. Although just a few textures were used for the game scene, three scripts were created for it. The number of codes outnumbered 550 lines. All of the game features were achieved as the First-Person Shooter game. More game features were looking forward to the future.

**Chapter 3**

**Report on the Present Investigation**

1. ***Market value*** *;- Horror games are consistently one of the most popular subgenres in gaming, be it this year's Resident Evil, the ever-so-popular Five Nights At Freddie's, or the soon-to-be lost to time PT. Horror games not only sell well, but are always part of the overall conversation.*
2. *As it turns out, horror has actually been a major part of the gaming market as well as dominating. Let's Plays and the collective heart attacks of the gaming populace. Make no mistake - horror gaming is pretty popular in this day and age but it actually rose to prominence much earlier*

* *Types of Horror Games –*
* *1.1 Survival horror.*
* *1.2 Action horror.*
* *1.3 Psychological horror.*
* *1.4 Jump scare horror.*
* *1.5 Reverse horror.*

*We had Made a Survival Type Horror Game*

**Chapter 4**

**Results and Discussions**

*We found some findings on evaluation of Unity3D game engine as a tool for*

*design study by examining the aspects of visualization and interaction. By*

*considering these two factors, we emphasize on the data compatibility between*

*Unity3D game engine and CAD/GIS software (Blender, AutoCAD, ArcGIS).*

*This compatibility and interoperability of game engine has significant factor for*

*the integration of digital design tools.*

*For the interaction mechanism we created scripts and develop basic interaction*

*system that engages users within this virtual environment. From one side of*

*view, Unity3D C# language gives freedom to create interaction*

*system based on our own preference and ideas.*

*Object oriented programming language also gives an advantage in the way that*

*any interaction method came from game object behavior and it responds to user*

*interaction. The script-based interactions also open possibility to create an*

*interaction system that bounds external data into game object. For example, we*

*bound external data of text, image, and video into game interaction.*

*Although Unity3D has the potential to facilitate the development of an*

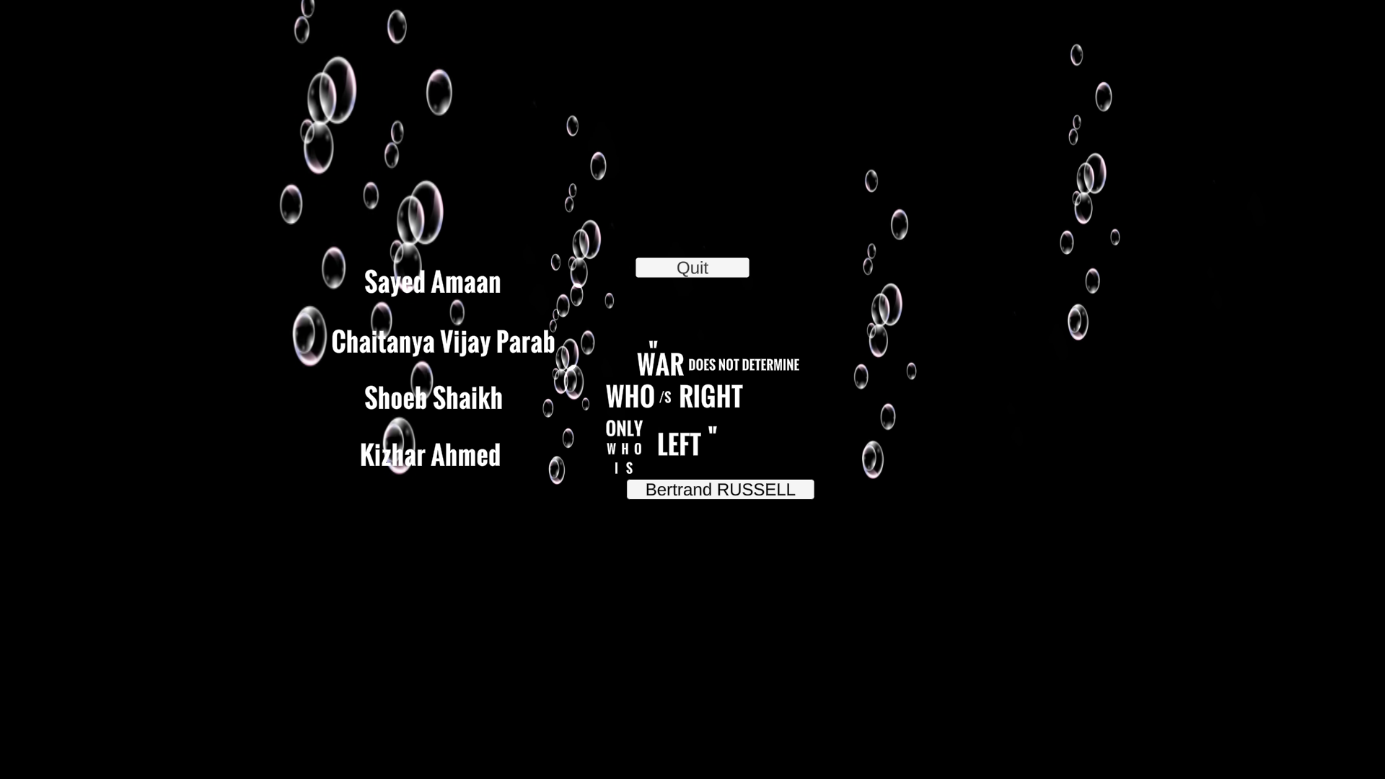
*application that can be a 3D viewer and 3D simulation with interaction features*

*at the same time, it has some limitations regarding to its function as a general*

*purpose game engine application, which leads to some restraint conditions*

*particularly in non-computer science fields.*





Future Scope :

*We have created a simple game, which can be created in detail in future. We don’t possess enough time, so in our free time we will keep on working on it.We expect that this game can be more innovative as while creating game ,we had many ideas which we were unable to do due to our insufficient experience in game making.*

**Chapter 5**

**Conclusions**

Conclusions derived from the logical analysis presented in the Results and Discussions Chapter shall be presented and clearly enumerated, each point stated separately.

*This study aims to design and develop a gaming application using Unity Game Engine. Through this cornerstone for a new concentration on Game Development, we have conveyed our views and ideas on promoting education via innovation. The functions that Unity3D supports autonomously are very abundant. All game developments are possible such as shader, physics engine, network, terrain manipulation, audio, video, and animation, and it is enabled so that it is possible to revise, meeting demand of user according to the need.*

**Appendix**

1. *To develop this game we used unity technology. In unity, we used C# as our core programing language.*
2. *We also used Unity in belt feature Unity Collab.*
3. *We created our 3D Models using Blender*
4. *We used KineMaster for video editing for our trailer.*
5. *For Editing and Designing Game Audio we used Audacity.*
6. *We made a horror game keeping in mind that the horror genre is quite famous amongst the young generation and gaming community.*
7. *It has a high market value.*
8. *We face a lot of difficulty which we overcome by helping each other and with our supervisor’s guidance.*

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**Paper 2:** 3D Game Development with Unity: A First-Person Shooter (FPS) Game

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*PENG XIA*

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