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## RANKERS ARENA: A Game developed using UNITY GAME ENGINE

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### ABSTRACT:

The main goal of this claim is "Reducing the stress of students and enhancing critical thinking abilities with the support of a multi-player Virtual Game Environment". Modern-day students have many other things to do, such as studying in college lectures, taking part in extra-curricular activities, going for coaching classes and so on. All these add up to the stress that student faces. As it has already been mentioned that, "Humans are Social Animals", hence it is very important for people to interact with one another. Multi-player games can enhance leadership abilities, team working abilities and even enhance logical thinking among the students while simultaneously they release some repressed stress within a shorter duration of time. The last two years because of the recent pandemic many students have struggled to socialize and communicate with their friends and even family members. Thus, with the assistance of a simple to play multi-player game the end user of any age group can easily become friends on-line while playing the game.

**Keywords:** Stress, virtual environment, socialization, critical thinking, logical thinking.

### INTRODUCTION

As per a series of studies that have been conducted over the last few years, stress among university students has risen by an enormous percentage. The studies also indicated a series of people who had been affected by the recent pandemic and how those people also gained a lot of stress and depression. Many people were quarantined and this also impacted the mental state of many people.

Most people use games as a medium to drain the pent-up tensions within them and even to become contented.

Games are also responsible for addiction because of something called "progression systems". This gives the end users numerous objectives which they need to accomplish to move forward in the game.

As before said most individuals have played computer games and therefore those we design do possess the potential of affecting how you feel. We have such a variety of other types of games that have been made to allow one to engage in the process. Some games take long periods of time to finish playing (or games with no restriction on how much time is played, where the users themselves decide how much time they wish to play) or some games such as puzzles that can take lesser time to solve.

Many people have not enough time to unwind because of their busy schedules and might have to dispel the tension in a shorter period of time.

### LITERATURE SURVEY

A multi-player game can also possess some typical challenges such as a delay in communication, network-related problems and even sometimes some servers were slower than the rest. Unity makes the programmers capable of writing scripts in C#, JavaScript (It is also referred to as UnityScript) and a variety of other languages. Unity is highly popular nowadays because of its capacity to deploy on various platforms employing the same code. Unity employs Mono as its runtime environment and it is cross platform supported. MonoDevelop is an open-source Mac OS X, Windows Operating System, Android Operating System and Linux Integrated Development Environment.

Unity Cloud is a forthcoming piece of software that will enable cross-platform advertising and title promotion, and the developers can even earn some of the revenue that will minimize the use of third-party software to do the same. The only disadvantage of the legacy version of Mono is that the developer will need to continue developing on Garbage Collection once the application has reached some size.

All kinds of game development can be done with Unity as it supports all kinds of different functions such as shaders, physics engine, audio and video animation etc. Unity has received a number of various awards such as Gamasutra Top 5 Game Companies in 2009(1). Unity editor contains numerous sub-windows. The most frequently used Unity sub-windows are the Inspector, Project Browser, Game View and Scene View. The window where the

developer updates values to make the game run properly is the Inspector window. The Game View is where the preview (how the game will look at the end) is added. And in Scene View, the developer can insert different objects of the Project View by dragging and dropping them at their best places.

Photon Unity Networking or PUN, is utilized to provide multiplayer support for games using different networking methods. The plugin consists of several different classes and functions, but there is only one main class called "PhotonNetwork". This course covers all of the various methods and data variables that you will need in order to have multiplayer capability for your game. Photon Cloud products are client-server architecture, and thus multiple clients can connect to one server at a time. This can happen from many various locations.

The reason why one plays games is because "it is fun", "it makes them happy", but what element of these games makes people happy? It's extremely simple, they feel like they're doing something by overcoming a number of various hurdles that are placed within games to provide them with fun, such as "can you do 'x' action, 'y' amount of times in a day?" or "there are a thousand or so individuals playing this game, can you beat all of them?".

In this essay, there will be described many different ways in which the players will be able to talk with other players who are in the same room or even across the world and create strategic moves to beat each other at a simple multiplayer game. In our game, we shall incorporate a set of different attributes from a set of already existing games, in order for us to understand exactly what makes one satisfied and reproduced to enable the users to relax.

## OBJECTIVES

- Improvement of cognitive and co-operative skills using a virtual game platform.
- Encouraging socialization.
- Designing a simple-to-play game with no mechanism of progress to entice individuals of all ages.
- Conducting testing on each individual module and showing the system (game) as per specifications and test its performance.

## PROBLEM STATEMENT

Improvement of critical thinking and cognitive skills through interactive online participation in a virtual game environment.

### A. Existing System

The current system possesses some of the generic features, some characters and progression systems that can be utilized to motivate users to play the games on a regular basis.

### B. Proposed System

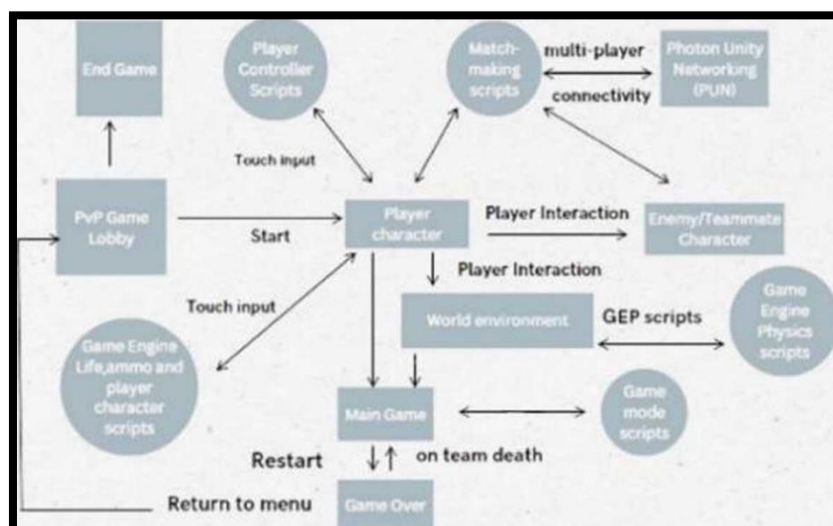
This game system has been developed to place the users in euphoria and lessen their anxiety in a few minutes. The game also has an easy user interface through which anyone of any age group can easily browse in the game. The new system will enable users to interact with users anywhere and eliminate anxiety. The new multiplayer game does not have a violent environment.

This suggested system is less prone to issues such as addiction and excessive screen time.

### C. Suggested Detailed Methodology

The method is used to make a setting for users to release steam with an exciting online experience through the intervention of a virtual gaming world.

Multiplayer games need a lot of strategic thinking and logic to accomplish some things and solve some puzzles in the game. These games increase response time, creativity, concentration and also enhance team working skills in the players. It is only natural that individuals who play multiplayer games will develop improved skills in problem-solving.



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## Future Scope

We anticipate developing more characters in the game.

We can also integrate a voice chat in the future.

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## CONCLUSION

Finally, all we can do is hope this project will come in handy for all the people worldwide who feel stressed. We are quite positive that our ordinary game will compel users to be social more often and form cognitive skills on a grand scale. We will certainly see more people using simple multi-player games in an effort to connect with other people throughout the world. There is no way that our game could be anything less than superior to all the games that already exist.

Without any progression system, our game certainly surpasses all the other addictive games that currently exist.

And since the social cause is behind our game, it is the only system that people of all age groups need.

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## REFERENCES

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