

# VR Tag

## Introduction

The VR Tag Game project introduces an innovative virtual reality application that revitalizes the traditional game of tag within a digitally constructed, spherical world. It will have one chaser and multiple runners, and the chaser has to catch the runners to win the game. We used the **Oculus Integration Toolkit** for the VR experience and **Photon Pun** for multiplayer functionality.

## Game Design and Features:

**Spherical world:** A custom-made spherical world is used so the world doesn't end. Here, we tried to keep a cartoonish and medieval world. The default gravity is disabled, and a custom gravity that points towards the planet's center is attached.

**Navigation:** The player navigation can be done by using the joysticks of the controller with the left hand for movement and the right hand for rotation. This is the popular navigation technique used in most of the VR games.

**Multiplayer Functionality:** Players can create or join rooms through an intuitive user interface, enabling them to play with friends or connect with others in the virtual space. So, they can either create a room or select any of the existing rooms of their choice to start the game.

**Character Identification:** To enhance player interaction and recognition, each network character displays a username. This feature allows players to easily identify and interact with one another within the game world.

**Auditory Feedback Mechanism:** The application utilizes sound effectively to convey game events, such as the moment a chaser tags a runner. When this happens, a notification-like sound is played to notify them.

**Interactive Power-Ups:** Players can collect three types of power-ups, turbo speed, teleportation, and attractor/repulsive force, each providing a strategic advantage within the game. A unique custom-made model is used to distinguish the powerups from each other. Around 10 powerups from each kind will be floating on the planet at different locations. The acquisition of a power-up destroys the power-up, accompanied by a unique sound effect, serving both as an auditory indicator of the power-up's activation and as an enhancement to the game's immersive experience.