.

Multiplayer First Person Shooter Game

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Abstract

A game is organised form of play, usually undertaken for enthralling and sometimes used as a form of remuneration. Games also are inexpensive method to improvise artful qualities and intellectual proficiencies such as focus, concentration and judgemental qualities including strategy, planning and logics.Jonas Heide Smith [1] explained in his paper that researchers from fields as assorted as comparative literature, graphic design, computer science, film studies and theatre studies have backed to the indulgent phenomenon of computer games. This paper consists of a research on Multiple Player First person shooter Unity game engine for Android phones. Characteristics of this game are the unique gameplay empowered by unique gameplay characteristics and blended together by distinct traits of every character. Development of this project has been undertaken for educational as well as an aim to introduce randomness in a gameplay with usually balances the differences between an amateur and connoisseur. In general, one player has the authority to host using a mobile wireless Intranet (Hotspot) while several other players (12 MAX) can join for supremacy.

Keywords: Multiplayer, FPS, WiFi, Unity

1. INTRODUCTION

Globalization and cut-throat competition has made world abysmal and stressful where people usually compromise enjoyment and abstinence from leisure activities.

Games usually provide these people fun without conceding their comfort zone. Games were in extant since 470 BC such as Senet and Mancala. This paper focuses on fps which consists of 5 characters with distinct traits blended for unique gameplay to create humor and fun.

Game commences when a user (Host) creates an intranet using mobile Hotspot or Google-play technology for both online and offline in which other players use to connect as multiplayers. Players can select a character of their own preference for first time while after death character is assigned randomly to every user. Players fight for supremacy.

There are many factors which influence the player performance. The traits are cardinal for performance of each user where character is balanced with respect to agility, damage abilities and armor.

Game is hardware independent and runs on software (Android) while movement and functional, operational parameters are developed with importance.

2. LITERATURE SURVEY

Games form an integral part of human culture ancient or modern humans had affinity towards it. Today games incorporate a total huge chunk of humanities, rest assured a billion dollar computer gaming industry. Jonas Heide Smith's survey confirms Computer games, especially adventure games, fascinated the attention of literary intellectuals quite timely .Although obvious attempts are made to tell stories in a new medium.

In an industry as mammoth as this, survey isn't a walk in a park, though the column discusses the following papers and concepts as published and launched previously.

Team Fortress 2:- Team Fortress 2 is a team-predicated first-person shooter multiplayer video game developed and published by Valve Corporation. It is the sequel to the 1996 mod Team Fortress for Quake and its 1999 remake. It was relinquished as a component of the video game compilation The Orange Box on October 10, 2007. In Team Fortress 2, players join one of two teams comprising nine character classes, battling in a variety of game modes including capture the flag and king of the hill. The development is led by John Cook and Robin Ambulator, engenderers of the pristine Team Fortress. Promulgated in 1998, the game once had more authentic, militaristic visuals and gameplay, but this transmuted over the protracted nine-year development.

In capture the flag maps, the objective for both teams is to obtain a briefcase of astuteness from the enemy team's base and return it to their own base while averting the opposing team from doing equipollent. The player carrying the perspicacity can be killed to drop the briefcase, or the player can disposing drop it; in either case this commences a two-minute timer. If the perspicacity is not accumulated by another player on the opposing team afore that timer expires, it is returned to its home base. A team can only score by distributing the enemy's perspicacity to their base. A match lasts until one team scores a set number of points or time runs out.

Team Fortress 2 is played competitively mostly in one of three game modes: Highlander (one of each class, 9 players per team), 6v6 (2 Scouts, 2 Soldiers, 1 Demoman, and 1 Medic with other classes utilized in certain

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situations), or 4v4 (1 Scout, 1 Soldier, 1 Demoman, and 1 Medic, with other classes used often). While formalized competitive gameplay is very different from mundane Team Fortress 2, it offers an environment with a much higher caliber of teamwork than in public servers (additionally kenned as "pubs"). Most teams utilize a voice chat to communicate, and utilize an amalgamation of strategy, communication, and aiming faculty to acquire victory against other teams. Community-run competitive leagues withal incline to feature an item ban list, as well as the abstraction of randomized critical hits, in order to expedite gameplay and to abstract unbalanced or game-breaking elements from matches.[4] Many competitive leagues withal award in-game medals and player accolades, which are submitted via the Steam Workshop and approved by Valve.

Counter Strike:- Counter-Strike (officially abbreviated as CS) is a series of multiplayer first-person shooter video games, in which teams of terrorists and contravene-terrorists battle to, respectively, perpetrate an act of terror (bombing, hostage-taking) and avert it (bomb defuse, hostage rescue). The series commenced on Windows in 1999 with the first version of Counter-Strike. It was initially relinquished as a modification for Half-Life and designed by Minh "Gooseman" Le and Jess "Cliffe" Cliffe, afore the rights to the game's astute property were acquired by Valve Corporation, the developers of Half-Life.

Map to be developed has been inherited from this game. The positioning of game objects such as crates, planks play a massive role in order to provide cover to players. Placement of genesis points and respawning points for health, ammo are referred from Counter Strike.

Mini-Militia:- Doodle Army 2: Mini Militia is a 2D shooter game released for iOS and Android devices. Doodle Army 2: Mini Militia has three game modes: training mode, survival mode, and multiplayer.

Training mode is a rudimentary tutorial that sanctions the player to learn the basic controls

In survival mode, the player must forfend themselves against weaponized robots with the avail of a CPU player. Sundry weapons can be obtained from eradicating the robots, including the shotgun, Desert Eagle, Uzi, Revolver, MP5, AK-47, M4, M93BA, SMAW, machete, and grenades. The player is fitted with jetpack boots with circumscribed fuel which sanctions them to better navigate the map.

The multiplayer mode features both Bluetooth and Wi-Fi cross-platform connectivity and fortifies up to six players. The gameplay is akin to survival, however, it includes a wider variety of weapons and maps. Weapons and avatars can be obtained through microtransactions.

User Interface and gameplay is being referred for development of this play.

3. PROPOSED WORK

With the highlights of survey listed in above points, hypothesis has been lead. Consider a game where a player can join a group of 5 characters, battling each other for supremacy. Gameplay is designed for unique blend of humor and fun. It includes a Deathmatch scenario where players compete for highest score in a stipulated amount of time.

Below describes a flow chart where a play button triggers an event host. Any user can host, while rest will join the game. Hosting a game implies to generate a mobile hotspot, setting up game details such as Map, time limit. Game-lobby displays game stats to users before gameplay actually begins, including list of connected players and every player has the privilege to select any random character for the first time while after which this privilege is withdrawn.
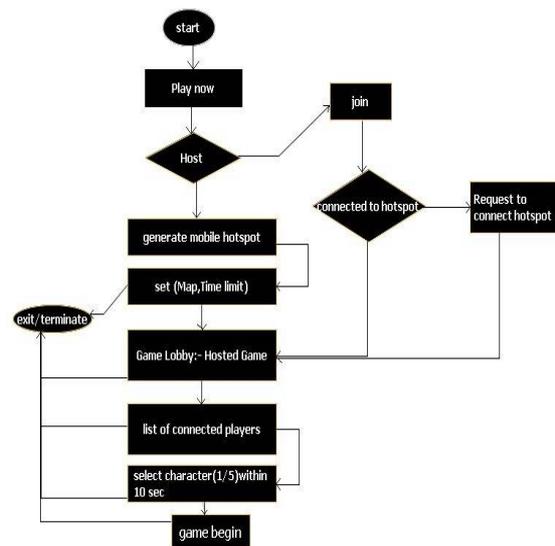

Fig. 3.1 System Flowchart

The Use-Case diagram however is shown below, which describes the functionalities each actor can actually perform. It consist of 2 actors; host & users.

Objectives:-

- To develop and deploy multiplayer FPS for mobile [android] platform.
- To gain insights and learn game design and game development.

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- Learn Unity engine and implement game design concepts in unity environment.
- Learn C# and scripting in C#
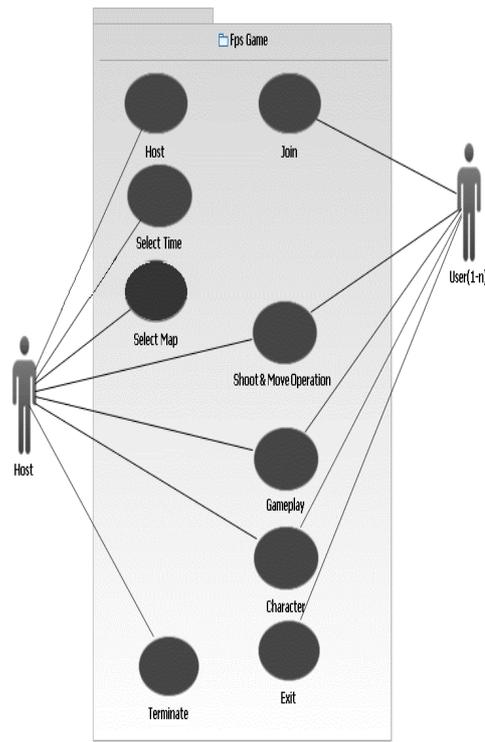
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[2] Official Unity Scripting Documentation
[3] Brackeys video podcasts.