

MES COLLEGE OF ENGINEERING, KUTTIPPURAM  
DEPARTMENT OF COMPUTER APPLICATIONS  
20MCA246 – MAIN PROJECT

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PRO FORMA FOR THE APPROVAL OF THE FOURTH SEMESTER MAIN PROJECT

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(Note: All entries of the pro forma for approval should be filled up with appropriate and complete information. Incomplete Pro forma of approval in any respect will be rejected.)

Main Project Proposal No: 1

Academic Year : 2021- 22

Year of Admission : 2020

1. Title of the Project : Video Game Development Using Unity – 3D Adventure

Game (Mini Project Extension)

2. Name of the Guide : Syed Feroze Ahamed M

3. Student Details (in BLOCK LETTERS)

Name

Register Number

Signature

AMAN ABDUL MALIK K P

MES20MCA2004

Date:

**Approval Status :** Approved / Not Approved

Signature of  
Committee Members }

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**Comments of the Guide**

Dated Signature

Initial Submission :

First Review :

Second Review :

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**Comments of the Project Coordinator**

Dated Signature

Initial Submission:

First Review

Second Review

Final Comments :

Dated Signature of HOD

**Introduction:** An action-adventure game can be defined as a game with a mix of elements from an action game and an adventure game, especially crucial elements like puzzles. Action-adventures require many of the same physical skills as action games, but also offer a storyline, numerous characters, an inventory system, dialogue, and other features of adventure games. I will be focussing on creating such a game. Action-adventure games are very popular these days. Typically, pure adventure games have situational problems for the player to solve, with very little or no action. If there is action, it is generally confined to isolated minigames. Pure action games have gameplay based on real-time interactions that challenge the reflexes. Therefore, action-adventure games engage both reflexes and problem-solving in both violent and non-violent situations.

**Objectives:** The objectives of this project are to create a fully functional 3D action-adventure game using Unity. Unity is a cross-platform game engine developed by Unity Technologies. which is primarily used to develop video games and simulations for computers, consoles and mobile devices. The overall aim of this game is to create a tense and unnerving experience for the player. Since game development is time consuming and laborious, the primary objective of the project is the time bound release of a playable version of the game which provide many functionalities which can be enhanced or updated anytime later. The player assumes the role of a protagonist in an interactive story or objective driven by exploration and/or puzzle-solving. Action-adventures require many of the same physical skills as action games, but also offer a storyline, numerous characters, an inventory system, dialogue, and other features of adventure games. They normally include a combination of complex story elements, which are displayed for players using audio and video. The story is heavily reliant upon the player character's movement, which triggers story events and thus affects the flow of the game

**Problem Definition:** Understanding Unity will be the key for the progress of this project. Initially, the templates provided by unity will thoroughly gone through and fiddled with. If possible, will be incorporated in to the said project. Since this is an action-adventure game both the functionalities of an action game and an adventure game need to be incorporated to the same game. And creating a massive 3d open world is time consuming and require a lot of computing power. This can be done using a powerful machine. The game will be in third person perspective (TPP). The player will be able to navigate an interactive menu, choose a desired character, map, game mode, details of all of which will be provided in the respective interfaces. An arsenal of weapons, characters and specific special abilities will also be available. The game will have moving platforms and player teleportation facilities which will make the gameplay more fun and also needs lot of game mechanisms to work with. The game has different types of enemies, each with different characteristics which the user can interact.

**Basic functionalities:** There will be an intuitive UI. The depth and count of the following features would be determined by the time constraint:

- The game will have a massive 3d open world where the player can roam around and complete objectives.
- The player will have different actions and movements like walking, running, rolling on the ground etc.

- Enemy animations and behaviour
- Different type of weapons and fire arms
- Maps
- Interactive UI
- The player will have a melee weapon to destroy enemies
- Sprites
- Game modes

#### Tools / Platform, Hardware and Software Requirements:

##### Hardware Requirements:

- Processor - Intel Core i5 (min)
- Clock Speed - 1.5 GHz (min)
- RAM - 8 GB (min)
- Hard Disk - 100 GB (min)
- GPU - 1 GB (min)

##### Software Requirements:

- Operating System - Windows 10 or above
- Game Engine – Unity
- Programming Language – C#
- IDE - Visual Studio 2019
- SFX – Audacity
- Modelling - Blender (if necessary)
- Texturing - Photoshop (if necessary)