**Computer Game**

**Introduction, History and Development**

**PC games**, also known as **computer games** or **personal computer games**, are [video games](https://en.wikipedia.org/wiki/Video_game) played on a [personal computer](https://en.wikipedia.org/wiki/Personal_computer) rather than a dedicated [video game console](https://en.wikipedia.org/wiki/Video_game_console) or [arcade machine](https://en.wikipedia.org/wiki/Arcade_machine). Their defining characteristics include a more diverse and user determined gaming hardware and software, and a generally greater capacity in input, processing, and video output.

[Home computer](https://en.wikipedia.org/wiki/Home_computer) games became popular following the [video game crash of 1983](https://en.wikipedia.org/wiki/Video_game_crash_of_1983) leading to the era of the "bedroom coder". In the 1990s, PC games lost mass-market traction to [console games](https://en.wikipedia.org/wiki/Console_game) before enjoying a resurgence in the mid-2000s through [digital distribution](https://en.wikipedia.org/wiki/Digital_distribution).

Newzoo, reports that the PC gaming sector is the third largest (and estimated in decline), with the consoles second largest, and across all platforms as of 2016, 2.2 billion gamers generate US$101.1 billion in revenue (i.e. all numbers exclude hardware costs), and "Digital game revenues will account for $94.4 billion or 87% of the global market. [Mobile](https://en.wikipedia.org/wiki/Mobile_operating_system) is the most lucrative segment, with [smartphone](https://en.wikipedia.org/wiki/Smartphone) and [tablet](https://en.wikipedia.org/wiki/Tablet_computer) gaming growing 19% year on year to $46.1 billion, claiming 42% of the market. In 2020, mobile gaming will represent just more than half of the total games market. [..] China expected to generate $27.5 billion, or one-quarter of all revenues in 2017."[[3]](https://en.wikipedia.org/wiki/PC_game) PC is considered synonymous (by them and others) with [IBM PC](https://en.wikipedia.org/wiki/IBM_PC) compatible systems; while mobile computers – smartphones and tablets, such as those running [Android](https://en.wikipedia.org/wiki/Android_(operating_system)) or [iOS](https://en.wikipedia.org/wiki/IOS) – are also [personal computers](https://en.wikipedia.org/wiki/Personal_computer) in the general sense. The "[APAC](https://en.wikipedia.org/wiki/Asia-Pacific)" region is estimated to generate $46.6 billion in 2016, or 47% of total global game revenues (note, not only "PC" games). China alone accounts for half of APAC's revenues, reaching $24.4 billion, cementing its place as the largest games market in the world, ahead of the US's anticipated market size of $23.5 billion. China is expected to have 53% of revenues from mobile in 2017 (46% in 2016).

The uncoordinated nature of the PC game market and its lack of physical media make precisely assessing its size difficult.

**Types of Game**

RPG: Role-playing Game is a [game](https://en.wikipedia.org/wiki/Game) in which players assume the roles of [characters](https://en.wikipedia.org/wiki/Player_character) in a fictional [setting](https://en.wikipedia.org/wiki/Setting_(narrative)). Players take responsibility for acting out these roles within a narrative, either through literal [acting](https://en.wikipedia.org/wiki/Acting) or through a process of structured decision-making or character development. Actions taken within many games succeed or fail according to a formal [system of rules](https://en.wikipedia.org/wiki/Role-playing_game_system) and guidelines.

WEG: Web Game(Browser Game) is a [computer game](https://en.wikipedia.org/wiki/Computer_game) that is played over the Internet using a [web browser](https://en.wikipedia.org/wiki/Web_browser). Browser games can be run using [standard web technologies](https://en.wikipedia.org/wiki/HTML)or browser [plug-ins](https://en.wikipedia.org/wiki/Plug-in_(computing)). The creation of such games usually involves use of [standard web technologies](https://en.wikipedia.org/wiki/HTML) as a [frontend](https://en.wikipedia.org/wiki/Front_end_processor_(program)) and other technologies to provide a [backend](https://en.wikipedia.org/wiki/Front_and_back_ends). Browser games include all [video game genres](https://en.wikipedia.org/wiki/Video_game_genres) and can be [single-player](https://en.wikipedia.org/wiki/Single-player_video_game) or [multiplayer](https://en.wikipedia.org/wiki/Multiplayer_video_game). Browser games are also [portable](https://en.wikipedia.org/wiki/Software_portability) and can be played on multiple different devices, web browsers, and operating systems.

ACT: Action Game is a [video game genre](https://en.wikipedia.org/wiki/Video_game_genres) that emphasizes physical challenges, including hand–eye coordination and reaction-time. The genre includes diverse subgenres such as [fighting games](https://en.wikipedia.org/wiki/Fighting_game), [shooter games](https://en.wikipedia.org/wiki/Shooter_game) and [platform games](https://en.wikipedia.org/wiki/Platform_game) which are widely considered the most important action games, though [multiplayer online battle arena](https://en.wikipedia.org/wiki/Multiplayer_online_battle_arena) and some [real-time strategy](https://en.wikipedia.org/wiki/Real-time_strategy) games are also considered to be action games.

In an action game, the player typically controls the [protagonist](https://en.wikipedia.org/wiki/Protagonist) or [avatar](https://en.wikipedia.org/wiki/Avatar_(computing)). The avatar must navigate a [level](https://en.wikipedia.org/wiki/Level_(video_gaming)), collecting objects, avoiding obstacles, and battling enemies with various attacks. At the end of a level or group of levels, the player must often defeat a boss enemy that is more challenging and often larger than other enemies. Enemy attacks and obstacles deplete the avatar's [health](https://en.wikipedia.org/wiki/Health_(gaming)) and [lives](https://en.wikipedia.org/wiki/1-up), and the player receives a [Game over](https://en.wikipedia.org/wiki/Game_over) when they run out of lives. Alternatively, the player wins the game by finishing a sequence of levels. But some action games, usually [arcade games](https://en.wikipedia.org/wiki/Arcade_games), are unbeatable and have an indefinite number of levels; and the player's only goal is to maximize their score by collecting objects and defeating enemies.

AVG: Adventure Game

CAG: Card Game

----------too much background detail to describe , could short and simplify it then focuses explain one type-----------

**Research**(tbc)

**Design Platform**

Windows Computer (or windows phone)

**Design Technology**

Unity 3D, version5.6.4(a set of versions, briefly introduce it)

**Design Model**

Single client service

**Game Type**

A basic Role-Playing Game (wait to add details)

**Game Interface**

Menu (start, exit and setting)

Character Information

**Game Model**

Character actions: walk, attack and jump

Character update

(Update action: multi-attack models)

**Means of the Game**

Culture

(Second)

**Design Inspiration**

It from a Chinese Wuxia online game. It is a kind of game can describe Wuxia culture(more details if it needs extension )

Introduce background, technology

-------Which parts should have heavy weight, which parts only briefly introduce ---------

**The reason of Unity**(tbc)

1.Unity has directly sence view windows to observate and program project synchronously

2.Unity collects models, engines and several effects itself

------------------------------imitate sample module -----------------------------

**The Reference Example of a Part Functions**(tbc)

[**https://unity3d.com/cn/learn/tutorials/topics/2d-game-creation/2d-game-development-walkthrough?playlist=17093**](https://unity3d.com/cn/learn/tutorials/topics/2d-game-creation/2d-game-development-walkthrough?playlist=17093)

It is a 2D game that a character does a set of actions with C# script files and there are some basic functions can be used in this project.

Attack function:

Damage calculate function:

Special assist function:

Character dead and reload game function:

# Architecture

## Design model

This project is designed with two parts, one is form User Interface with character models, scene of game and other UI functions.

To make a 3D model to use in Unity, we need to use 3D modelling application to create and import it such as Blender. Here is one video with [Making Game Objects In Blender For Unity 3D | Beginner](https://www.youtube.com/watch?v=p8Q6zgA4K4E&feature=youtu.be)**.**

Another is scripts part, this part would control events that happen inside of game.

## Setting Options

Also, there are set of user settings surface.

The first view about character information, we type a name and pick gender for our character then start game.