# What is a Video Game?

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Introduction to Game Design & Development

| (a) | (b) | (c) |

(a)SUPER MARIO BROS,　(b)Left 4 Dead,　(c)Pocket Monsters

## 1　Introduction

Video game is also known as electronic games, Video games is refers to the user (players) interact with Video equipment. Traditional video games typically refers to a raster display device. However, with the development of video games, video games now have been defined as all types of display devices.

Video game is the game all depends on interaction of electronic media platform and run. Electronic game in accordance with the carrier, can be divided into the arcade games, handheld games, TV games (or parts of console games, video games), computer games and mobile games,refers to the game that people through electronic devices (such as computers, game consoles and mobile phone, etc.) . Western games tend to electronic game segmentation for Video game and Audio game, etc., while Chinese gaming habits are use "Video games" to refer to.

### A brief History:

1972 : Pong (Hardware) Classics : Atari , NES , SNES , Commodre64 , NeoGenesis ,…ets.

1993 : Doom (idTech 1)

1995 : Software-Rendered Engines (CPU-only)

1998 : Unreal (Hardware 3D - GPU)

2007 : Unreal Engine 3

## 2　Overview

**Game Structure**：That Games have a different structure than any other software.

**Game Loop**:
```
// a simple game loop in C++
int main()
{
Initialize();
while (true)
{
Process();
Update();
Render();
}
ShutDown();
}
```

**What actually happens:**
```
While(true)
{
/* Process controller input : Checks for player's input .. For example ,
if the player hits spacebar then make the character jump … etc*/
Process();
/* Update entities : this is where the game reacts to the changes the
player's made as well as updates the game state */
Update();
/*Update Graphics : draw the background, draw sprites, update
HUD elements, etc */
Render();
}
```

**Game Design:**Game Design is very critical and

requires experience and knowledge .

**Game Genres:**Can be used to describe : Gameplay , Story and even the perspective … e.g. (FPS , RPG..)

**Game art:**2D art like picture(a) and (c) can be divided into Concept Art,Sprites,Texture Art and UI Artist. 3D art like (b) need modeling,Wrapping & Texturing and Animation.

## 3  Conclusion

Video Game is an interactive medium.Interactivity is what makes games differ from movies and other art forms .The content of the game as a Medium is what makes it differs from other software.And obviously they are more fun .

## References

http://baike.baidu.com/link?url=_h5k6Wq6TmS8E-2xb1mUcuiwf-y-