老师好，我们小组来自于软件工程1809班，我是小组成员之一--廖严浩。小组的另外两位成员是彭凌寒和杨孟衡。这次我们小组的课题是有关于电子游戏的发展，我们将会从这四个方面来说说我们对这个课题的理解。而我主要负责的部分是有关电子游戏的发展历史以及一些现在较为流行的游戏的介绍。即前两个部分中的绝大多数内容，对应PPT的1-13张。

首先让我们来简单谈谈电子游戏的发展历史吧，这里有一句非常有趣的话：xxxx；意思是电子游戏为人们的娱乐方式带来了新的变化，使之 成为全世界都认可的文化的一部分。而在Computer games的发展中，最重要的一点就是其发展总是伴随着硬件的发展的；不只是游戏，而是所有的软件都是如此。

Hello teacher, our group is from class 1809 of software engineering. I am one of the group members - Liao Yanhao. The other two members of the group are Peng Linghan and Yang mengheng. This time our group's topic is about the development of Computer games. We will talk about our understanding of this topic from these four aspects. And I am mainly responsible for the history of the development of Computer games and some of the more popular games. That is, most of the contents in the first two parts correspond to 1-13 sheets of PPT.

First of all, let's talk about the history of the development of video games. Here is a very interesting sentence: XXX, which means that video games have brought new changes to people's way of entertainment, making them part of the culture recognized by the world. In the development of computer games, the most important point is that its development is always accompanied by the development of hardware; not just games, but all software.

那么说到Computer games，现在人也经常会称呼它为Video games or电子游戏，是指所有依托于电子设备平台而运行的交互游戏，其必须依托于一定的电子设备平台。现在的人们大多数想到的典型的Comuter games都是如League of legends、DOTA，或者是想巫师3、黑魂这样的游戏；这些大都是只能在电脑上运行的游戏，但真正的电子设备平台可不止电脑。当我们把历史的车轮往前滚动的时候，我们可以发现现在这些人们熟悉的电脑游戏在以前是没有人敢于想象的。这其中有科学技术落后的原因，但也因为在世界上第一款电子游戏开发出来之前没有类似的东西存在；所以人们没有对于电子游戏的概念。而现在的电子游戏能够像这样发达，除了硬件技术个编程技术的发展外，正是因为借鉴了前人对电子游戏不断开发而积累的经验。

When it comes to computer games, people often call it video games or electronic games. It refers to all interactive games running on the platform of electronic devices, which must rely on a certain electronic device platform. Nowadays, most of the typical comuter games that people think of are like League of legends, DOTA, or games like wizard 3 and black soul. Most of these games can only run on computers, but the real platform of electronic devices is more than computers. When we roll the wheel of history forward, we can find that no one dared to imagine these familiar computer games before. There are some reasons for the backwardness of science and technology, but also because there is no similar thing before the development of the first video game in the world; therefore, people do not have the concept of video games. But now the Computer game can be so developed, in addition to the development of hardware technology and programming technology, it is precisely because of the experience accumulated by predecessors in the continuous development of electronic games.

如果要介绍电子游戏的历史，那么就不得不提一下世界上第一款电子游戏了；基本上公认的世界上第一款电子游戏，是在1947推出的CRT entertainment device，这是人类历史上第一次诞生了电子游戏的雏形，电子游戏的发展也由此开始。而那个时候的电子游戏主要是依靠硬件来进行实现，而且其游玩的内容是从将现实中的游戏在电脑硬件上进行简单的实现，所以其定义与现在的电子游戏有着不同的地方。而随着编程技术和电脑技术的发展，电子游戏在1970年代开始以一种商业娱乐媒体被引入，成为1970年代末日本、美国和欧洲一个重要娱乐工业的基础。而1971年，也诞生了世界上第一款商业化的电子游戏—由NolanBushnell设计的街机游戏《ComputerSpace》(or Cyberspace)。请注意，这个时候已经出现了软件的概念，但由于那个时候的电脑的硬件设施还是难以运行部分的游戏软件的运行，故那个时候的电子游戏软件必须拥有相应的硬件设备的支持。而那个时候运行电子游戏的主要硬件设备就是街机。在1972年，NolanBushnel和他的朋友TedDabney用500美金注册成立了自己的公司，这个公司就是电子游戏的始祖——Atari，其成立之初的业务重点也放在了街机上。而有关于硬件设备的部分我们将在稍后的介绍。

1984年，美国的电子游戏市场发生了大萧条，雅达利首当其冲；这便为日本的任天堂的崛起提供了一定的条件。而随着硬件的发展，16位机、32位机相继出现，更精良的机器提供的是更为优秀的游戏体验；同时随着美国电子游戏市场的逐步恢复，电子游戏进入了其发展的黄金时期。1994-1998年，索尼问世；而微软也扛过了美国电子游戏的大旗；发展到现在，进行着电子游戏的开发的公司有很多，但任天堂、索尼、微软已经成为了游戏市场的三大巨头，现如今他们也依然活跃于电子游戏的各个领域中。

And if we want to introduce the history of Computer games, we have to mention the first video game in the world. Basically, the world's first video game is the CRT entertainment device launched in 1947. This is the first time in human history that the embryonic form of electronic games was born, and the development of electronic games began. At that time, the electronic games mainly rely on hardware to achieve, and the content of playing is from the real game on the computer hardware for simple implementation, so its definition is different from the current electronic games. With the development of programming technology and computer technology, video games began to be introduced as a commercial entertainment media in the 1970s, and became the basis of an important entertainment industry in Japan, the United States and Europe in the late 1970s. In 1971, the world's first commercial video game, computer space (or cyberspace), designed by Nolan Bushnell, was born. Please note that the concept of software has appeared at this time, but since the hardware facilities of the computer at that time were still difficult to run part of the game software, the video game software at that time must have the support of the corresponding hardware equipment. At that time, the main hardware device to run video games was the arcade. In 1972, Nolan bushnel and his friend Ted Dabney signed up for $500 to set up their own company, Atari, the founder of video games, and its initial business focus was on arcades. We will discuss the hardware device later.

In 1984, the U.S. video game market experienced a great depression, and yadali was the first to bear the brunt, which provided certain conditions for the rise of Nintendo in Japan. With the development of hardware, 16 bit and 32-bit computers have appeared one after another, and more sophisticated machines provide more excellent game experience; at the same time, with the gradual recovery of the American video game market, electronic games have entered its golden period of development. From 1994 to 1998, Sony came out; and Microsoft also carried the banner of American video games; until now, there are many companies developing video games, but Nintendo, Sony and Microsoft have become the three giants in the game market, and now they are still active in various fields of video games.

在上文中我们可以看到，电子游戏的发展往往是伴随着电子设备的发展、软件概念的提出以及编程技术的发展的。而电子设备可以说是至关重要，没有设备就无法运行电子游戏程序。最常见也是最古来的游戏平台就是控制台，后续大部分的硬件设施都是控制台演变而来的，而最早的时候人们也大都是在控制台上玩游戏的。之后随着硬件技术的发展，控制台逐渐演变为家用游戏机，像任天堂就退出了第一代家用游戏机—Famicom，其拥有的在那个时代较高的图像技术使得很多重做之后的游戏大放异彩。现在为游戏玩家所知道的控制台大概是SegaMegaDrive、PC-Engine、Nintendo64、SEGASaturn、Sony’s PlayStation series吧。

而在控制台发展到家用游戏机之前，最为经典也最为人所熟知的控制台便是街机了，这也是Atari公司的业务重点。如果要说电子游戏，Atari是不可以不提的。可以说，Atari的成功与失败都与控制台的发展息息相关。街机（Arcade）即是流行于街头的商用游戏机，以此名称别于个人电脑和家用游戏机。街机在Famicom出现之前，可以说是最受欢迎的电子游戏设备了，但其在图像方面并没有家用游戏机那么优秀，而Atari公司在看到家用游戏机的前景过后便迫切的想开拓新的市场，便推出了雅达利2600游戏机；但由于错误估计了市场，1984年，Atari发生了大崩溃，美国游戏市场便从此进入了两年的萧条，从而日本的电子游戏市场占据了主流。而这其中一部分原因正是任天堂、索尼等推出了新的家用游戏机系列，而Atari由于没有找到自己在市场中的定位而造成。而随着近现代电子技术的发展，便携式游戏机的推出以及手机、电脑等移动设备的普及，电子游戏有了新的运行载体；而基于其高效的CPU、优秀的图像显示技术和方便携带特性，大部分玩家开始在这些设备上面玩电子游戏，而电子游戏也逐渐开始被大家称为Computer games。也就是说，Computer games是来源于video games的，在其中的变化也与上述中硬件的发展的过程密切联系。而现在最为热门的电子游戏是：xxx,xxx,xxx；我相信有人没玩过它们，但一定听说过它们。

In the above, we can see that the development of electronic games is often accompanied by the development of electronic devices, the proposal of software concepts and the development of programming technology. And it's impossible to run a video game without a device. The most common and ancient game platform is the console. Most of the subsequent hardware facilities are evolved from the console. At the earliest time, most people played games on the console. After that, with the development of hardware technology, the console gradually evolved into a home game console. For example, Nintendo withdrew from the first generation of home game console - Famicom. Its high image technology in that era made many games after remaking shine. Now game players know that the console is probably segmegadrive, PC engine, nintendo64, Sega Saturn, Sony's Playstation series

Before the console developed to the home game console, the most classic and well-known console was the arcade, which is also the business focus of Atari company. If you want to talk about video games, Atari can't be ignored. It can be said that Atari's success and failure are closely related to the development of the console. Arcade is a kind of commercial game machine popular in the street, which is different from personal computers and home game machines. Arcade was the most popular video game device before Famicom appeared, but it was not as good as home game in terms of image. Atari company, after seeing the prospect of home game console, was eager to explore new market and launched Atari 2600. However, due to the wrong estimation of the market, Atari collapsed in 1984, and American Games were launched Since then, the market has entered a two-year depression, and the Japanese video game market has occupied the mainstream. Part of the reason is that Nintendo, Sony and others have launched new home game console series, while Atari has not found its own market position. With the development of modern electronic technology, the introduction of portable game machines and the popularity of mobile devices such as mobile phones and computers, electronic games have a new carrier of operation. Based on its efficient CPU, excellent image display technology and convenient portability, most players begin to play video games on these devices, and electronic games are gradually called computer games.

In other words, computer games is derived from video games, and its changes are closely related to the development of hardware mentioned above. Now the most popular video games are: XXX, XXX, XXX; I believe some people have never played them, but they must have heard of them.

随着硬件的发展，电子游戏的玩法、游玩方式也越来越多样化，从而出现了一个以前从没有人注意的概念，就是游戏种类的划分。在我看来，根据玩法的不同，早期大部分的Compter games都可以分为这样几个大类：RPG、AVG、ACT、FPS；至于其他一些游戏种类，如音乐游戏、MOBA类游戏都是从上述几种游戏类别中演变而来的。虽然现在世界上第一款RPG、第一款AVG游戏都诞生于非常久远的时代，但在我看来，所有的游戏都可以称作是一场冒险，而大部分游戏中，我们都可以看到RPG的影子。

RPG，顾名思义，玩家在现实世界或虚拟世界中扮演一个角色，玩家负责在一个结构化规则下通过一些操作来控制角色和发展剧情。而且RPG也只能运行在电子设备上。比如说世界上最早的RPG游戏便是雅达利的创世纪系列，这是世界上最早的开放世界角色扮演游戏，也就是巫师系列和上古卷轴系列的祖先，但其却只能运行在IBM XT 5160电脑上，不过游戏中的战斗系统、NPC系统、世界探索的玩法都为后续的游戏打下了基础。RPG的核心在于扮演，这就意味着你需要拥有一定的综合能力才能成功通关，即你需要有一定的耐心、推理能力以及一定的策略。不过RPG对于玩家的操作要求并不高；而一旦这些和操作结合起来后，便逐渐衍生出了ACT和FPS这样的动作类游戏，比如魂斗罗和CS；动作类游戏将战斗系统做了一定的升级，使转而更加考验玩家如何对人物进行操作，不过其游戏的核心依然是需要玩家对游戏内角色进行操控。而伴随着图像技术的发展，为解密游戏和恐怖游戏提供了良好的发展平台。而这就出现了第四种游戏的种类—AVG。通常来讲，冒险游戏和动作游戏之间较难区分，其主要的区别是ACT不需要对剧情有过多的关注，其注重的是人物在玩家控制下如何做出精密的动作；而AVG游戏的进行除了动作之外，还需要配合游戏剧情的发展，其恐怖和解密的元素较多，比如古墓丽影和生化危机系列，这类游戏在考验玩家操作的同时，同样考验了玩家的解密能力；不过其玩法核心还是操控人物。因此，上述所有的游戏种类都可以从RPG游戏发展而来。至于其他的一些游戏种类，都是RPG游戏在某一个玩法上的特化，或者是在RPG中加入了一些其他的元素。比如着重考察玩家策略的模拟经营类游戏(SLG)，加入了团队合作元素的MMORPG，而现在的MOBA类游戏如League of legends、DOTA便是再次基础之上发展而来的。

With the development of hardware, the playing methods and ways of playing video games are becoming more and more diversified, which leads to a concept that no one has paid attention to before, that is, the classification of game types. In my opinion, according to the different playing methods, most of the early computer games can be divided into the following categories: RPG, AVG, act, FPS; as for other game types, such as music games and MoBa games, they are evolved from the above categories. Although the world's first RPG and AVG games were born in a very long time ago, in my opinion, all games can be called an adventure, and in most games, we can see the shadow of RPG.

RPG, as the name suggests, the player plays a role in the real world or virtual world, and the player is responsible for controlling the role and developing the plot through some operations under a structured rule. And RPG can only run on electronic devices. For example, the earliest RPG game in the world is Atari's genesis(创世纪) series, which is the earliest open world role-playing game in the world, that is, the ancestor of wizard series and ancient scroll series, but it can only run on IBM XT 5160 computer. However, the combat system, NPC system and world exploration play methods in the game have laid the foundation for subsequent games. The core of RPG is playing, which means that you need to have a certain comprehensive ability to successfully pass the games, that is, you need to have a certain amount of patience, reasoning ability and certain strategies. However, RPG does not have high requirements for players' operation; once these are combined with operation, action games such as ACT and FPS are gradually derived, such as soul Toro and CS; action games upgrade the combat system to a certain extent, which makes it more testing for players how to operate characters. However, the core of the game is still the need for players to improve their role in the game Control. With the development of image technology, it provides a good development platform for decryption game and horror game. And that's the fourth kind of game - AVG. Generally speaking, it is difficult to distinguish between adventure games and action games. The main difference is that act does not need to pay too much attention to the plot. It focuses on how the characters make precise actions under the control of the players. In addition to actions, AVG games need to cooperate with the development of the game plot. There are many elements of horror and decryption, such as Tomb Raider and biochemical crisis system Column, this kind of game not only tests the player's operation, but also tests the player's decryption ability; however, the core of its playing method is to control the characters. Therefore, all of the above types of games can be developed from RPG Games. As for other types of games, RPG games are specialized in a certain way, or some other elements are added to RPG. For example, the simulated business games (SLG) focusing on player strategy and MMORPG with team cooperation elements are added. The current MoBa games, such as League of legends and DOTA, are developed on the basis of this.

不过在电子游戏发展的过程总，从AVG游戏下衍生出来了一个与RPG极其不同的存在，那就是ADV。其属于AVG的一个分支，也别指代的是日式文字类冒险游戏，也被人称为galgame，其展现形式更加类似于视觉小说，玩家需要根据剧情给出的选项做出自己的选择，不同的选择会导致不同的剧情分支，而游戏的推进完全依靠剧本以及玩家的选择。这类游戏的玩法不再是操控人物，而是将自己代入到人物中，故需要极其优秀的游戏剧本作为支撑，这是和传统的AVG不同的。

However, in the process of the development of computer games, AVG games derived from a very different existence with RPG, that is ADV. It belongs to a branch of AVG, especially refers to the Japanese word adventure games, also known as GALGAME. Its presentation form is more similar to visual fiction. Players need to make their own choices according to the options given by the plot. Different choices will lead to different plot branches, and the promotion of the game completely depends on the script and the player's choice. The way of playing this kind of game is no longer to control the characters, but to put yourself into the characters, so it needs excellent game scripts as support, which is different from the traditional AVG .

随着近代人们娱乐水平的提高，人们不再满足于只在虚拟的电子世界中获取游戏的乐趣；再加上真人秀节目的盛行，人们逐渐开始将游戏搬到了现实中来。游戏的载体也变的较多起来。不过大部分的游戏都需要依靠一套规则进行推进，而这种规则也就是依靠现在人们所说的程序来进行实现的。而进行编程需要有一定的编程工具和编程语言，这些决也定了游戏的质量和玩家的游戏体验。接下来将有plh来介绍有关游戏载体的类别以及游戏编程语言的发展，让我欢迎他：

With the improvement of modern people's entertainment level, people are no longer satisfied with the fun of games in the virtual electronic world; coupled with the popularity of reality TV show, people gradually began to move the game to reality. The carrier of the game has become more and more. But most games need to rely on a set of rules to promote, and this rule is also relying on what people now call the program to achieve. Programming requires a certain programming tools and programming language, these decisions also determine the quality of the game and the player's game experience. Next, PLH will introduce the types of game carriers and the development of game programming languages, let's welcome him: