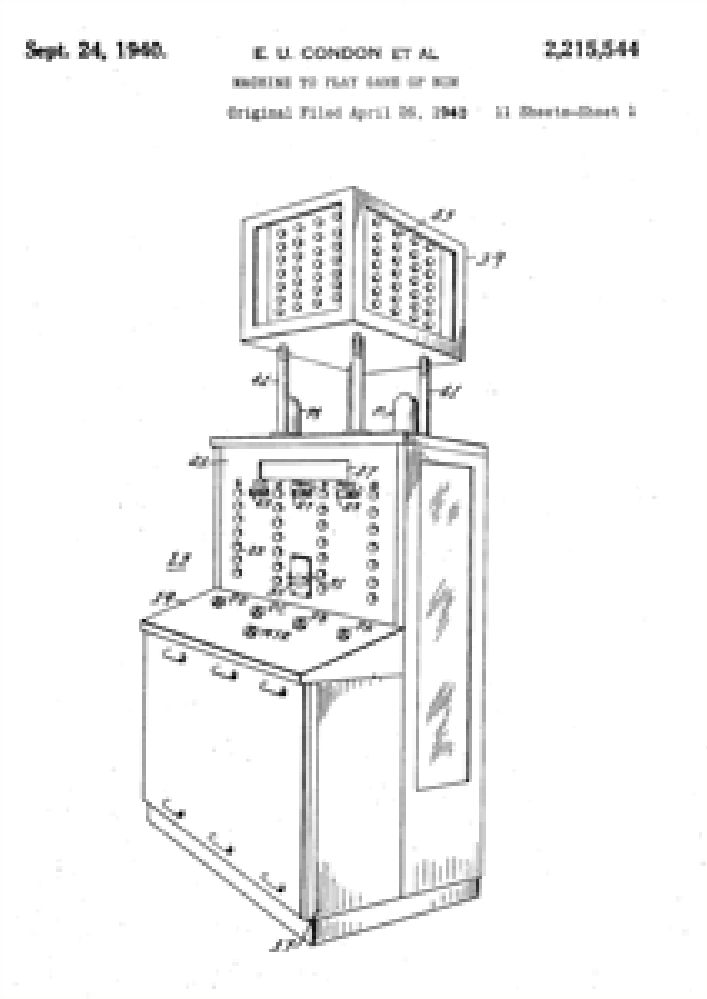
Ders 1

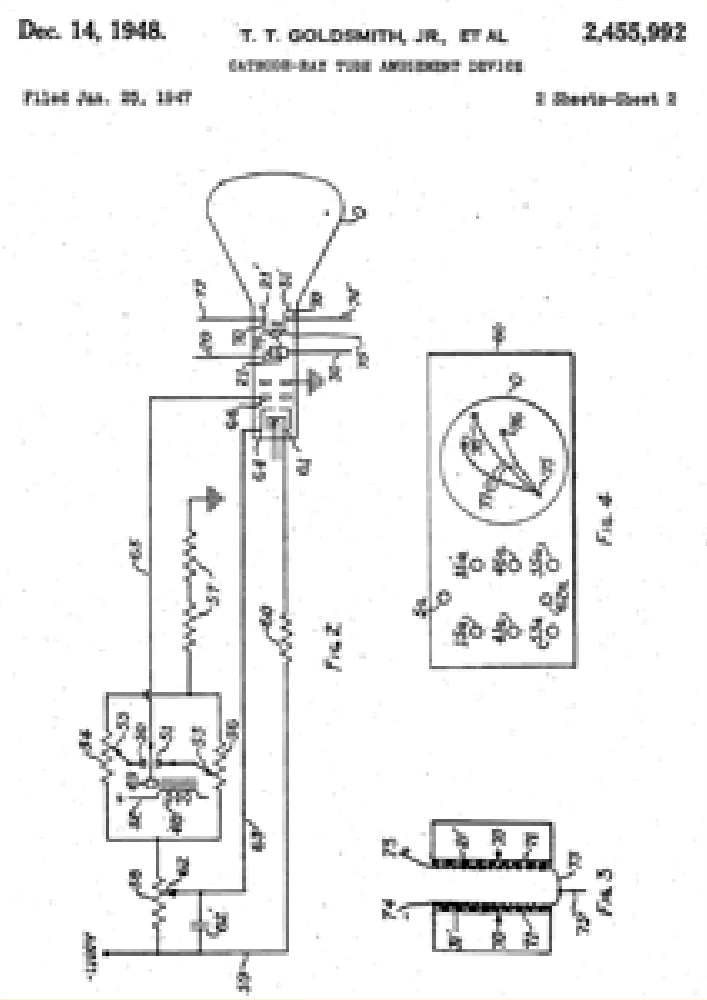
Oyunların Tarihi

1940



For the Westinghouse display at the World's Fair, Edward U. Condon designs a computer that plays the traditional game Nim in which players try to avoid picking up the last matchstick. Tens of thousands of people play it, and the computer wins at least 90% of the games.

1947

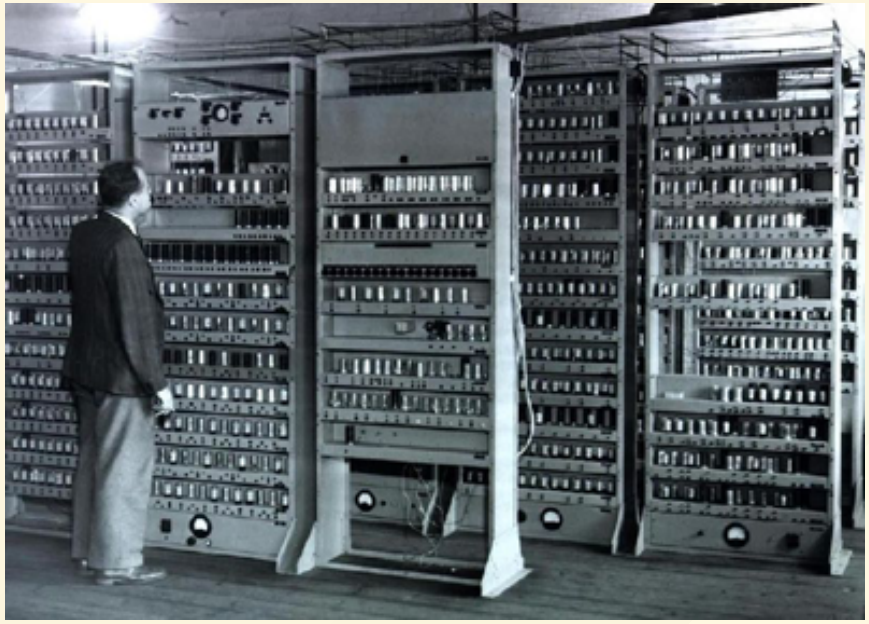


Thomas T. Goldsmith Jr. and Estle Ray Mann file a patent for a "cathode ray tube amusement device." Their game, which uses a cathode ray tube hooked to an oscilloscope display, challenges players to fire a gun at a target.

1950

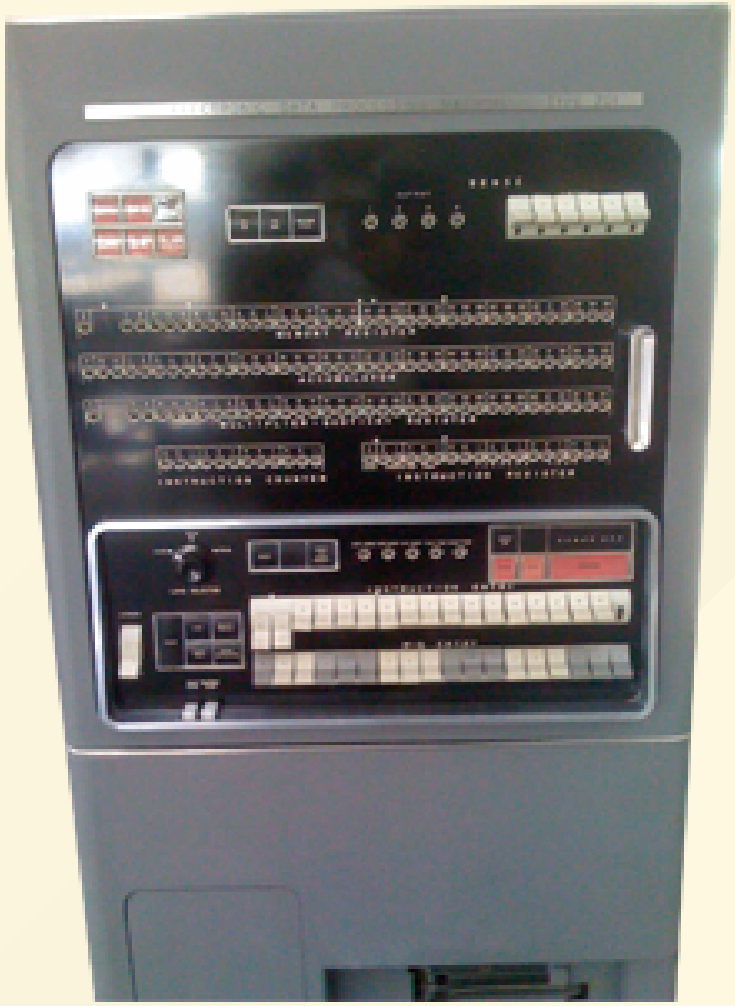
Claude Shannon lays out the basic guidelines for programming a chess-playing computer in an article, "Programming a Computer for Playing Chess." That same year both he and Englishman Alan Turing create chess programs.

1952



A. S. Douglass creates *OXO* (a game known as noughts and crosses in the United Kingdom and tic-tac-toe in the United States) on Cambridge's EDSAC computer as part of his research on human-computer interactions.

1954



Programmers at New Mexico's Los Alamos laboratories, the birthplace of the atomic bomb, develop the first blackjack program on an IBM-701 computer.

1955

The long tradition of military wargaming enters the computer age when the U.S. military designs *Hutspiel*, in which Red and Blue players (representing NATO and Soviet commanders) wage war.

1956

Arthur Samuel demonstrates his computer checkers program, written on an IBM-701, on national television. Six years later the program defeats a checkers master.

1957

Alex Bernstein writes the first complete computer chess program on an IBM-704 computer - a program advanced enough to evaluate four half-moves ahead.

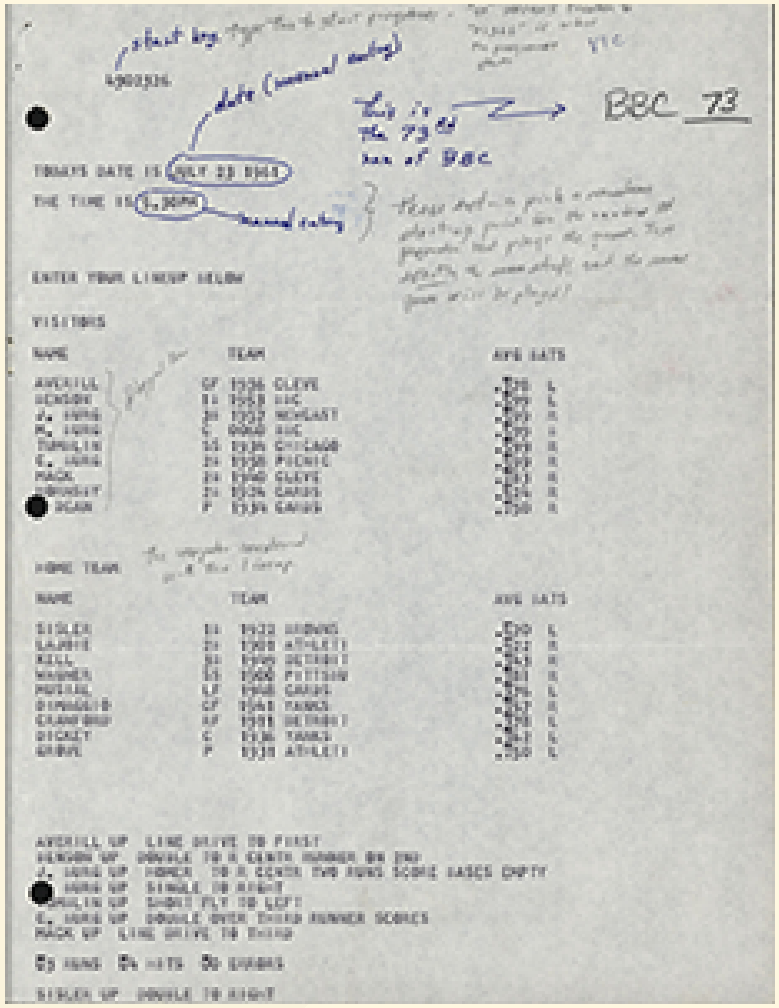
1958

Willy Higinbotham creates a tennis game on an oscilloscope and analog computer for public demonstration at Brookhaven National Laboratory in 1958. Although dismantled two years later and largely forgotten, it anticipated later video games such as *Pong* .

1959

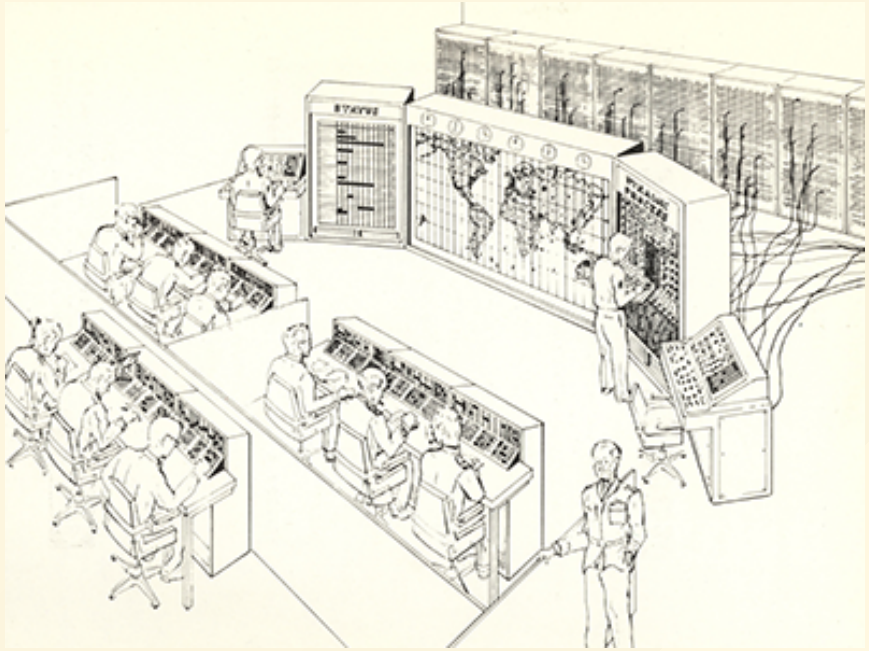
Students at MIT create *Mouse in the Maze* on MIT's TX-0 computer. Users first draw a maze with a light pen, then a mouse navigates the labyrinth searching for cheese. In a revised version, a bibulous mouse seeks out martinis yet still somehow remembers the path it took.

1960



Computer programmer John Burgeson stays home sick from work at IBM and begins developing a computer baseball simulation. A month later (in January 1961), aided by his brother Paul, John runs this first-known baseball computer program on an IBM 1620 computer.

1961



The Raytheon Company develops a computer simulation of global Cold War conflict for the U.S. Joint Chiefs of Staff. Although it is sophisticated and even models the benefits of arms control, the simulation proves too complex for users unfamiliar with computers, so Raytheon creates a more accessible analog version called "Grand Strategy."

1962

MIT student Steve Russell invents *Spacewar!*, the first computer-based video game. Over the following decade, the game spreads to computers across the country.

1963

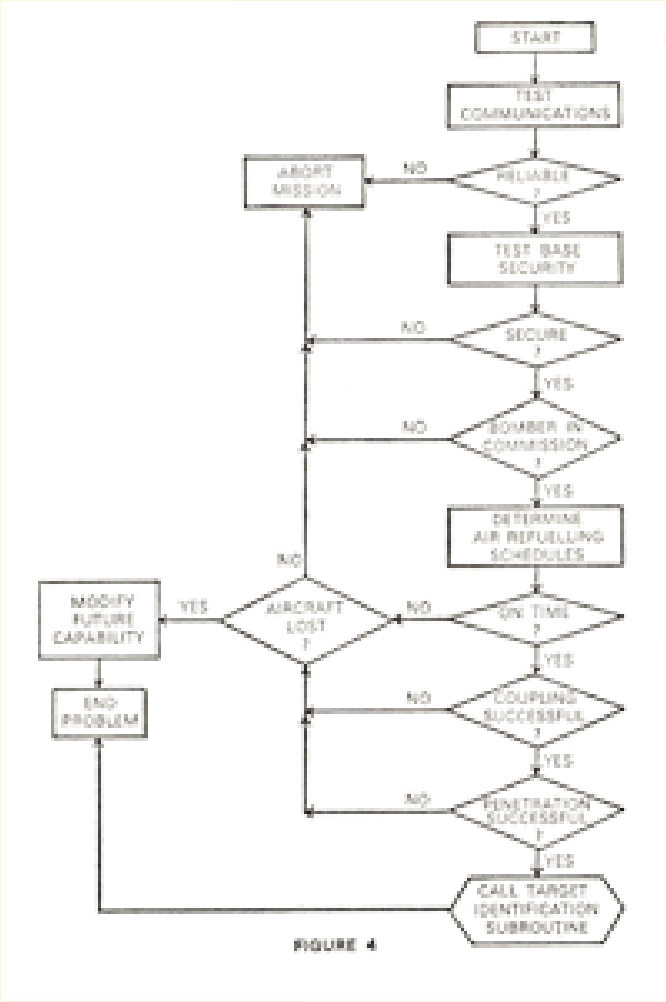


FIGURE 4

Months after the Cuban Missile Crisis, the U.S. Defense Department completes a computer war game known as *STAGE* (Simulation of Total Atomic Global Exchange) which "shows" that the United States would defeat the Soviet Union in a thermonuclear war.

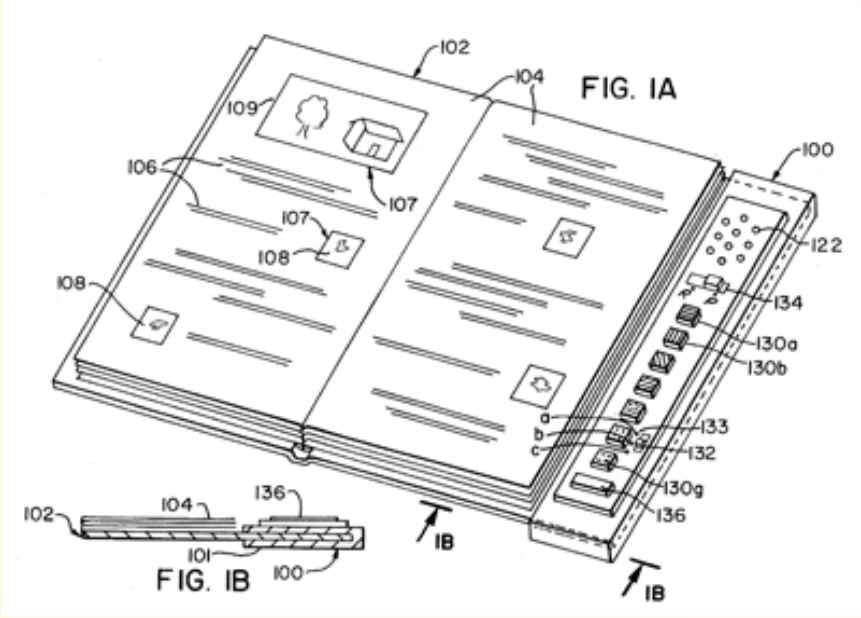
1964

Everyone is a programmer. That's the creed of Dartmouth's John Kemeny who creates the computer time-share system and BASIC programming language at Dartmouth. Both make it easy for students to write computer games. Soon, countless games are being created.

1965

A day after Dartmouth defeats Princeton 28–14 in football to win the Ivy League championship, a Dartmouth student programs the first computer football game. Earlier that year, John Kemeny and Keith Bellairs had created the first computer game in BASIC.

1966

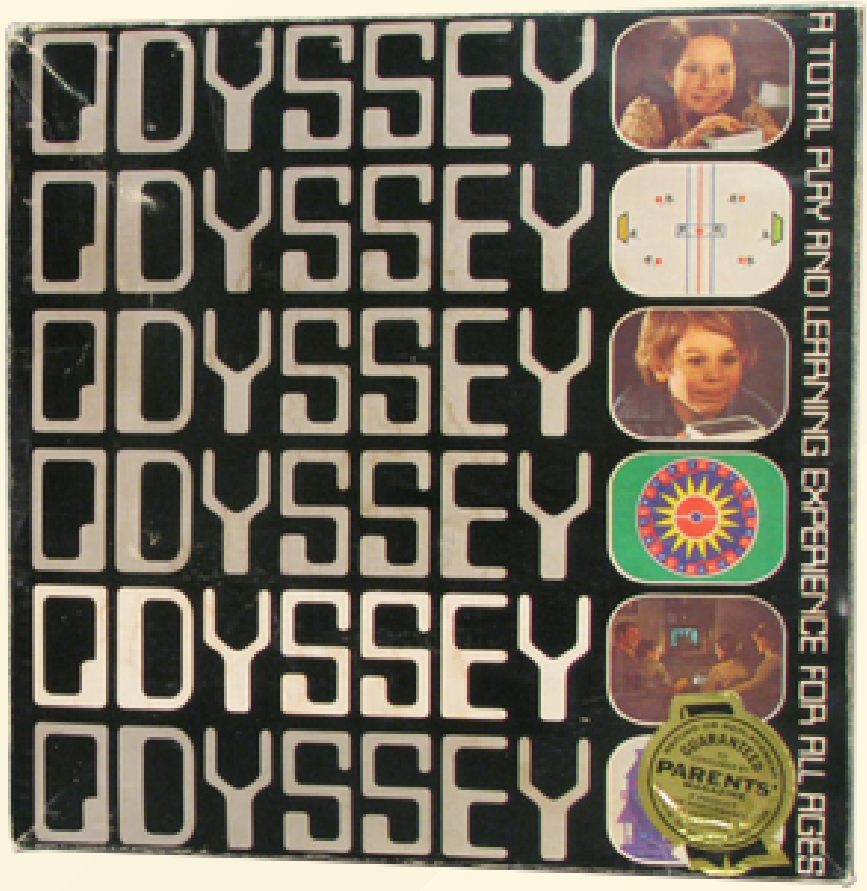


While waiting for a colleague at a New York City bus station, Ralph Baer conceives the idea of playing a video game on television. On September 1, he writes down his ideas that become the basis of his development of television video games.

1967

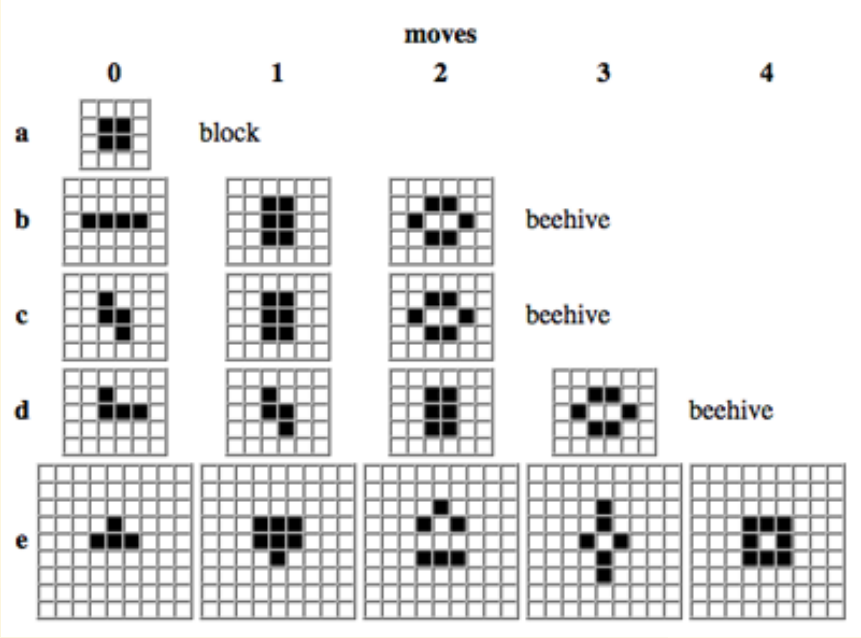
Ralph Baer develops his "Brown Box", the video game prototype that lets users play tennis and other games.

1968



Ralph Baer patents his interactive television game. Four years later Magnavox releases Odyssey, the first home video game system, based on his designs.

1970



Scientific American publishes the rules for *LIFE* in Martin Gardner's "Mathematical Games" column. In this simulation, isolated or overcrowded cells die, while others live and reproduce. Hackers rush to implement it on their computers, watching beautiful patterns emerge and change.

1971

Minnesota college students Don Rawitsch, Bill Heinemann, and Paul Dillenberger create *Oregon Trail*, a simulation of pioneers' westward trek. Originally played on a single teletype machine, Rawitsch later brought the game to the Minnesota Educational Computer Consortium (MECC) which distributed it nationally.

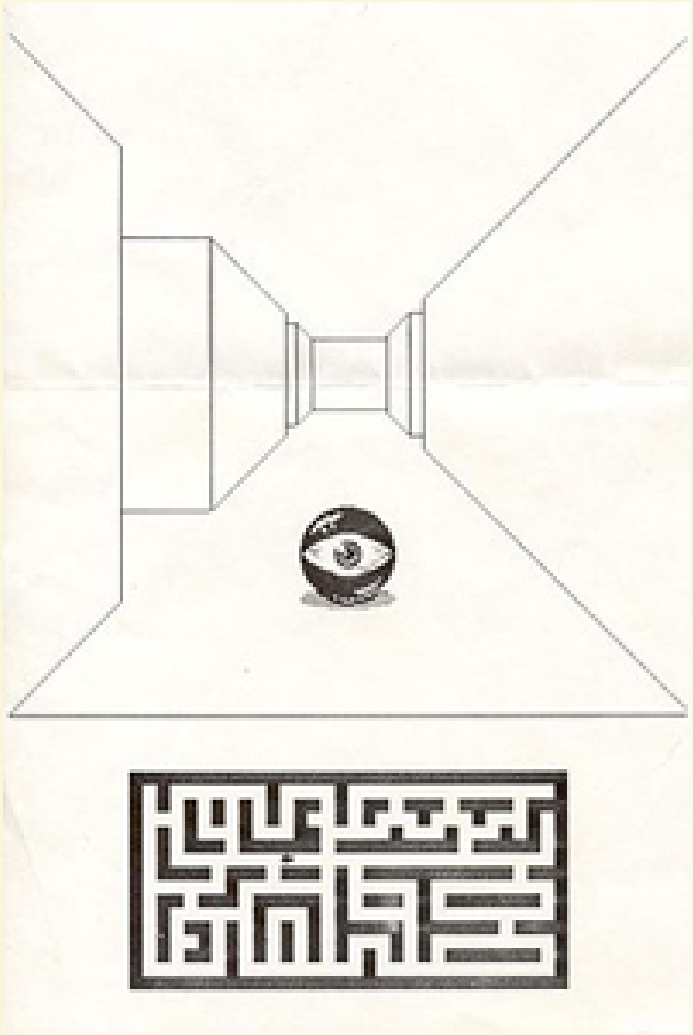
1972

Nolan Bushnell and Al Alcorn of Atari develop an arcade table tennis game. When they test it in Andy Capps Tavern in Sunnyvale, California, it stops working. Why? Because people played it so much it jammed with quarters. *Pong*, an arcade legend, is born.

1973

A year after launching the first general computer magazine, *Creative Computing*, David Ahl publishes *101 BASIC Computer Games*, allowing gamers to become an ancient Sumerian king in HMRABI, find the creatures hiding in a grid in MUGWMP, and command the North versus the South in CIVILW.

1974

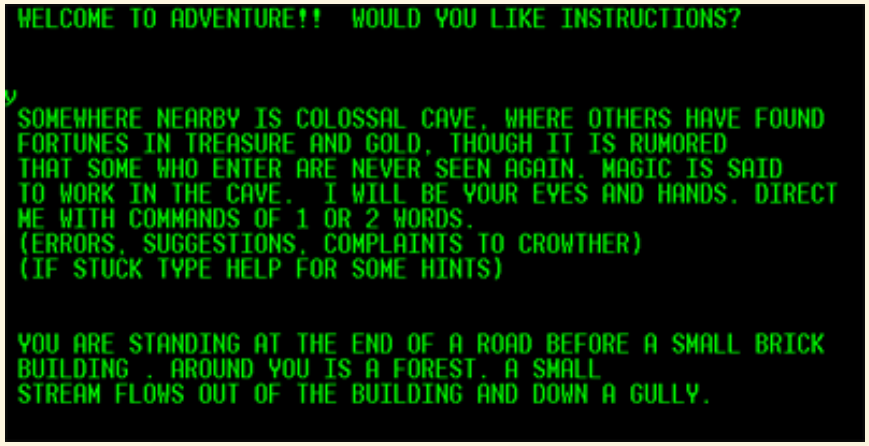


Two decades before *Doom*, *Maze Wars* introduces the first-person shooter by taking players into a labyrinth of passages made from wire-frame graphics.

1975

Atari introduces its home version of *Pong*. Atari's founder, Nolan Bushnell, cannot find any partners in the toy business, so he sells the first units through the Sears Roebuck sporting goods department.

1976

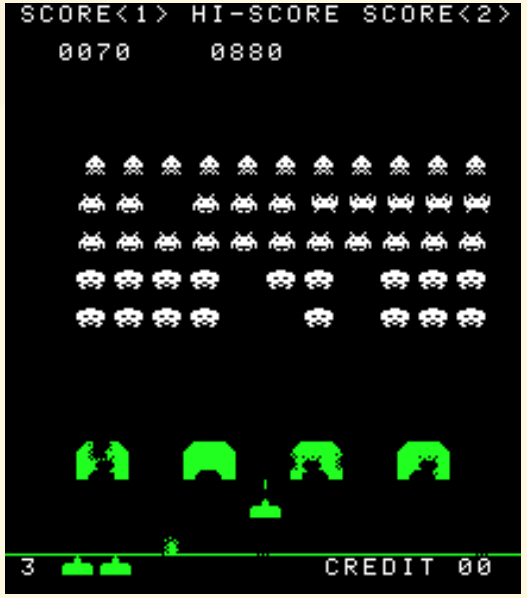


Don Woods's version of the pioneering text-based game, *Adventure* (first created by William Crowther in 1975), plunges players into an imaginary world of caves with treasures. Inspired by Dungeons and Dragons, it paves the way for *Zork* and thousands of other computer role-playing games.

1977

Atari releases the Video Computer System, more commonly known as Atari 2600. Featuring a joystick, interchangeable cartridges, games in color, and switches for selecting games and setting difficulty levels, it makes millions of Americans home video game players.

1978



Taito's *Space Invaders* descends on Japan, causing a shortage of 100-yen coins. Within a year, 60,000 *Space Invaders* machines in the United States tempt Americans to spend millions of quarters driving back the seemingly unstoppable ranks of attacking aliens.

1979

Toy-maker Mattel supplements its handheld electronic games with a new console, the Intellivision. Intellivision has better graphics and more sophisticated controls than Atari 2600, and players love its sports games. Mattel sells three million Intellivision units.

1980

A missing slice of pizza inspires Namco's Toru Iwatani to create *Pac-Man*, which goes on sale in July 1980. That year a version of *Pac-Man* for Atari 2600 becomes the first arcade hit to appear on a home console. Two years later, *Ms. Pac-Man* strikes a blow for gender equality by becoming the best-selling arcade game of all time.

1981

Video game fans go ape over Nintendo's *Donkey Kong*, featuring a character that would become world-famous: Jumpman. Never heard of him? That's because he's better known as Mario—the name he took when his creator, Shigeru Miyamoto, makes him the star of a later game by Nintendo.

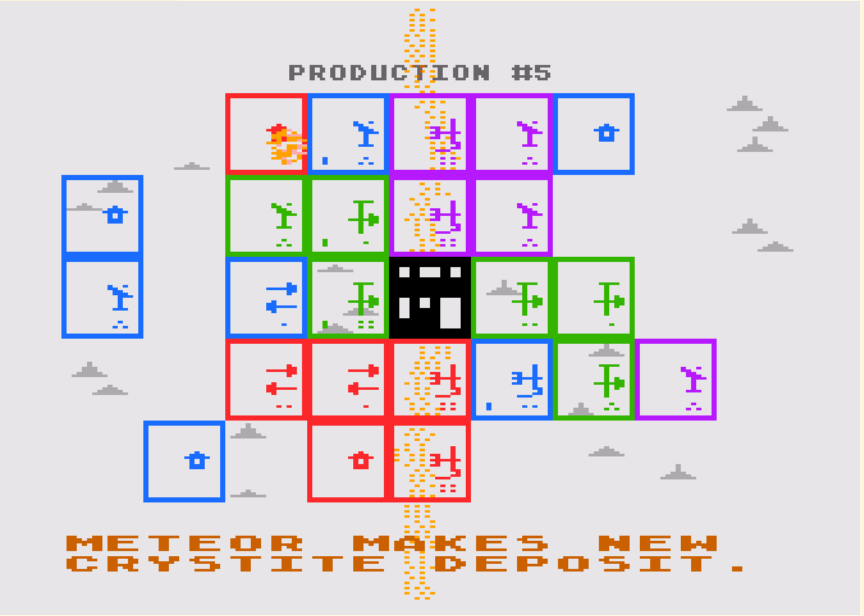
1982

Disney taps into the video game craze by releasing the movie *Tron*. An arcade game featuring many of the contests from the movie also becomes a hit.

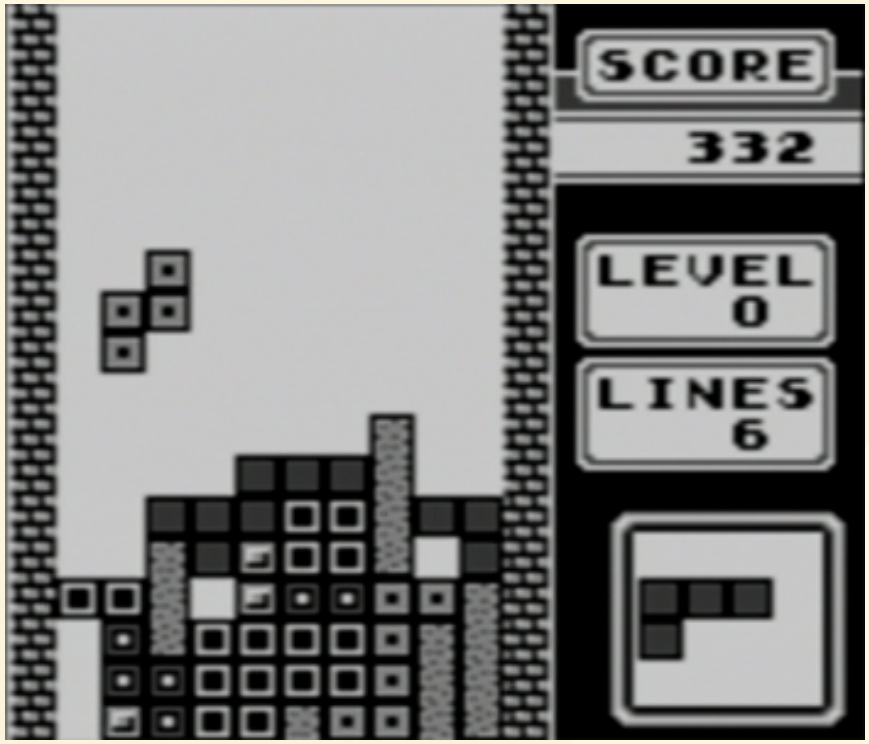
1983

Multiplayer play takes a huge step forward with Dan Bunten's *M.U.L.E.*

In the game, players compete to gather the most resources while saving their colony on the planet of Irata.



1984

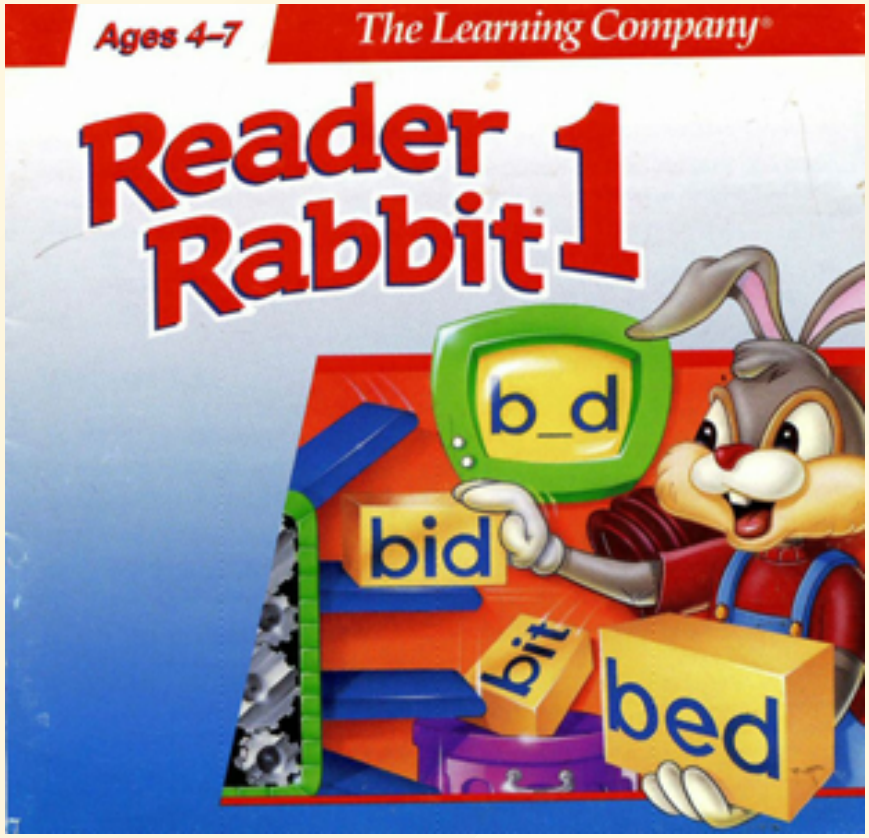


Russian mathematician Alexey Pajitnov creates *Tetris*, a simple but addictive puzzle game. The game leaks out from behind the Iron Curtain, and four years later, Nintendo bundles it with every new Game Boy.

1985

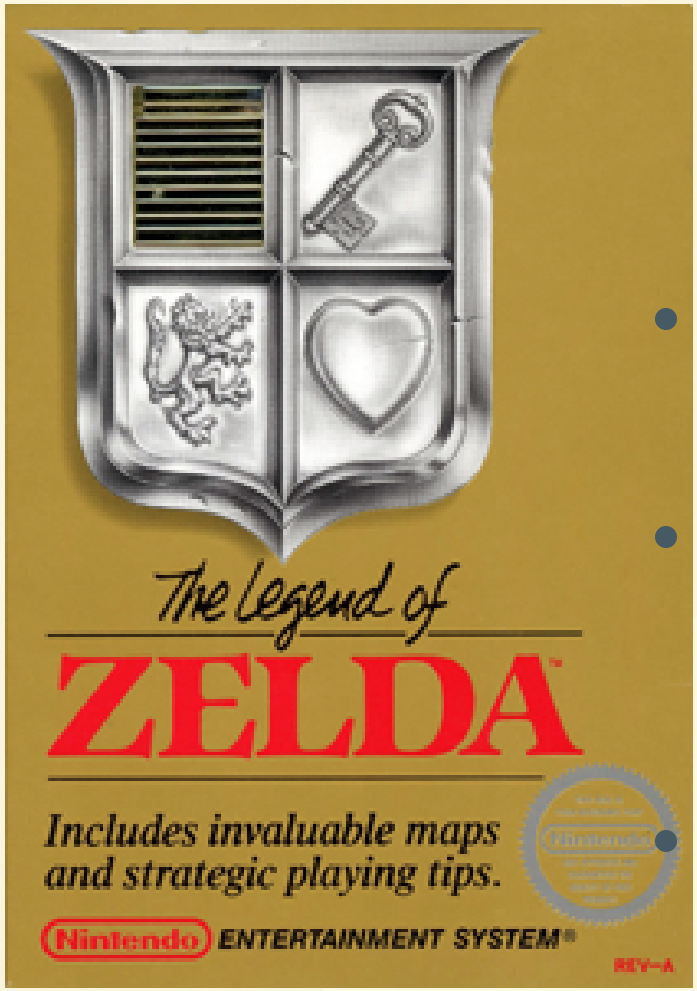
The Nintendo Entertainment System (NES) revives an ailing United States video game industry two years after the Nintendo Corporation released it in Japan as Famicom.

1986



The emerging educational software market leaps ahead with the introduction of The Learning Company's *Reader Rabbit* program. The educational computer business mushrooms with the introduction of CD-ROMs in the 1990s, but crashes with the rise of the Internet.

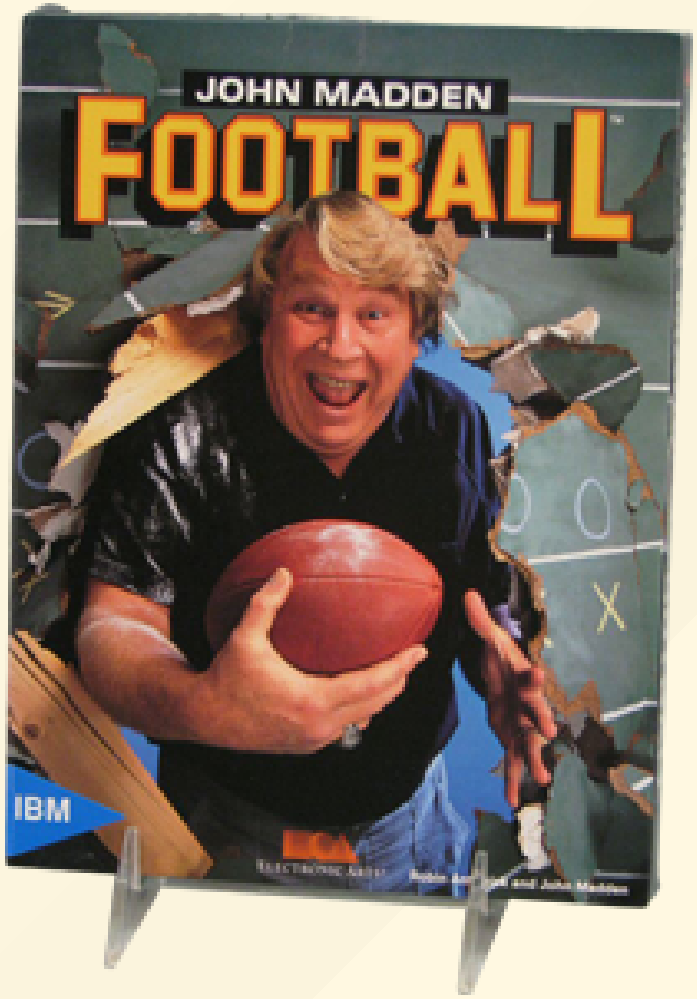
1987



It's a good year for fantasy Role Playing Games

- Shigeru Miyamoto creates *Legend of Zelda*
- SSI wins the video game license for *Dungeons and Dragons*
- Sierra's *Leisure Suit Larry* gives players a different kind of adult role playing game.

1988

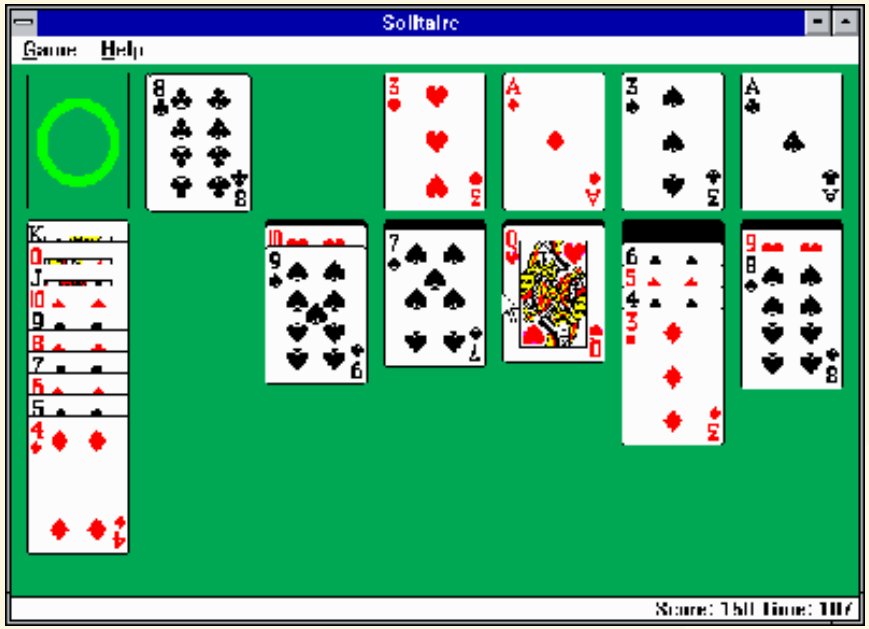


John Madden Football introduces grid-iron realism to computer games, making this game —and its many console sequels— perennial best-sellers.

1989

Nintendo's Game Boy popularizes handheld gaming. Game Boy is not the first handheld system with interchangeable cartridges—Milton Bradley introduced Microvision 10 years earlier—but it charms users with its good game play, ease of use, and long battery life.

1990

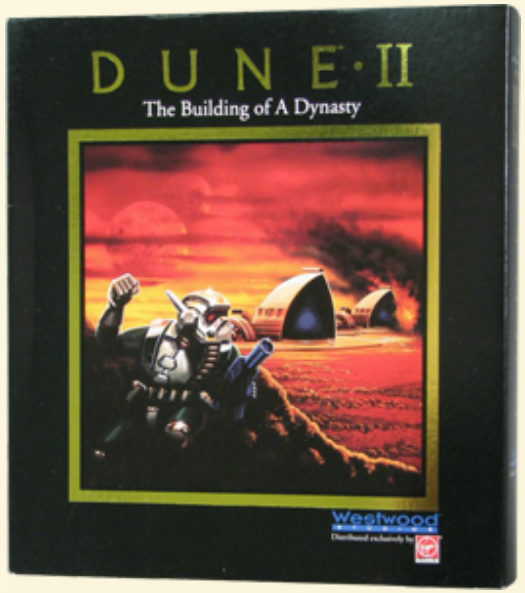


Microsoft bundles a video game version of the classic card game solitaire with Windows 3.0. Millions of users who would not normally pick up a game console find they enjoy playing computer games. Solitaire becomes one of the most popular electronic games ever and provides a gaming model for quick, easy-to-play, casual games like *Bejeweled*.

1991

Sega needs an iconic hero for its Genesis (known as Mega Drive in Japan) system and finds it in Sonic the Hedgehog. Gamers, especially in the United States, snap up Sega systems and love the little blue guy's blazing speed and edgy attitude.

1992



Westwood Studios' *Dune II* establishes the popularity of real-time strategy games that require players to act as military leaders deploying their resources and forces on the fly in order to defeat opponents.

1993

Concern about bloodshed in games such as *Mortal Kombat* prompts United States Senate hearings on video game violence. The controversy riles the industry and prompts the creation of a video game rating system. Ironically, that same year the game *Doom* popularizes "first person shooters."

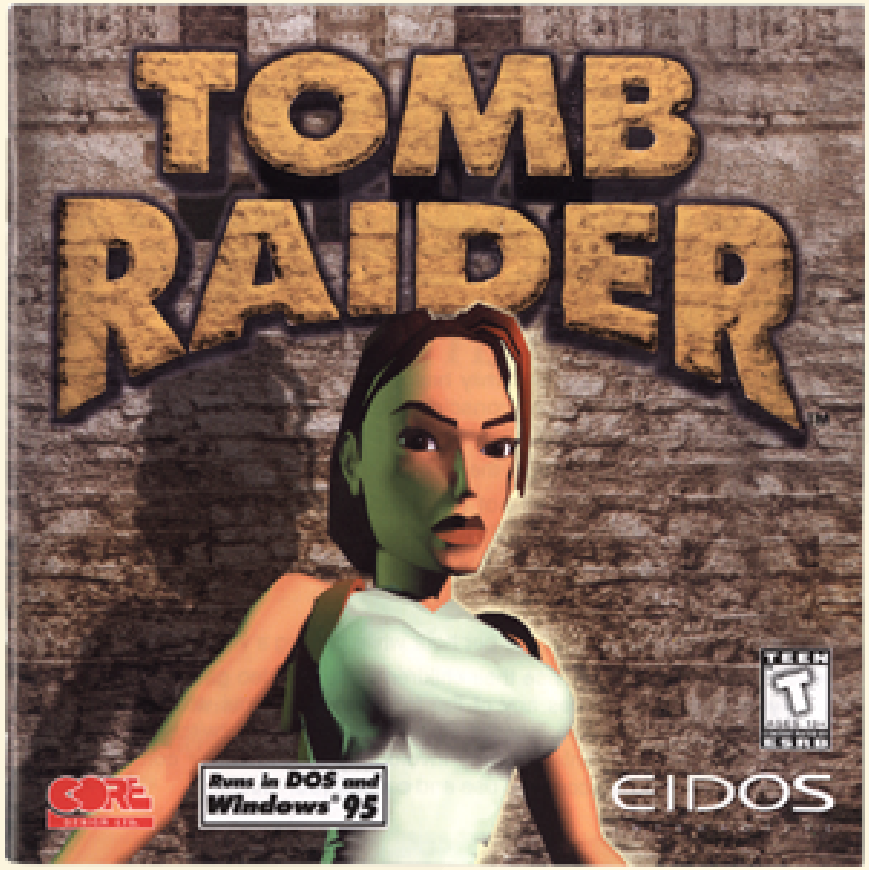
1994

Blizzard releases *Warcraft: Orcs and Humans*, a real-time strategy game that introduces millions of players to the legendary world of Azeroth.

1995

Sony releases PlayStation in the United States, selling for $100 less than Sega Saturn. The lower price point, along with the arrival of Nintendo 64 in 1996, weakens Sega's home console business. When Sony PlayStation 2 debuts in 2000, it becomes the dominant home console and Sega exits the home console business.

1996



Lara Croft debuts as the star of Eidos's adventure game *Tomb Raider*. Players love her, but critics charge that she's an example of sexism in video games.

1997

Machine triumphs over man as IBM's supercomputer chess program Deep Blue defeats world champion Gary Kasparov in a match.

1998

Legend of Zelda: Ocarina of Time transports players to the richly imagined world of Hyrule, full of engaging characters, thought-provoking puzzles, and the most memorable musical instrument to ever appear in a video game.

1999

Sony Online Entertainment's *Everquest* leads hundreds of thousands of users to join guilds, fight monsters, and level up in the multiplayer online world of Norrath.

2000

Will Wright's *The Sims* models real life. It is not the first simulation game—*Utopia* on Intellivision (1982), Peter Molyneaux's *Populous* (1989), Sid Meier's *Civilization* (1991), and Wright's own *SimCity* (1989) preceded it—but it becomes the best-selling computer game ever and the most popular game with female players.

2001

Microsoft enters the video game market with Xbox and hit games like *Halo: Combat Evolved*. Four years later, Xbox 360 gains millions of fans with its advanced graphics and seamless online play.

2002

The U.S. Army releases America's Army video game to help recruit and communicate with a new generation of electronic gamers, and the Woodrow Wilson International Center for Scholars launches the Serious Games Initiative to encourage the development of games that address policy and management issues.

2003

Valve energizes PC gaming with its release of Steam. The digital distribution platform allows players to download, play, and update games.

2004

Nintendo maintains its dominance of the handheld market with the Nintendo DS, an easy-to-use, portable gaming system packed with two processors, two screens, multiplayer capabilities, and a stylus for the touchscreen. Great games like *Super Mario Kart DS* helped too.

2005

Microsoft's Xbox 360 brings high-definition realism to the game market, as well as even better multiplayer competitions on Xbox Live and popular titles such as *Alan Wake*.

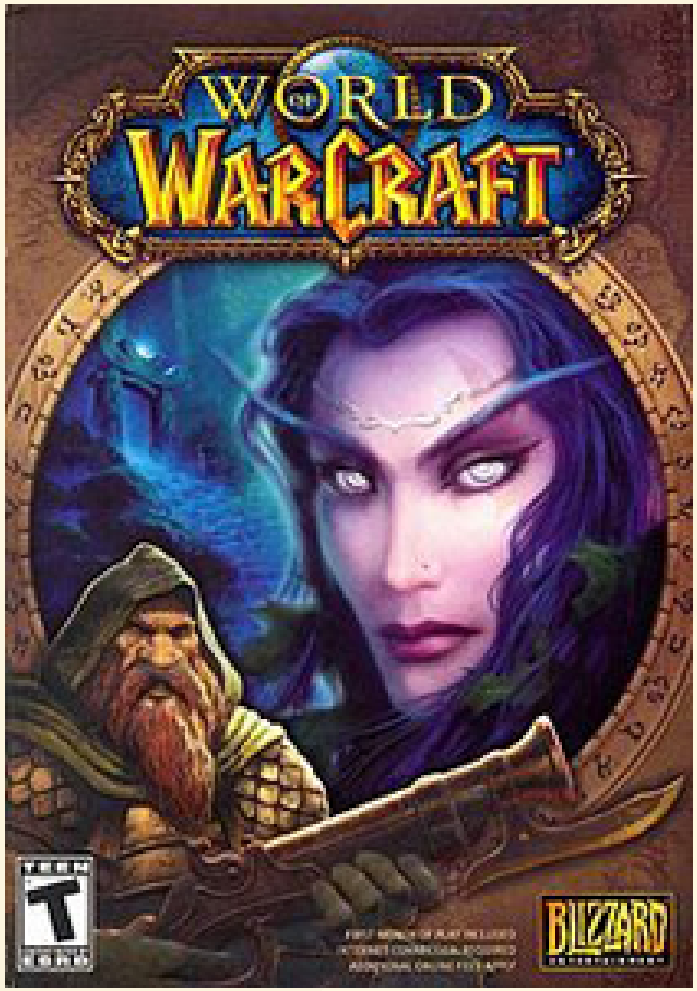
2006

Nintendo Wii gets gamers off the couch and moving with innovative, motion-sensitive remotes. Not only does Nintendo make gaming more active, it also appeals to millions of people who never before liked video games.

2007

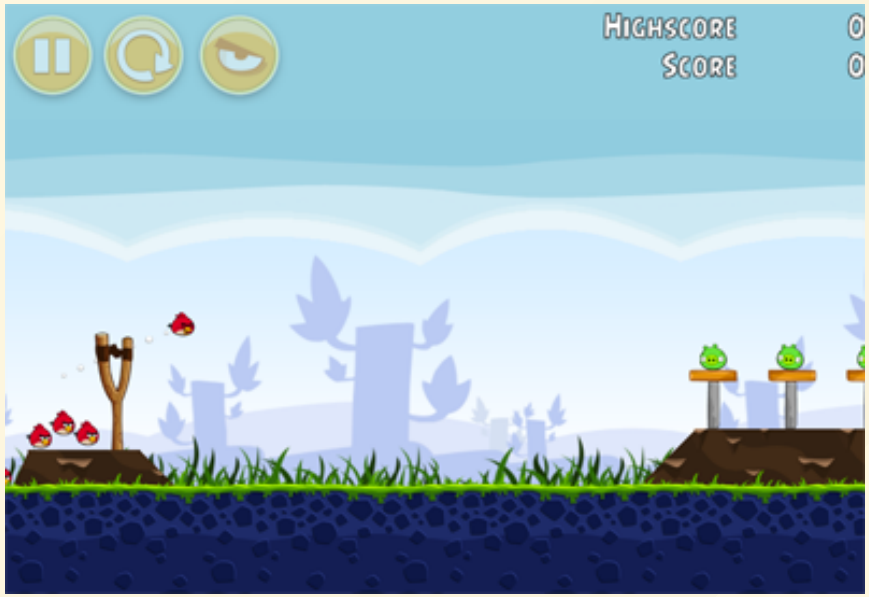
Grab your guitar, microphone, bass, or drums, and start playing *Rock Band*. That's what millions of would-be musicians did with Harmonix's hit title.

2008



More than 10 million worldwide subscribers make *World of Warcraft* the most popular massively multiplayer online (MMO) game. MMOs create entire virtual universes for players and redefine how we play, learn, and relate to each other.

2009



Social games like *Farmville* and mobile games like *Angry Birds* shake up the games industry. Millions of people who never would have considered themselves gamers now spend hours playing games on new platforms like Facebook and the iPhone.

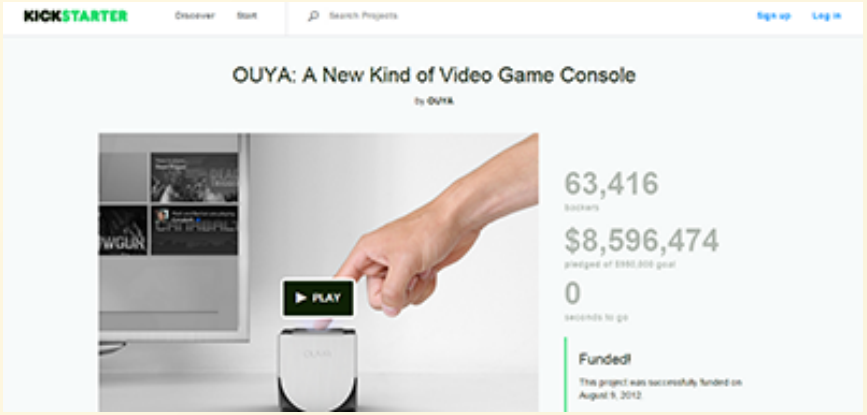
2010

The indie game movement comes of age with the tremendous popularity of *Minecraft*, the addictive brick-building game from Swedish developer Markus Persson.

2011

Skylanders: Spyro's Adventure becomes the first augmented-reality hit by letting players place plastic figures on a Portal of Power to zap characters into the game. Two years later Disney Infinity joins the ranks of toy-video game hybrids.

2012



Crowdfunding site Kickstarter enables game creators to raise millions of dollars to produce new and experimental play platforms such as the OUYA console and the Oculus Rift.

2013

Gone Home, *The Last of Us*, and *Papers, Please* usher in a new wave of mature video game stories that confront players with tough emotional choices in ethically-complex worlds.

2014

"Free-to-play" becomes a dominant business model as blockbusters like *CrossFire*, *League of Legends*, *World of Tanks*, and even *Kim Kardashian: Hollywood* achieve sales in the hundreds of millions of dollars through microtransaction payments for in-game items and premium content.

Çığır açan oyunlar

Pong, Space Invaders, River Raid, Ultima, Tetris, Super Mario Bros, Wolfenstein 3D, Dune II, Half-life, Counter Strike, Grand Theft Auto, Heroes of Might and Magic, Simcity, Sims, Championship Manager, Fifa Series, MUD, Nethack, Fallout, Command and Conquer, Morrowind, Diablo II, ...

Oyun Geliştirme Tekniklerinin Tarihi

İlk cihazlar

- İlk kullanılan cihazlar oldukça kısıtlıydı.
  - Commodore 64, Sinclair Spectrum ZX, Amstrad 464
  - 8bit işlemci, 48-64k RAM, sınırlı grafik gücü
  - Depolama yok, yükleme kaset ile yapılıyor

İlk Cihazlar

- Yalnızca BASIC dili ile oyun geliştirilebilirdi
- Platform bağımsızlığı söz konusu değildi
- Compiler diye bir kavram yoktu
- Kod yazarken her satırın, her komutun hesabı yapılırdı
- Herşey optimize edilmek zorundaydı
- İyi taraf: piyasada 1-2 farklı cihaz vardı :)

İlk Oyunlar

- Grafik ve ses çok temel seviyedeydi
- Odak noktası oynanabilirlik ve senaryo idi

Oyun Fikrinin Yükselişi ve Çöküşü

Orjinal fikir

- 1980'lerin ilk zamanlarında çıkan hemen tüm oyunlar sahneye yeni bir fikir taşıyordu
- Her oyun neredeyse yeni bir genre (janr) oluşturuyordu
- Grafik ve ses ile yapılabilecek şeyler sınırlıydı
- Bu yüzden oyunun satması için orjinal olması önemliydi

Klon oyunlar

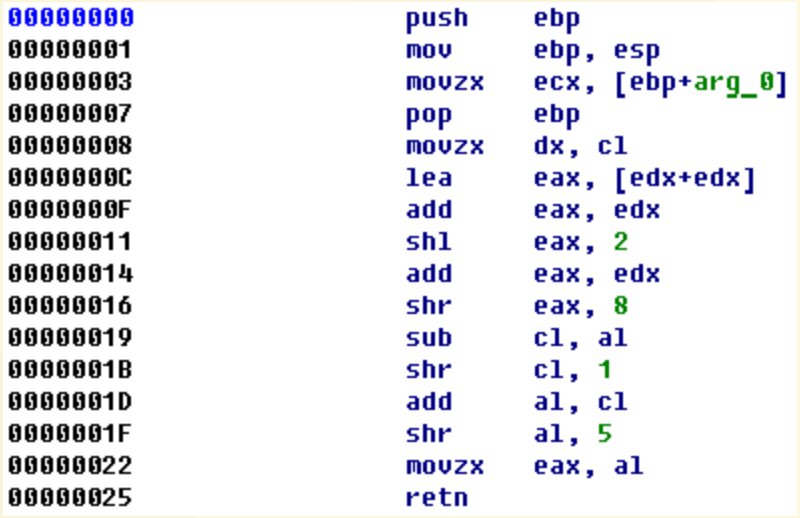
- Özellike 2000'lerde oyunlar tekrar etmeye başladı
  - En büyük sebep: market baskısı
  - Ne satıyorsa onu üret!
  - Zorlamaya gerek yok!
- PC'nin yükselişiyle, grafik ve ses öne çıkmaya başladı
  - Aynı oyunu boya, cilala, tekrar sat

Oyun Geliştirme Ortamları

İlk yıllar

Aslında söylenecek çok bir şey yok

- Machine Language
- Assembly
- BASIC



İlk yıllar

- op-code'ları kağıda yaz
- hex'e çevir (machine code)
- hex loader ile bilgisayara yükle

Assembler

- Assembly dili direk op-codeları kullanarak kod yazmayı mümkün kıldı
- Her programın kendi içinde tanımlı bir hafıza bloğu oldu

C çağı

- Ardından C gelişmeye başladı
- Tamamı C ile yazılan ilk oyun: DOOM
- İnsanlar assembly kullanmadan bir oyun yazıldığına uzun süre inanamadı
- Bu yeni bir çağ başlattı

DOS çağı

- Microsoft DOS
- 16bit'ten 32bit'e geçildi
- İşlemci hızları, RAM artmaya başladı

Windows 95

- Windows 95, DOS üzerinde çalışır
- Kısıtlı kaynaklar W95 ve oyun arasında paylaşılır
- Microsoft bunun mümkün olduğunu kanıtlamak istiyordu
- WinG: ilk başarısız deneme
- Developerlar DOS için oyun üretmeye devam etti

DirectX

- DirectX hardware'e erişmek için bir arayüzdür
- DOS'tan daha hızlı (ve kolay) olduğu iddiasıyla ortaya çıktı
- İlk versiyonu pek kimse umursamadı
- DirectX II, COM modelini kullanıyordu
- Aynı zamanda C/C++ compilerlarını da geliştirdiler
  - Artık WATCOM'u geçiyorlardı

DirectX

- İlk DirectX kullanan W95 oyunu: Pitfall
- DirectX Watcom ile uyumlu değildi
- Oyun geliştiriciler Visual C++'a geçmek zorunda kaldı

Haftaya hazırlık

- Modern oyun geliştirme araçları ve bu araçlarda kullanılan diller nelerdir?