

The background of the entire screen is black and filled with numerous white-outlined, irregular polygonal shapes of various sizes, representing asteroids. A large, horizontal rectangle with a thick blue border is centered on the screen, containing the main title and a start button. Below this rectangle, at the bottom of the screen, are three smaller rectangles, each with a blue border, containing the names of the developers. The text is all in a white, pixelated, monospace font.

CSC 329

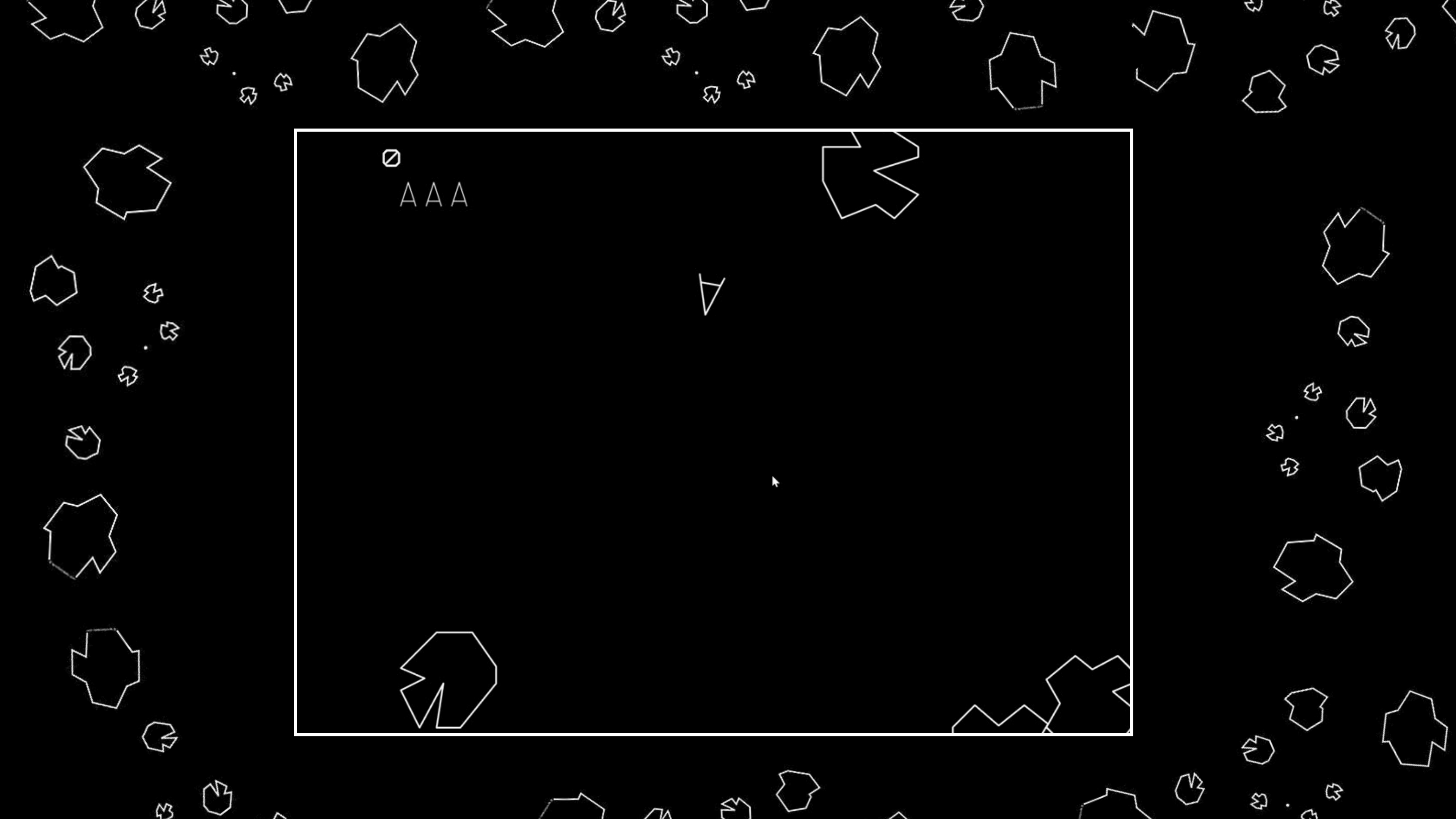
ASTEROIDS

START!

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AAA



GRAPHICS

- Graphics are low-poly and rudimentary.
- Composed of vectors (as opposed to rasters) to allow for precise aiming.
- Made for the Atari 2600 in 1981, which had **128 bytes of ram** and a maximum resolution of **160 x 192 pixels** (aka basic).
- Came out around the same time as other arcade games like Space Invaders and the OG Pac-Man.

SOUNDS



Explosion

- Audio for this game is typical for arcade-era games (simple but effective).
- Sounds indicate when you hit an asteroid, when you are firing, when a saucer is present, when you gain a life, etc.
- There are sounds for different magnitudes (ex. hitting larger asteroids makes a louder explosion sound and larger saucers are louder).

GAMEPLAY

- Movement is not as straightforward as you would probably think.
- In Asteroids, you can only directly move forward (up-arrow on browser version).
- X-axis movement is limited to **left and right rotation**. Meaning, in order to move “backwards”, you would have to accelerate forward while rotating 180 degrees.
- Forwards movement follows the direction the cursor or player sprite is pointing.
- Gameplay consists of shooting at obstacles (asteroids and saucers) and avoiding getting hit.

The background of the slide is a dark blue space filled with white outlines of various sized asteroids and small saucers, mimicking the Asteroids game. A central white rectangle with a blue border contains the text.

..... GAMEPLAY

- You gain an extra life for every 10,000 points earned.
- In the original 1979 release, the game ends either when you reach 99,990 points or when you run out of lives.
- You “win” levels by hitting all asteroids and saucers and clearing the screen. Hitting big asteroids breaks them apart into smaller ones, which makes it more challenging.
- Its simple UI makes it easier to focus on the gameplay, which is addictive.
- However, this can also make it repetitive and boring after a while, which is a typical drawback for this kind of game.

..... INFLUENCERS

Asteroids was heavily influenced by earlier games in the arcade and computer game industry.

- 1.Spacewar! (1962): One of the first video games, which featured spaceships battling in a star-filled arena
- 2.Computer Space (1971): The first commercial arcade game, which also involved shooting in space.
- 3.Space Invaders (1978): Popularized shooting enemies to survive. Asteroids expanded on this by introducing free-floating asteroids that fragmented into smaller pieces, creating more dynamic and unpredictable gameplay.
- 4.Cosmos: An unfinished game that Asteroids was directly based on, serving as its foundation.
- 5.1970s Science Fiction Craze: The era's fascination with space and sci-fi heavily influenced the design and aesthetic of Asteroids.



INFLUENCES

- Industry Impact: Led to countless adaptations, sequels, and spiritual successors across both arcade and home consoles. Games like Stardust (1993), Super Stardust HD (2007), and even modern indie titles have drawn inspiration from its core mechanics.
- Mechanics Influence: Asteroids introduced shooting and dodging mechanics in a free-floating, inertia-based environment, setting a new standard for action-packed gameplay. This innovation directly influenced later arcade hits like Defender (1981) and Robotron: 2084 (1982), as well as modern twin-stick shooters such as Geometry Wars (2003).
- Physics-Based Movement: It laid the groundwork for future space games that embraced Newtonian physics. By demonstrating how momentum and direction affect movement in a zero-gravity setting, Asteroids influenced titles like No Man's Sky (2016) and Kerbal Space Program (2011).
- Establishment of Space Shooters: Asteroids helped solidify space shooters as a major genre in gaming. Its success paved the way for iconic titles like Galaga (1981), Gravitar (1982), and Space Duel (1982), all of which expanded on the space combat formula.
- Narrative Space Games: Contributed to the foundation of space-themed storytelling in gaming. Its success encouraged developers to explore deeper, more immersive space experiences. Games like Elite (1984), Wing Commander (1990), and Mass Effect (2007) built upon the themes and mechanics introduced by early space shooters.

RECEPTION

Massive Success (1979):

- Asteroids became Atari's best-selling arcade game of all time, with over 70,000 units sold worldwide.
- Its simple yet addictive gameplay and realistic physics-based movement captivated players, making it a must-play in arcades.
- The game's overwhelming popularity solidified Atari's dominance in the gaming industry during the late 1970s.

Cultural Impact:

- Became a symbol of the golden age of arcade gaming, representing the excitement of early video game culture.
- It has been referenced in TV shows like The Simpsons, featured in movies such as Pixels (2015), and frequently spotlighted in gaming retrospectives.
- Today, Asteroids remains a nostalgic touchstone of the late '70s and early '80s, reminding players of the era when arcade cabinets ruled the entertainment world.

SUCCESSORS

Asteroids had several sequels and remakes:

1. Asteroids Deluxe (1981) – Introduced new enemies, a shield feature, and increased difficulty, refining the original formula.
2. Blasteroids (1987) – A graphically enhanced sequel featuring power-ups, co-op play, and new enemy types for a deeper experience.
3. Asteroids Recharged (2021) – A modern remake with updated visuals, new mechanics, and a fresh soundtrack, bringing the classic to a new generation.
4. Spiritual Successors – Titles like Super Stardust and Asteroids Hyper 64 expanded on the franchise's legacy, keeping its core gameplay alive in new and innovative ways.

HISTORY

- Lyle Rains and Ed Logg are majorly responsible for the creation of Asteroids.
 - Rains - Vice President of Atari Engineering
 - Logg - Programmer in Atari Arcade Division
- Rains wanted to use raster graphics, but Logg had more experience with vectors and they decided to make it a vector game.
 - Logg advocated for a vector game as it would allow for more precise aiming
- Logg was inspired by Spacewar! when creating the controls and the physics of the game, and implemented a high score table modeled after Exidy's Star Fire
- Demand for Asteroids was so high they shipped out about 300 Asteroids games in game cabinets originally intended for Lunar Lander.

PLATFORMS

- **Arcade - 1979**
 - Original release
- **Atari 2600 - 1981**
 - Colorful
 - Raster graphics
- **Atari 5200 - Announced by never released**
 - Controller made it hard to play
 - Raster graphs
- **Atari 7800 - 1984**
 - 3D asteroids and UFOs
 - Maximum two players
- **Windows, Playstation2, Xbox360 - 2003-2005**
 - Atari Anthrology
 - Included 80 Atari games



..... PLATFORMS

Arcade - 1979

Atari 2600 - 1981

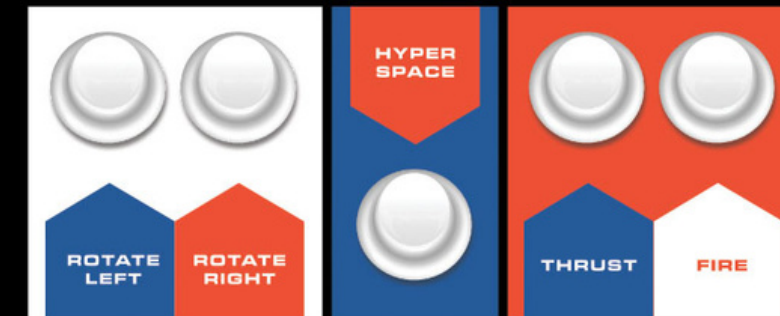
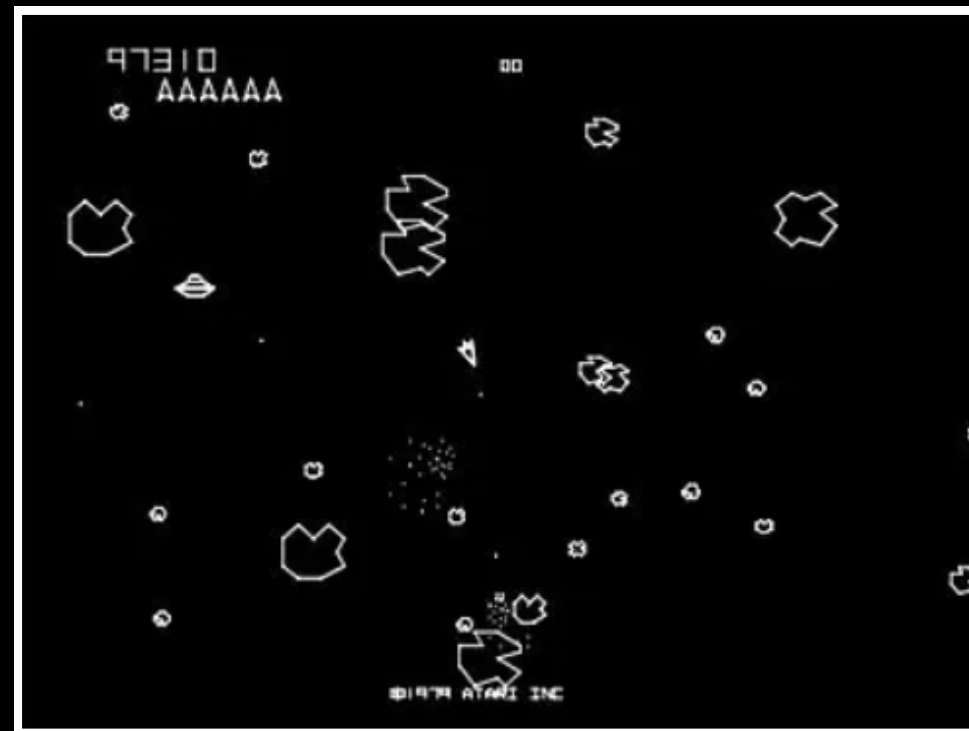
Atari 5200 - Announced by never released

Atari 7800 - 1984

Windows, Playstation2, Xbox360 - 2003-2005

PLATFORMS

Arcade - 1979



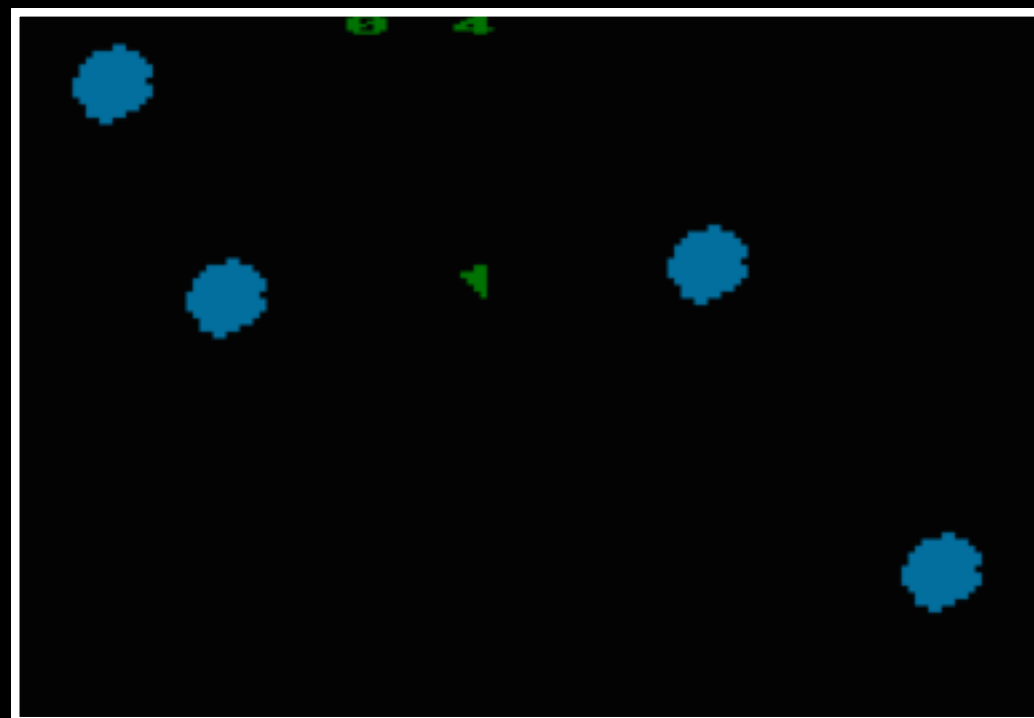
PLATFORMS

Atari 2600 - 1981



PLATFORMS

Atari 5200 - Announced by never released



PLATFORMS

Atari 7800 - 1984



PLATFORMS

Windows, Playstation2, Xbox360 - 2003-2005



WHY IT'S UNIQUE

- **Addictive Game Play**

- Players felt they had to “clear the screen”.
- Game never ends
- “Heartbeat” sound in background that speeds up

- **Top Ten High Scores**

- One of the first games to allow players to type their initials to save their score.
- Competitive - People wanted to beat the high score
- Replay Value

- **Vector Graphics**


- Many games at this time were using raster graphics.
- Vector graphics are scalable, made it look smooth.

- **Real Physics**

- One of the first video games to use real world physics
- Asteroids split when shot
- Spaceship had momentum

REFERENCES

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THANK YOU!