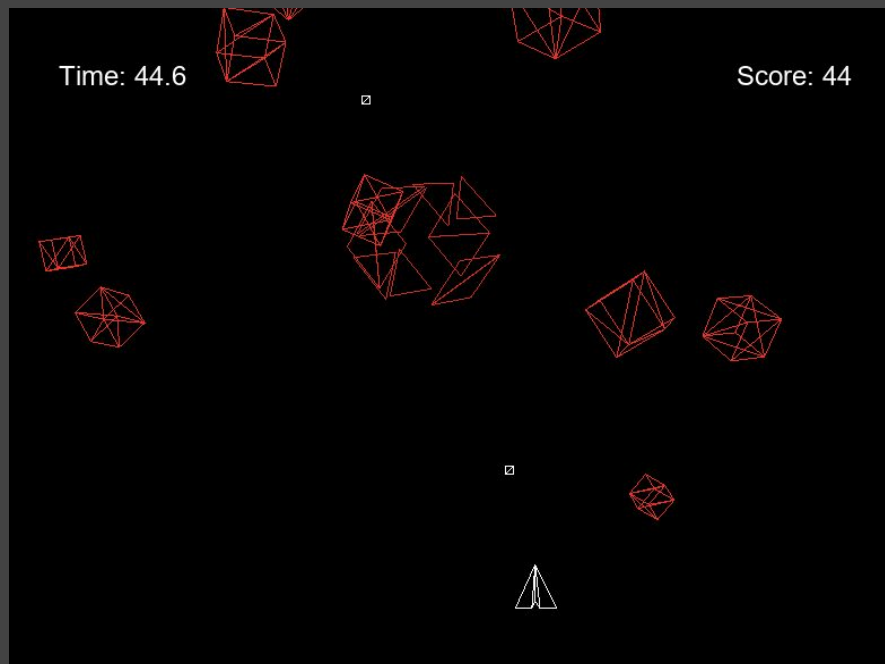




# ASTEROIDS

**ASTEROIDS** is a simple spaceship in an asteroid field game developed with a **custom C++ Game Engine**.



**.Source code?** <https://github.com/amuoz/Asteroids>

**.How to PLAY?** Download **Asteroid.zip** and execute **11bitsAsteroids.exe**

## .Controls

<b>A, D</b>	Horizontal movement
<b>SPACE</b>	Shoot
<b>R</b>	Restart

## .Configuration file

You can change the game's default configuration by editing **CONFIG.CONF** file in **config folder** (Do not change the names!)

Configuration will **HOT-RELOAD** after **restart** for testing purposes.



```
FORWARD_VELOCITY=4.0  
ANGULAR_VELOCITY=6.28  
THRUST=9999.0  
MASS=300.0  
FREQUENCY=1.0  
FREQUENCY_INCREASE=0.02  
BULLET_VELOCITY=15.0  
BULLET_FREQUENCY=0.5  
EXPLOSION_DURATION=0.5  
RAPID_FIRE=1  
DIFFICULTY_INCREASE=1.2
```

## .Gameplay

**Dodge** the asteroids **and destroy** as much as you can in this **endless** game.

You have different **stages** that you can recognize by the **colors** of the asteroids. Be careful, their **speed** will also increase.



**Rapid fire** option has been added to enhance gameplay.

**Asteroids** collide and **bounce** between each other.

## .Technical

### .C++ Libraries

OpenGL3, GLFW, GLAD, GLM, FreeType, VS2017

### .Interesting stuff

- Custom **physics** and **collisions**.
- **Optimized memory** usage recycling asteroids.
- Generic **entity pool**.
- **Actor** abstract class.
- **Geometry shader** explosions.