

Ship

- SCREEN WIDTH: double
- SCREEN HEIGHT: double
- SHIP_RADIUS: float
- hitbox: Hitbox
- collisionCount: int
- bullets: std::vector<Bullet>
- shootTimer: sf::Clock
- shootInterval: sf::Time
- hasCollided: bool
- shape: sf::ConvexShape
- angle: double
- x: double
- y: double
- speed: double
- acceleration: double
- rotationSpeed: double
- +getX(): double
- +getY(): double
- +checkCollision(objectPosition: sf::Vector2f, objectSize: float): bool
- +incrementCollisionCount(): void
- +getCollisionCount(): int
- +move(): void
- +setAngle(newAngle: double): void
- +accelerate(): void
- +decelerate(): void
- +rotateLeft(): void
- +rotateRight(): void
- +update(window: sf::RenderWindow&): void

Hitbox

- hitbox: sf::FloatRect
- +Hitbox(x: double, y: double, width: double, height: double)
- +update(x: double, y: double): void
- +checkCollision(asteroidPosition: const sf::Vector2f&,
- asteroidRadius: float): bool

Bullet

- BULLET SPEED: float
- BULLET RADIUS: float
- shape: sf::CircleShape
- position: sf::Vector2f
- angle: float
- +Bullet(x: float, y: float, angle: float)
- +update(): void
- +isOutsideWindow(window: const sf::RenderWindow&): bool
- +operator==(other: const Bullet&): bool

Main

- score: int
- asteroids: std::vector<Asteroid>
- window: sf::RenderWindow
- playerShip: Ship
- font: sf::Font
- coordinatesText: sf::Text
- scoreText: sf::Text
- collisionText: sf::Text
- gameText: sf::Text
- asteroidSpawnClock: sf::Clock

+main()

Asteroid

- x: float
- y: float
- velocity: float
- directionX: float
- directionY: float
- shape: sf::CircleShape
- size: float
- +Asteroid(x: float, y: float, velocity: float, directionX: float, directionY: float, size: float)
- +checkCollision(bulletPosition: const sf::Vector2f&, bulletRadius: float): bool
- +operator==(other: const Asteroid&): bool
- +update(): void
- +getShape(): const sf::CircleShape&
- +getX(): float +getY(): float
- +getSize(): float