

Prefab Name:

EnemyBullet

Purpose

The EnemyBullet prefab represents the projectile fired by enemy characters (such as mafia enemies). It is spawned whenever an enemy gun shoots. The bullet travels in a straight direction and will later be used to damage the player.

Components Included

1. Sprite Renderer

- Displays the bullet graphic
- Assigned a simple pixel bullet sprite
- Sorting layer: *Enemies* or *Projectiles* (optional, depending on game setup)

2. Rigidbody2D

- Body Type: Kinematic
- No gravity
- Does not rotate
- Used only for movement via scripts

3. Collider2D (Circle or Box)

- IsTrigger: Checked
- Allows the bullet to detect collisions without bouncing

- Will be used to damage the player later

4. EnemyBullet.cs Script

Handles bullet behavior:

- Movement direction
- Speed
- Lifetime
- Destroying itself on impact

```
public class EnemyBullet : MonoBehaviour
{
    public float speed = 8f;
    public float lifetime = 3f;

    private float timer;

    void Update()
    {
        transform.Translate(Vector2.right * speed * Time.deltaTime);
        timer += Time.deltaTime;
        if (timer >= lifetime)
            Destroy(gameObject);
    }

    private void OnTriggerEnter2D(Collider2D other)
    {
        // Collision handling will be added later
    }
}
```

How It Is Created at Runtime

The bullet is spawned by the EnemyShooter script using:

```
Instantiate(bulletPrefab, firePoint.position, firePoint.rotation);
```

- `bulletPrefab` is the `EnemyBullet` prefab
 - `firePoint` is the tip of the gun on the enemy
 - The bullet automatically moves in the facing direction of the enemy
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How It Works With Enemy Shooter

1. `EnemyShooter` calls `Shoot()`
 2. `Shoot()` instantiates the `EnemyBullet` prefab
 3. The bullet begins to move immediately along its local +X axis
 4. Bullet destroys itself after a set lifetime
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Why This Prefab Is Useful

- Keeps bullet logic modular and easy to modify
- Makes shooting enemies easy to add or remove
- Allows the bullet sprite, speed, or behavior to be changed in one place
- Prevents duplication of bullet code across multiple enemies