Round Spawn System

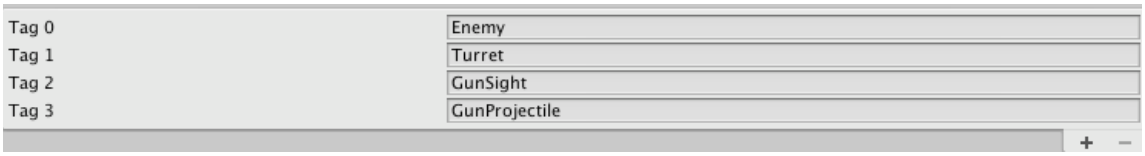
1.0

If you have any questions, or suggestions for improvements, please email robert.wells@gandhigames.co.uk.

DEMO SCENE SETUP

For the demo scene to work correctly please add the following tags and layers. These are only required for the demo scene; you do not need to setup any custom tags or layers when using the Round Spawn System.

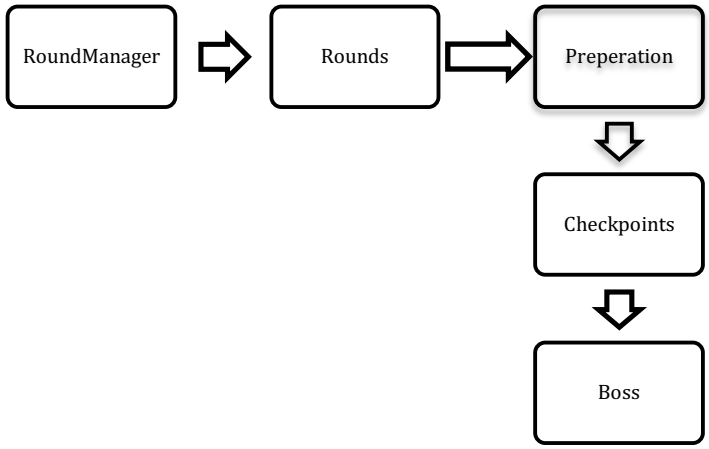
Tags: Enemy, Turret, GunSight, GunProjectile



Layers: Enemy

OVERVIEW

Each round has a user defined number of checkpoints, within each checkpoint you can define: how long the checkpoint runs for, what enemies are spawned, enemy spawn chance, time between enemy spawns, and the maximum number of enemies that can be spawned.



By separating a round into a number of checkpoints you can easily set the intensity of not only the game, but each individual round.

QUICK START

1. Add Round Manager class to scene
2. Setup round manager: setup enemy prefabs, round time, bosses, preparation time etc.
3. Implement the request events (see Events section below for more information).
4. Call RoundManager.Instance.Begin () to start the round manager.

QUERYING ROUND MANGER

For full code documentation please see the separate code documentation. However, a number of queries that can be run against the Round Manager are shown below.

Please note: most of the interaction with the round manager is through reacting to events rather than direct querying.

RoundManager.Instance: returns an instance of the RoundManager class. Enables access to the RoundManager class from any script.

RoundManager.Instance.CurrentRound: returns the currently executing round.

RoundManager.Instance.CurrentRound.CurrentCheckpoint: returns the currently executing checkpoint.

RoundManager.Instance.CurrentRound.InPreperation: returns true if the current round is in the preparation stage.

RoundManager.Instance.CurrentRound.RoundTime: returns the current remaining round time as a float.

RoundManager.Instance.CurrentRound.RoundTimeInSeconds: returns the remaining round time in seconds.

RoundManager.Instance.CurrentRound.RoundTimeInMinutes: returns the remaining round time in minutes.

RoundManager.Instance.CurrentRound.RoundTimeInMinutesSeconds: returns the remaining round time in minutes and seconds.

RoundManager.Instance.CurrentRound.RoundTotalTime: returns the total round time (including preparation time) as a float.

RoundManager.Instance.CurrentRound.RoundOver: returns true if round is over.

EVENTS

Events are raised during each round; they allow you to easily extend the round managers functionality. It is up to you how (or if) you react to these events.

Please note: Events can contain useful information. For example, the event 'EnemySpawnRequestEvent' contains the enemy prefab that should be spawned.

A number of examples of how to react to events are included in:

Scripts/Demo Scripts/Event Examples/

A template for each event is included in:

Scripts/_Round System/Event System/_Templates

These templates provide a quick starting point.

Important: there are a number of important events that should be reacted to:

- EnemySpawnRequestEvent
- ObjectSpawnRequestEvent
- BossSpawnRequestEvent

It is important to include code to react to these request events otherwise enemies/objects will not be spawned, and if you enable 'destroy enemies on round start/end' in the round manager you need to respond to the event 'DestroyCurrentEnemiesRequestEvent'. Examples of all three are included in the Event Examples folder.

Rough Order Of Events

FirstRoundEvent: raised at the beginning of the first round. Only called once per game.

LastRoundEvent: raised the beginning of the last round. Only called once per game.

RoundStartEvent: raised at the beginning of each round.

PreperationStartEvent: raised at the beginning of a rounds preparation stage. If there is no preparation stage, then the event is not raised.

PreperationEndEvent: raised at the end of a rounds preparation stage. If there is no preparation stage, then the event is not raised.

CheckpointStartEvent: raised at the beginning of each of a rounds checkpoint.

CheckpointEndEvent: raised at the end of each of a rounds checkpoint.

BossCountDownBegunEvent: raised at the beginning of a boss countdown, if: a round has a boss, and the boss has a countdown period.

BossKilledEvent: raised when a boss is killed.

RoundEndEvent: raised at the end of each round.

FinishedRoundEvents: raised when all rounds have finished.

Request Events:

It is important to respond to these events to enable the full functionality of the round manager.

DestroyCurrentnemiesRequestEvent: raised when all currently spawned enemies should be destroyed. For example, this is raised when 'DestroyAllEnemiesOnRoundEnd' has been enabled in the round manager and a round ends.

EnemySpawnRequestEvent: raised when an enemy should be spawned. The event contains the enemy prefab.

ObjectSpawnRequestEvent: raised when a preparation object should be spawned. The event contains the object prefab.

BossSpawnRequestEvent: raised when a boss should be spawned. The event contains the boss prefab.

Other Important Classes

RoundBoss: attach to any round boss. This script raises the BossSpawnedEvent and informs the current round when the boss has been killed.

RoundEnemy: attach to any round enemy. Informs the current round when an enemy has been spawned and killed.