

WORKSHEET TASKS

Version 1.0
BSc Computing for Games
Unreal Blueprints Worksheet

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Introduction

The goals of this series of workshops is to obtain a good working knowledge of Visual Scripting system in Unreal which is called Blueprints. This will enable you to not only create simple systems in a game (e.g. Triggers) but create full games.

Blueprints is the Visual Scripting language which is shipped inside Unreal Engine 4. This language is node based, where functions and variables can be represented as nodes on the graph and the relationship between these are defined by connections. These connections also allow you to easily see the flow of data through your code.

"We find you need to make a game wrong at least two or three times before you find the right path. ... We took a lot of opportunity to design and explore, knowing that a lot of it would be thrown away."

— Ken Wong, lead designer
Monument Valley

Objectives

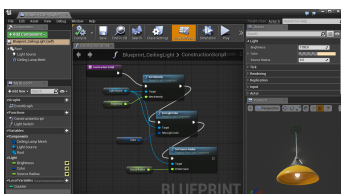
- (A) **Implement** An user interface using UMG
- (B) **Explain** the basic makeup of a Particle system
- (C) **Apply** your knowledge of UMG to create a main menu

Worksheet Setup

This is a continuation of worksheet 3, you should first finish off worksheet 4

Worksheet Tasks

1. As individuals carry out the following tasks
 - (A) Follow this video to **create a Main Menu** - <https://www.youtube.com/watch?v=yua1KSjJDdY>
 - (B) **Add a UI** to the main game to display a health and score
 - (C) **Create an explosion** when you destroy an enemy <https://www.youtube.com/watch?v=WDIhrn6XhHg>
 - (D) **Play a sound** when the enemy is destroyed <https://docs.unrealengine.com/latest/INT/BlueprintAPI/Audio/PlaySoundatLocation/index.html>
 - (E) **Add a door** to the level https://wiki.unrealengine.com/Blueprint_Automated_Door_Tutorial
 - (F) **Add an exit menu**, this should be triggered when the player's health reach 0. This menu will allow you to restart the game



Unreal Engine Blueprints

Additional Guidance

When you are coding it might be difficult to figure out the state of the application, it is often a good idea to set a break point or use Print String function.

Additional Resources

- Introduction to Particle Systems <https://app.pluralsight.com/library/courses/introduction-particle-systems-unreal-engine-1880/table-of-content>
- UI Animation <https://www.youtube.com/watch?v=F4QvCX09XaQ>
- UMG Guide <https://docs.unrealengine.com/latest/INT/Engine/UMG/UserGuide/>