

UE4 Worksheet 1: Building an FPS

Version 1.0

Creative Computing

COMP280

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|  | Introduction In this worksheet you will follow an Unreal Tutorial in order to become familiar with UE4 and C++. Final ProductBy the end of the workshop, we are going to have a basic FPS with the following featuresA typical FPS ControllerThe ability to shoot a gunProjectiles which will hit targetsTargets will have health values, when health hits zero it diesTargets will change colour when hitYou have a limited amount of ammo, when you are out, you can’t shootAn Ammo Pack pickupYou will have a bomb which destroys targets in a radius. You only have a limited supply of bombs.A timer which counts down from 2 minutesA UI which displays ammo and timeIf you use the bomb it will knock some time offThe level will end when all targets are destroyed, or the timer reaches zeroSetupYou will start by creating a C++ First Person ProjectOpen the Unreal EngineSelect the New Project TabSelect First Person, ensure that the folder is the scratch driveName the Project as COMP280-FPSHit the Create Project buttonSessionDepending on your experience with UE4 you can complete the tasks above or you can follow the tutor’s live demonstration or complete the tasks above.If you are a beginner, it might be worth completing the UE4 Quick start first before tackling the tasks.Stretch GoalsIf you complete the task before the allocated time, then please consider completing the following stretch goalsHave a new level which displays the time and the number of targets destroyedThe damage of the bomb falls off over distance i.e. in any objects caught in the centre of the blast received more damage than those in the outerAdd additional Weapons with different rate of fireAdd a grenadeAdd different type of enemiesHave the bomb and grenade give damage to the playerResourcesThese resources have been collected together in order to support the completion of the workshop.UE4 Quickstart <https://docs.unrealengine.com/en-US/Engine/QuickStart/index.html> C++ and Unreal <https://learn.unrealengine.com/home/LearningPath/90587?r=False&ts=637056209158467820> C++ and Blueprints <https://www.raywenderlich.com/185-unreal-engine-4-c-tutorial> C++ FPS Tutorial <https://www.youtube.com/watch?v=NyXq0Hy9xQs> |
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