**Spike:** 3.P

**Title:** Unreal Engine Spike Report

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**Goals / deliverables:**

The goal of this spike report was to analyse and discuss a Game Engine and its frameworks, being able to demonstrate knowledge on these frameworks, how they work and what they perform for the developers using the Engine. We also needed to present the games made with Unreal Engine and the different versions of the Engine that has been released through the years and what additions each version brang.

**Technologies, Tools, and Resources used:**

For this task I utilized a mixture of Unreal Engine’s official documentation and my own knowledge as I personally use Unreal Engine a lot during my spare time.

* <https://dev.epicgames.com/documentation/en-us/unreal-engine/gameplay-ability-system?application_version=4.27>.
* <https://dev.epicgames.com/documentation/en-us/unreal-engine/media-framework-overview?application_version=4.27>.
* <https://dev.epicgames.com/documentation/en-us/unreal-engine/gameplay-framework-in-unreal-engine>.

**Tasks undertaken:**

I used Google to look up the selected Frameworks and when writing I used a mixture of my own knowledge on the systems and the documentation to construct this report.

* I am currently building a Game in Unreal Engine that makes heavy use of the GAS. I am creating Gameplay Effects, Gameplay Abilities, Attribute Set’s for all entities in the Game and Gameplay Cue’s to be played when an Ability is either activated of destroyed.
* For the Media Framework, this knowledge was all based on Unreal Engine’s documentation.
* For the Gameplay Framework, this is based on experience using the Engine, in my projects I have created Actors, Game Mode, made use of a Camera Class, placed in Components that exist independently on objects, made use of child classes and so on.
* Looked at the different Engine versions and what they brought as I only started using Unreal Engine during its 4’th update.

**What we found out:**

I found out more about Unreal Engine’s flow in general and how modular the components are. I also learned a lot about the Media Framework and how in-depth it goes with the file types it accepts and how it loads data to and from memory. How many versions there have been and the impact each update has had as every major iteration that have brought something fairly big to the Engine like Blueprints, better rendering and a lot more.

**Open issues/risks** [Optional – **remove** heading/section if not used!]**:**

It was hard to word the report, but I am not the greatest at report writing.