

COMP350: Algorithms & Optimisation

2: PS4 Dev Kit & Profilers

Learning outcomes

By the end of today's session, you will be able to:

- ▶ **Develop** games for the PS4
- ▶ **Understand** the usage of a profiler
- ▶ **Profile** your own code base

Developing for the PS4



Coffee Break



Profilers




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 - ▶ GPU - Deferred Lighting, Transparent, Post Processing

Unity Profiler



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- ▶ Enabling **Deep Profile** will add a significant overhead to larger games
 - ▶ Surround you code with **Profiler.BeginSample** & **Profiler.EndSample** this will appear in the Profiler
- ▶ You should consider Profiling a development build as the Editor adds significant overhead

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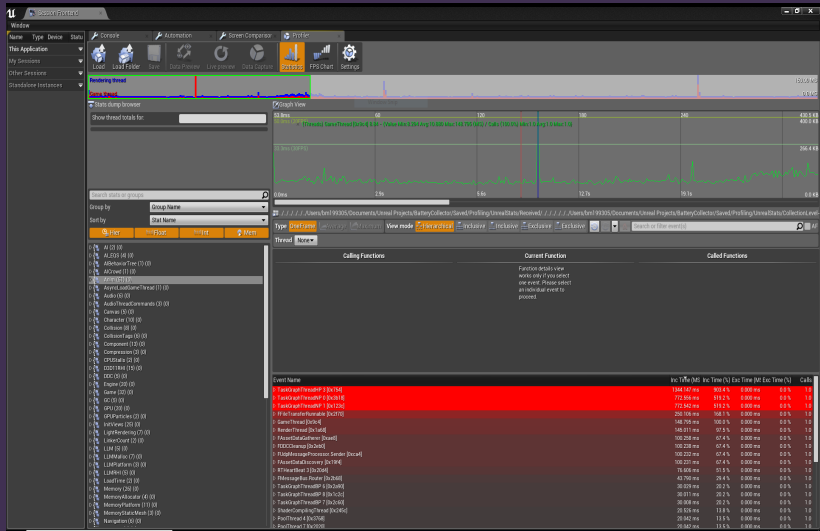
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- ▶ Allows us to profile all major systems including CPU (code) and GPU

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 - ▶ Another thing to track is **Blueprint Time**, switch inclusive view and locate it, then switch back to hierarchical view
 - ▶ **SkinnedMeshComp Tick** & **TickWidgets** can also be bottleneck

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- ▶ Switch your application to a release build
- ▶ To run the profiler, select **Debug** ; **Performance Profiler** and then click on **Performance Wizard**

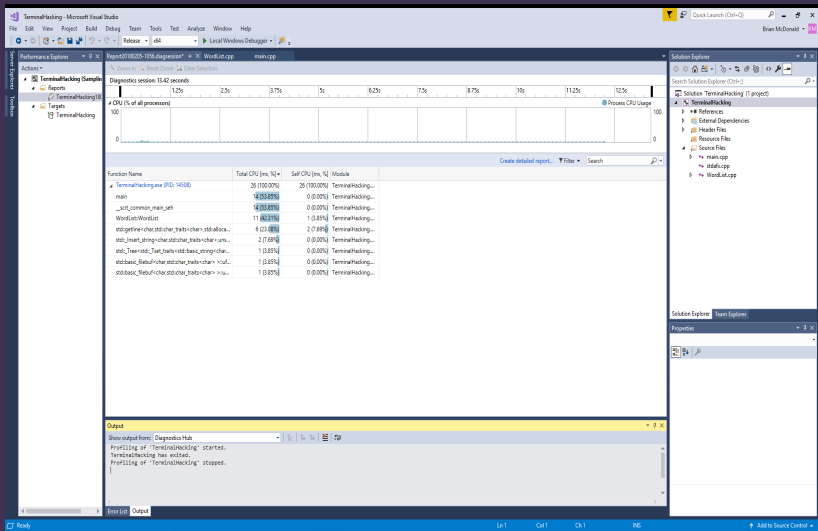
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- ▶ The profiler will run and start collecting data

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- ▶ Switch your application to a release build
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- ▶ The profiler will run and start collecting data
- ▶ Close the application to start analysing the data

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- ▶ You will not be able to do much about the *.dll calls, you should look at your own functions in here

Exercises



Profiler Exercise

1. Select a project (sample, past project, etc ,etc)
 2. Open up the project and profiler
 3. Run the profiler to see if you can find bottlenecks
 4. Record all sources you have used
- ▶ You may have to do some research on the profiler
 - ▶ The previous slides contain some links but you may need to find additional sources