Cross Platform Development – Project Research Workbook

This workbook will help you focus your research for your project.  
Once you have answered these questions, use this information in your Technical Design Document.

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| Briefly describe the cross-platform application, game, or simulation you are researching.  (This is your initial idea to focus your research. The application described in your design documents, or your final build may end up being different from this description) |
| My focus for research will be a board game called Black Hole created by Walter Joris and shown off by Tom Scott on his YouTube series Game On. |

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| List the software you will use to create your project.  Include any third-party plug-ins, APIs or libraries, if known. |
| Unity 3D  Visual Studio  GitHub  Atom  Microsoft Word  Paint.net  NuGet |
| With reference to the above list, what legislative frameworks or organisational standards govern the use of this software (including any third-party plug-ins, APIs or libraries).  For example, include any End User Licence Agreements (EULAs), terms of service, copyright notices, licencing information, developer guidelines, coding standards, or similar.  (Information in the AIE Student Handbook may also be relevant in relation to the use of software on campus machines).  Include URL links where relevant. |
| Unity Terms of Service: <https://unity3d.com/legal/terms-of-service>  Unity Copyright Policy: <https://unity3d.com/legal/copyright-policy>  Visual Studio EULA: <https://visualstudio.microsoft.com/license-terms/mlt031819/>  GitHub EULA: <https://desktop.github.com/eula/>  GitHub Terms of Service: <https://docs.github.com/en/github/site-policy/github-terms-of-service>  NuGet License: MIT License  Code Standards: <https://www.dofactory.com/csharp-coding-standards> |
| List the cross-platform installers and installation methods you will use, or the specific binary formats that are required to deploy the game.  This list should include all platforms you plan to deploy your game or application to.  (Your game or application must be deployed to at least two different web browsers, and at least two different digital devices – one of which may be PC) |
| Windows: Extracting Zipped File  Android: Installing via APK package  WebGL: GitHub Pages Deploy Script |

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| What IDE will you use?  Identify your reasons behind this choice (ignoring the pre-configured environment on the campus computers). |
| Visual Studio creates an easy-to-use interface which can communicate and help debug within Unity. It also has an extensive IntelliSense for use with Unity and C# which helps improve the development times and enjoyment for programmers. |

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| Identify the cross-platform libraries, plug-ins, or APIs you will use.  Mention any restrictions or limitations that exist with these libraries on each target platform.  For example, some parts of the .NET class libraries implicitly depend on threads, but some platforms (WebGL) do not support threads. |
| UnityEngine  UnityEngine.UI  UnityEngine.SceneManagement  System.Collections.Generic  TMPro |

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| What issues exist, or do you expect might exist when developing for the target platforms you have identified? |
| Lag on Android may be expected. |

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| List any areas in your game where pre-written scripting packages could aid in development.  For at least one of these items, identify a package from the Unity Asset Store (or another source) that may be suitable. |
| NuGet for Unity: <https://github.com/GlitchEnzo/NuGetForUnity>  TextMeshPro (Unity Package)  Universal Render Pipeline (Unity Package) |