Before I started my programming specialism briefs, I had a goal to increase my knowledge of Unity and also learn the basics of coding. The 3 briefs I attempted were making a speedometer, a radar and an FPS counter. I chose these briefs as I believe they would be not too complex for me to complete but also still challenging enough for me so that I would have to learn more than I already did about Unity and also coding.

The first brief I attempted was making a speedometer. I went in with little knowledge of Unity and coding and soon found myself learning about Rigidbodies and how velocity works on them. I found making the initial code to find the velocity of the Rigidbody relatively easy as I used the official Unity documentation to help me understand what to use in my code and what the logic behind what I had coded was. But when I proceeded to try and make a display component to show the speed of the Rigidbody I came across issues due to my lack of experience with Unity and coding as a whole. I found myself learning how to use the UI in Unity and how to change both images and text by using code. I overcame this by searching for tutorials on how to use the UI in Unity and testing different features of the UI by trial and error, but I finally came to an understanding of how the basics of the UI system in Unity worked and how to change elements of the UI through code. Overall, the difficulties I faced with this brief have increased my knowledge of how to use Unity and also how to write basic C# code and have specifically broadened my knowledge of what Rigidbodies are and how to use them. It has also increased my knowledge of the UI system in Unity and how I can change aspects of a UI through code.

The Second brief I attempted was making a radar. After completing my first brief, I went in with basic knowledge of how to use the UI system in Unity and a very basic understanding of how to code. Straight away, I found this brief a lot harder and more complex than the previous brief I had completed. I found it difficult on where to start, but after reading the brief many times I started by searching for how to find game objects with scripts attached. After searching, I came across FindObjectsWithType and found it worked with what the brief required. I then proceeded to learn how to use lists and add items to them, allowing me to complete the majority of the brief. The last difficulty I faced with this brief was finding the distance between the player and the object appearing on the radar and how I would show that on the radar map. I overcame this difficulty by again using the official Unity documentation to learn about transform and how I could use it in my code. Due to my use of the UI in my previous brief I found making the radar UI much easier this time round and easily found a way to show the radar contacts to the player. This brief like the first has significantly increased my knowledge of how to use Unity and has increased my ability to code by broadening my knowledge of classes that are used in Unity and how I can use them in my own code. This has made me more confident in myself when coding and using Unity.

The Final brief I attempted was making an FPS counter. After completing the first two briefs, I felt I had a good understanding of how to use Unity and significantly increased my understanding of how to code in C#. From a mixture of learning about how to both use Unity and code from the previous briefs and from lectures in the university, I found this brief significantly easier to complete compared to the previous briefs. I first looked on the Unity documentation page to learn more about Time and found Time.realtimeSinceStartup, I used this to make the interval between when the frame rate is displayed and also to work out the frame rate. I then used the same practice I had learnt from the first brief to code the number on the UI to change based on the maths I used to get the frames per second. I additionally used the Unity documentation page to find out how to only display the fps counter in a development build. Due to this brief, I have learned how to quickly find information on coding in Unity through the use of the Unity documentation page. I have also increased my ability to quickly and efficiently plan how I will attempt briefs and have also been made more used to planning what I will code first before I write it. These together have made me more capable of using Unity and coding and have additionally given me the bases of skills I can use elsewhere in game development.

In conclusion to my 3 briefs, I feel I have attained the goals I placed for myself at the start of the briefs to increase my ability to use Unity and code in C#. Throughout these briefs, I have learnt how to use UI in Unity and change it with code. Throughout the 3 briefs I completed I have also learnt how to use different components such as Rigidbodies and have also gained an understanding of how they work. This is also the same for coding. I have greatly increased my understanding of C# and how it can be used in Unity.