# CMP 102 Report

For the darts program I decided to have 3 classes as I thought that was a suitable number. Firstly, I designed the Player class that would contain all the players information that will be required for the program and set that to private and had a list of functions that could access and change the information of the private data. Secondly I created the board class that would hold an array of the numbers on a dartboard privately and then had public functions that would use that information along with the inherited data from the player class to simulate the player throwing a dart with the Single, Double, Treble and Bullseye functions being used depending on where the player is aiming. Thirdly there is the gameplay class which inherits from the other two classes and brings it all together to simulate a darts game

I found object-oriented programming hard to understand at first but slowly learnt the benefits of the methods and how to implement them into my code. Firstly I found being able to set data to private or public very useful, as the program could only access the private data if they inherited the class the data was in and used the right function to access that data making my program more secure compared to procedural programming and easier to debug as I knew which parts of the code had access to each other. I also found using classes very useful as I could separate and organise my code for example I would know that the bullseye function used to throw for a bullseye would be located in my board class so I wouldn’t have to spend a lot of time scrolling through code trying to find it.