Inheritance allows a class to use the attributes and methods from another class without the repetition of rewriting them over and over again. If a number of different classes have similar pieces of functionality that require the same code, that code can all be put in a singular class and can then be inherited by the other classes. The code around it can then be adapted to allow each class to carry out their different purposes. This is a benefit of Inheritance as it removes repetition from the program. An application in which Inheritance could be used is a program about sports. You could create a parent class holding all the related information between each sport. For example, there could be a method about competitions. It would hold a member variable for the name of the sport, the date/time of the competition and the location. You could then create a class for soccer, basketball, tennis, etc., all of which could inherit the information held in the competition method. Each sport would have to have its own specific information entered in for the parameters, but it would prevent the repetition of typing out all the information pertaining to the general subject of competitions for each sport.

For a code example, I have my Activity class. I have a constructor that holds name and description. I then inherited it to my “BreathingActivity” class so that I could use these member variables without having to recreate them. By inheriting the Activity class, I was also able to type “DisplayStartMessage()” into my “BreathingActivity” class and was then presented with all the information within the “DisplayStartMessage()” method in the Activity class.

A screen shot of a computer program

Description automatically generated

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