**M2 – Data types**

In this report I will be explaining why I have chosen the data type each variable has.

wallOne  
This variable is the length of one of the walls of the room. It is an integer because the length of the wall should be in whole metres.

wallTwo  
This integer, which is the length of the second wall, is an integer for the same reason as wallOne – it is a whole number.

height  
This variable is the height of the room, which is measured in whole metres like the walls, so it is an integer.

paintType  
This variable specifies what type of paint is to be used, so it is a string as each paint has different name.

undercoat  
this variable is used to specify whether or not the painter will apply an undercoat of paint. This question can only be answered yes or no, so it is a Boolean variable

area  
this variable is the total surface area of the walls, and as it is derived from wallOne, wallTwo and height, it must also be an integer.

time  
This variable is the time it will take to paint the walls, and is a floating point as it may not come to a whole hour – it could be 1.53 hours.

paintCost  
this variable is the cost of the paint, and is a floating point as the price per square metre is floating point so the total cost will also be floating point.

timeCost  
this is how much it will cost to pay the painter, and is a floating point because the price per hour is also floating point.

totalCost  
this is the total cost of painting the room, and is the sum of paintCost and timeCost, and as both of those variables are floating points, this variable must also be floating point.