**1: What is a code repository (often also called version control system) used for?**

A code repository is used to store code that has been developed or is in development. This can then be used to back track and to share work done on a program between peers for the use of peer reviews, collaborations and back-ups.

**2: Why is it advantageous to use a code repository?**

Some advantages of using a code repository would be that they easily allow you to share work that has already been done with peers as well as allowing you to check work previously done. Another advantage to using a code repository would be with regular saves, if there is ever a point where some code has crashed the program and you are unable to go back and edit it then you would be able to load a back-up from the code repository and continue working, making sure to note down what the issue was in a logbook for future reference.

**3: Describe the different “layers” of Software that exist on a typical computer and explain why there are different layers of software.**

The different layers of software that exist would be;

* Users
* Applications software
* System Software
* Hardware

There are different layers of software as this helps the computer run though a required task. When a command is given from the user to the application software then that application software will then send a request to the system software. The system software, which would be a driver, is the software that controls the hardware in the machine and ultimately will put though a command to the hardware to do the specific task. This would then have back though the layers from the hardware once its task is done to the driver (system Software) then though to the application, which finally comes back to the user.

**4: Describe what an algorithm is and explain why it is a useful “tool” to translate from a human level problem (we can think of) to a computer program.**

An algorithm is a set of rules that must be followed in calculations and other problem solving operations, especially by a computer. (Definition from [www.Google.com](http://www.google.com/)). An algorithm would be a useful tool to translate a human problem into a computer program as it would allow us to identify a problem and instruct the computer program of what to do when this situation occurs. For example, if a computer has run out of RAM, an algorithm is then running to allocate the data that would usually be allocated to the RAM to instead be allocated to the hard disk drive for the machine.