1. Wes has purchased a new smartphone so he can use Virtual Reality (VR) and Augmented Reality (AR).
2. Identify **one** difference between Virtual Reality and Augmented Reality.

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

**[1]**

1. Wes can interact with his smartphone using a menu-driven interface.

State **two** other ways in which Wes can interact with his smartphone.

1…………………………………………………………………………………………………………………

2…………………………………………………………………………………………………………………

**[2]**

1. Identify **one** advantage and **one** disadvantage to using a menu-driven interface.

Advantage ………………………………………………………………………………………………………

……………………………………………………………………………………………………………………

Disadvantage …………………………………………………………………………………………………..

……………………………………………………………………………………………………………………

**[2]**

1. Mr and Mrs Jones have decided to set up a home network so their entire family can share a broadband internet connection.
2. Describe what is meant by the term ‘broadband’.

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

**[2]**

1. Mr and Mrs Jones will use a router as part of their network infrastructure.

Describe the purpose of the router.

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

**[2]**

1. Mr and Mrs Jones are deciding on which Internet Service Provider (ISP) to use, the services of two providers are shown in the table below.

|  |  |  |
| --- | --- | --- |
|  | **MyNet** | **DC Internet** |
| Bandwidth | 20 Mbps | 50 Mbps |
| Email address | 2 | 10 |
| Security | Firewall | Firewall |
| Parental controls | No | Yes |
| Download limit | 10GB | Unlimited |
| Monthly charge | £15 | £25 |

Mr and Mrs Jones have four children. They all use the internet for email, downloading and streaming movies and playing online games. They have chosen DC Internet.

Explain why this is the best choice for the family.

…………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

**[3]**

1. Both ISP’s provide a firewall.

Explain how a firewall can improve online security.

……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

**[3]**

1. Faye is the oldest child of Mr. and Mrs. Jones. She has several digital devices including a laptop computer, smartphone and tablet device.

Faye often connects them together to transfer data between them.

Give **three** wireless connectivity methods that can be used to transfer data between devices.

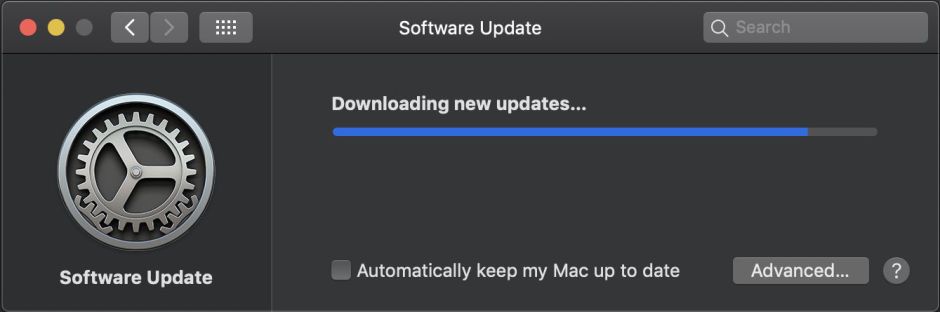
1…………………………………………………………………………………………………………………..

2…………………………………………………………………………………………………………………..

3…………………………………………………………………………………………………………………..

**[3]**

1. When Faye connects her tablet device to her laptop she often sees the dialogue box shown below.



The update includes a security fix for the software.

Give **two** other reasons for a software update.

1…………………………………………………………………………………………………………………..2…………………………………………………………………………………………………………………..

**[2]**

1. Faye has been advised that she can use ‘cloud storage’ with her devices.

Explain why cloud storage is useful when owning multiple devices.

……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

**[2]**

1. DC High School have recently improved their network infrastructure. The school operate using a client-server network model.
2. Networks might be set up as a client-server network or peer-to-peer network.

Fill in the table below with either true or false.

|  |  |
| --- | --- |
| **Statement** | **True / False** |
| A peer-to-peer network has one central controlling computer. |  |
| Peer-to-peer networks are easier to set up than client-server networks. |  |
| Peer-to-peer networks allow individual devices to share files between each other. |  |
| Peer-to-peer networks are commonly used in large organizations. |  |
| It is easier to implement security procedures throughout a client server network than a peer to peer network. |  |

**[5]**

1. The school uses a server

Describe the role of the server at DC High School.

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

**[2]**

1. Identify **two** pieces of network hardware that will allow networks to be created.

1…………………………………………………………………………………………………………………..

2…………………………………………………………………………………………………………………..

**[2]**

1. When students access the school website, they type in the URL such as [www.dchigh.co.uk](http://www.dchigh.co.uk) instead of the IP address.

Explain how students are able to access the website using the URL rather than the IP address.

……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

**[2]**

1. Give **one** benefit to students of accessing the website using a URL rather than using an IP address.

…………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

**[1]**

1. Using the URL stated below, identify the five parts using the table provided below. The first one has been done for you.

<http://files.dchigh.co.uk/StudentUser/Home.aspx>

|  |  |
| --- | --- |
| **Part** | **Example** |
| Scheme | http:// |
| Second level domain |  |
| Sub directory |  |
| Subdomain |  |
| Top level domain |  |

**[4]**

1. Students use a search engine to conduct research during lessons.

Describe how a search engine works

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

**[4]**

1. Systems software comprises of the operating system and utility programs.
2. Describe the purpose of systems software.

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

**[2]**

1. The user interface is one tool provided by the operating system.

Describe what is meant by a user interface.

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

**[2]**

1. Match up the remaining operating system tools with the correct description.

|  |  |  |
| --- | --- | --- |
| 1. Memory Management |  | 1. Allows a computer’s external devices to communicate with the computer system |
| 1. Peripheral Device Management |  | 1. The administrative feature of a computer system to control user access into a network |
| 1. User Management |  | 1. Used to allocate free memory to programs that need it |
| 1. File Management |  | 1. A system that is used by the operating system to organise and keep track of files. |

**[4]**

1. Files and folders can be archived or copied to secure data from being list. This is known as a backup.
2. State what is meant by a full backup.

…………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

**[1]**

1. State what is meant by an incremental backup.

…………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

**[1]**

1. Identify **two** advantages for making an incremental backup instead of a full backup.

1…………………………………………………………………………………………………………………..

…………………………………………………………………………………………………………………….

2…………………………………………………………………………………………………………………..

…………………………………………………………………………………………………………………….

**[2]**

1. Name and describe **two** additional methods of backup.

Method 1 ………………………………………………………………………………………………………

Description ……………………………………………………………………………………………………

………………………………………………………………………………………………………………….

Method 2 ………………………………………………………………………………………………………

Description ……………………………………………………………………………………………………

………………………………………………………………………………………………………………….

**[4]**

1. Backing up data is an optimisation tool provided by utility software.

Name **two** other utility programs used for optimisation.

1…………………………………………………………………………………………………………………..

2…………………………………………………………………………………………………………………..

**[2]**

1. Organisations who store high volumes of data digitally are encouraged to have a disaster recovery plan in place.

Explain why organisations need a disaster recovery plan.

…………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

**[3]**

1. Big D’s offer a takeaway service. Customers telephone to order their meals and customers can either pay with cash on arrival or using a debit/credit card. Big D’s are introducing an app where customers can order takeaway meals and pay online.

To process the orders successfully, Big D’s will need to implement a new IT system that will allow employees to use an ordering system.

Big D’s are considering investing in bespoke software.

1. Explain why Big D’s might choose bespoke software over applications software.

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**[3]**

1. Big D’s kitchen uses an oven and fridge both with temperature control, each of these are controlled by a computer which uses a feedback system.

Describe what is meant by a feedback system.

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

**[2]**

1. Big D’s will introduce their new system by following the systems development life cycle.

Explain the stages of the systems life cycle that must be completed so that staff can use the new ordering system. In your answer you should consider what would happen during the following stages. **[QWC 12]**

* Investigation
* Analysis
* Design
* Implementation
* Maintenance
* Evaluation

…………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………