Task 1

Claire is starting up her own clothing company from home. She has decided that she will host her website using her own computer as a web server.

Explain why hosting her own website might cause problems in the future.

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| Claire will be able to host her own website however, if demand for her clothes increase then so will the level of network traffic. If she decides to keep using her own computer as a web server, some customers will struggle to access the website, as a result they may go elsewhere which means Claire would lose money.  Claire can rent server space from a web host. These providers will use a warehouse of servers that can store Claire’s website and is powerful enough to deal with an increase in network traffic. In addition to this, if any maintenance or security updates need to be carried out, then they can be performed by the web host. |

Task 2

Use the internet and what you’ve learnt so far to put this DNS process in order (1 = Start 11= Finish) The start and finish have been done for you.

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| **Task** | **Step** |
| Enter URL into browser | 1 |
| DNS responds with details of the name server | 4 |
| Name server responds with IP address of the host | 6 |
| Server hosting the site sends across content | 9 |
| ISP sends IP address to the browser | 7 |
| Browser requests IP address of site from ISP | 2 |
| Website displayed to the user | 11 |
| ISP asks name server for site IP address | 5 |
| Browser receives website content | 10 |
| Browser sends request to the server hosting the site | 8 |
| ISP requests IP address from DNS server | 3 |

Task 3

Identify the differences between an IP address and a MAC address.

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| **IP Address** | **MAC Address** |
| IP addresses can be changed / are allocated as needed | MAC addresses can't be changed / every device has a fixed MC address |
| IP(v4) addresses are 4 bytes long | MAC addresses are 6 bytes long. |
| IP(v4) addresses are normally written in denary | MAC addresses are normally written in Hex. |
| IP addresses are configured by software | MAC addresses are configured in hardware. |
| IP addresses are used for routing across a WAN / internet | MAC addresses are only used within the LAN |

Task 4

Identify the five parts that make up a URL address.

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| scheme-url | Scheme  The scheme tells web servers which protocol to use when it accesses a page on your website. |
| subdomain-url | Subdomain  A subdomain in a URL indicates which particular page of your website the web browser should serve up. |
| second-leveldomain-url | Second-level domain  This is the name of the website. |
| top-level-domain-url | Top-level domain  The top-level domain (TLD) specifies what type of entity your organization registers as on the internet. |
| subdirectory-url | Sub-directory  A subdirectory helps people understand which particular section of a webpage they’re on. |

Task 5

List a range of services provided by an Internet Service Provider (ISP)

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| * Provide internet access * Provide email addresses * Web site building * Provide web site hosting * Supply the equipment – e.g. the router. |