Security risks and protection mechanisms involved in website performance

Firewalls

Firewalls are used to block unauthorised access from entering networks. They build protective barriers around computers or networks, allowing only authorised access to gain access to data. Firewalls set up a gateway, only allowing authorised traffic through. For example if a hacker were to try and access data from a computer or network, the firewall will prevent access from the unauthorised users blocking them and not allowing them to gain access. Web servers should make sure to close ports, otherwise hackers would be able to gain access into their system.

Secure Socket Layers

Websites having an SSL (Secure Sockets Layer) ensures customers that they have a secure communication whilst using the internet. The SSL is a protocol that is made specifically for being able to send information over the internet. For example, a website such as an ecommerce site would need to use an SSL on their website as it secures customers when they access their accounts online or making online payments. IT would be best to have an SSL as it shows people viewing the site that it is secure and can be trusted if a user were to enter personal details into the website, whereas if the website didn’t have an SSL, users may think twice about sharing their information on the website.

Adherence to standards

Computer user should always use strong passwords for their accounts, especially for web servers and for ecommerce systems.   
Passwords should at least contain:

* Lowercase and Capitals
* Numbers and letters
* Symbols such as ! or #
* More than 8 characters

By having strong passwords containing all of the above, it will be harder for hackers to hack into personal accounts, therefore the harder the password, the harder it will be for the hacker to guess it. Hackers can use programs to gain access into personal accounts using many combinations of characters of what a password would be. To avoid being hacked and caught out by programs like so, having the strongest password possible would make it harder for those programs to detect the password, making the hackers get bored of guessing it making them move on.