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Web Engineering

Assignment 1: task 4 Http vs https

**HTTP VS HTTPS**

**Difference Between HTTP and HTTPS:**

|  |  |
| --- | --- |
| HTTP | HTTPS |
| HTTP stands for Hypertext Transfer Protocol. | HTTPS stands for Hypertext Transfer Protocol Secure. |
| It is an Unsecure protocol. | It is a Secure Protocol. |
| Its port is 80 | Its port is 443 |
| OSI layer is the Application layer. | OSI layer is the Transport layer. |
| It does not have TLS certifications. | It has TLS certifications. |
| It doesn’t require domain validation. | It requires domain validation. |
| It is not encrypted. | It is encrypted. |
| HTTP URLs starts with http:// | HTTPS URLs starts with https:// |
| Good for websites designed for information consumption like blogs. | Good for sites that collect private data like credit card details. |
| It does not scramble data before transmission. | It scrambles data before transmission. |
| It operates at TCP/IP level. | It operates on encrypted TLS/SSL connections. |
| HTTP websites do not need SSL certifications. | HTTPS websites require SSL certifications. |
| It is Faster than HTTPS. | It is Slower than HTTP. |
| Information is vulnerable to hackers. | Information is highly secure hence it is not vulnerable to hackers. |

**Chart, pie chart

Description automatically generated**

**Source:** [**https://serverguy.com/ssl/difference-between-http-and-https/**](https://serverguy.com/ssl/difference-between-http-and-https/)

**Timeline

Description automatically generated**

**Source:** [**https://www.cloudflare.com/learning/ssl/why-is-http-not-secure/**](https://www.cloudflare.com/learning/ssl/why-is-http-not-secure/)

**Summary:**

**The** HTTP protocol is good for information-based sites that are used only for research or education purposes. It is fast to access and doesn’t require extra SSL certifications. But it is vulnerable to hackers. That is why it is only used by sites that don’t require personal data that can be hacked by hackers. On the other hand, HTTPS protocol is good where online protection is required for handling sensitive data. It can be your personal information, credit card details, and many more. It requires SSL certifications and is slower than HTTP but way too secure than that. Nowadays, HTTPS is widely in use, even by simple information sites, making them more defensive towards online attacks.