Project URL:<http://54.91.184.36/projectlamp/info.php>

SIDE SELF STUDY NOTES

**1. Software Development Life Cycle (SDLC)**

The Software Development Life Cycle (SDLC) is like the steps followed when building a house. You plan the design, gather the materials, construct the house, inspect it for any issues, move in, and later maintain or improve it. Similarly, SDLC has stages: **Planning**, **Gathering requirements**, **Designing**, **Developing (building/automating the software)**, **Testing**, **Deploying (releasing)**, and **Maintaining (updating)**. It helps developers build software in an organized way so it works well for users.

**2. LAMP Stack**

LAMP is a set of four tools that work together to build websites and web apps.

L = Linux (the base system, like the ground the team stands on), A = Apache (the messenger, delivers pages to users), M = MySQL (the memory, stores data), P = PHP (the thinker, adds logic and brain to the site). Linux runs the system, Apache shows the site, MySQL stores product details, and PHP connects everything together.

**3. chmod and chown in Linux:** chmod is like house rules (who can enter or use things) and chown is like changing the house owner.In Linux, every file has rules about who can read, edit, or run it. chmod: sets the rules (permissions). Example: chmod 700 file.txt means only the owner can use it fully. chown: changes the owner of a file. Example: chown user1 file.txt gives ownership to user1.

**4. TCP vs UDP:** TCP and UDP are ways computers send data, but they work differently.

TCP: Like sending a letter by courier with confirmation. Reliable but slower. TCP is used for browsing and emails.

UDP: Like shouting across a room. Faster, but no guarantee the whole message was received. UDP is used for gaming, video calls, or streaming.

**5. Common Web Ports**

Ports are like doors on a computer that let in different kinds of communication:

HTTP: 80 (normal websites)

HTTPS: 443 (secure websites)

SSH: 22 (secure remote login)

Telnet: 23 (remote login, not secure)

FTP: 21 (file transfers)

SFTP: 22 (secure file transfers)

**6. Basic Vi (Vim) Editor**

Vi is a text editor in Linux. It feels different at first but here are few basics i used during my first PBL:

Open a file: vi filename.txt

Press i to enter insert mode and start typing

Press Esc to stop typing

Save and quit: :wq and Enter

Quit without saving: :q! and Enter