Homework assignment-2:

Student : Laye Yomba Ifono

E-mail: layeyomba12@gmail.com

Phone: +224 621-95-20-82

Exercise 1: Explain the nature of the Y2K bug

The Y2K bug, also known as the "Millennium bug," was a programming issue related to how dates were represented in older computer systems. In these systems, the year was recorded using only two digits, such as "99" for 1999. Developers did not account for the transition to the year 2000, which would be recorded as "00" and could be mistaken for the year 1900. This could have led to errors in date and time calculations, potentially causing significant software and system failures. Businesses and governments had to invest heavily in updating their systems to prevent widespread failures as the year 2000 approached.

Exercise 2: Explain the need for a DNS on the internet

The Domain Name System (DNS) is crucial for the internet's functionality because it translates human-readable domain names (such as www.google.com) into numerical IP addresses (like 192.168.1.1) that computers use to locate servers on the network. Without DNS, users would have to remember and type the exact IP addresses of every website they want to visit, which would be impractical. DNS enables easier and more

user-friendly navigation by hiding the technical complexity of IP addresses behind easy-to-remember domain names.

Exercise 3: Describe all the steps necessary for a computer to load and display a web page

1. DNS Resolution: The user enters a URL in their browser, such as "http://www.google.com". The browser contacts a DNS server to translate this domain name into an IP address.

2. Connecting to the Server: Once the IP address is obtained, the browser sends an HTTP request to the corresponding server to fetch the webpage content.

3. Data Transfer: The server responds to the request by sending the necessary HTML, CSS, JavaScript, and other media files (images, videos) to display the webpage.

4. Page Rendering: The browser interprets the received files, including HTML and CSS, to generate the visual layout of the page. It also executes JavaScript to make interactive elements functional.

5. Display to the User: Once all rendering steps are completed, the web page is displayed on the screen for the user to interact with.