**Day 2-AN Assignment**

**Assignment topics and Submission Guidelines**

**Topics to Choose From:**

1. Operating Systems
2. Introduction to Networks and Communication
3. Cloud Services
4. Information Security
5. IT Companies: Roles and Opportunities

**Submission Guidelines:**

* Select one topic from the above list and prepare a detailed report.
* Each assignment should be submitted as a report in PDF format.
* Reports must include an introduction, detailed explanations, relevant examples, and a conclusion.
* Students can include diagrams, tables, or charts wherever applicable.
* Citations should be provided for any external sources referenced.

**Assignment Details:**

**Assignment 1: Operating Systems**

**Objective:** Explore and understand the concepts of operating systems and their functionalities.  
**Instructions:**  
Students should prepare a detailed report covering the following:

1. Overview of an operating system and its role in computer systems.
2. Types of operating systems (e.g., Windows, Linux, macOS) and their key features.
3. Explain the process of memory management and scheduling in operating systems.
4. Discuss at least one real-world use case where a specific operating system is preferred.
5. Emerging trends in operating systems (e.g., mobile OS, cloud-based OS).

**Assignment 2: Introduction to Networks and Communication**

**Objective:** Understand the fundamentals of networking and its importance in communication.  
**Instructions:**  
Students should prepare a document covering:

1. Definition of computer networks and the significance of communication protocols.
2. Types of networks (LAN, WAN, MAN) with examples.
3. The OSI model: Explain the layers with their functionalities.
4. Compare wired vs. wireless communication.
5. A case study on the importance of networks in a specific domain (e.g., healthcare, education).

**Assignment 3: Cloud Services**

**Objective:** Analyze the applications and benefits of cloud computing services.  
**Instructions:**  
The report should include:

1. What is cloud computing? Types of cloud services (IaaS, PaaS, SaaS).
2. Benefits and challenges of using cloud services for businesses.
3. Comparison of popular cloud platforms (AWS, Google Cloud, Azure).
4. Real-life applications of cloud computing in industries.
5. Future trends in cloud services.

**Assignment 4: Information Security**

**Objective:** Highlight the importance of securing information in the digital age.  
**Instructions:**  
The report should discuss:

1. Definition and importance of information security.
2. Common threats to information security (e.g., phishing, ransomware).
3. Security measures and tools used for protection.
4. The role of cybersecurity professionals in maintaining security.
5. A real-life case of a data breach and its consequences.

**Assignment 5: IT Companies Roles and Opportunities**

**Objective:** Explore the career opportunities and roles in IT companies.  
**Instructions:**  
Students should prepare a report addressing:

1. Overview of the IT industry and its significance in the global economy.
2. Different roles in IT companies (e.g., developer, analyst, project manager).
3. Skills and qualifications required for these roles.
4. Future opportunities and growth areas in IT.
5. A brief analysis of a top IT company and its contribution to the industry.