**Project Description**

Here is a **detailed project description** for a Networking Course, to be implemented using **Cisco Packet Tracer**, based on your requirements for **East West University** with multiple departmental networks:

**Project Title: Departmental Network Infrastructure for East West University using Cisco Packet Tracer**

**1. Objective:**

To design and implement a robust and secure campus-wide network infrastructure for East West University using Cisco Packet Tracer. The network will support inter-departmental communication, email, and FTP services with controlled access policies.

**2. Departments/Networks to Include:**

* CSE Department
* EEE Department
* Business Department
* Law Department
* Civil Department
* Pharmacy Department
* English Department
* Genetic Engineering Department
* Admin Section

Each department will have a **dedicated LAN** with at least 4 PCs, including a **Chairman PC**.

**3. Services and Functional Requirements:**

**a. FTP Configuration:**

* An **FTP Server** will be set up (centrally or locally).
* **Chairman PCs** of each department will have **full FTP access**:
  + Read
  + Write
  + Show List
  + Delete
  + Rename
* **Other PCs** in departments will have **limited FTP access**:
  + Show List
  + Download
* **All devices in the Admin section** will have **full FTP access** (same as Chairmen).

**b. Email Configuration:**

* One **Email Server** will be configured.
* All PCs in all departments should be able to:
  + Send emails to each other
  + Receive emails

**c. Network Communication:**

* Enable **end-to-end packet communication** across departments.
* Devices should **ping** each other successfully.

**d. Routing:**

* Use **Static Routing or Dynamic Routing (e.g., RIP or OSPF)** depending on your convenience.
* The router setup should ensure efficient data routing between all departments.

**4. IP Addressing Scheme:**

* Assign **separate subnets** for each department using
* Maintain a table of IP assignments for clarity and troubleshooting.
* Example:
* CSE Dept: 192.168.10.0/24
* EEE Dept: 192.168.11.0/24
* Business Dept: 192.168.12.0/24
* ...
* Admin Section: 192.168.20.0/24

**5. Topology Design:**

* Implement switches in each department.
* Connect departments through routers using serial or Ethernet links.

**8. Expected Outcomes:**

* Fully connected university network.
* Email service among all departments.
* FTP services with role-based access control.
* Static or Dynamic Routing with proper network segmentation.

**9. Optional Enhancements (for extra marks):**

* Simulate a basic Web Server for academic announcements or department info.