NATIONAL INSTITUTE OF TRANSPORT
FACULTY OF INFORMATICS AND TECHNICAL EDUCATION
COMPUTER COMMUNICATION TECHNOLOGY (CCT)

Module Code	ITU 08104
Module Name	Network Administration and Security

ASSIGNMENT 1 Submission Deadline Friday 30/01/2026 4:30

Question:

You are working as a junior system administrator for a company called *SmartTech Solutions Ltd*, which operates an internal network using **Ubuntu Server 24.04 or later**, and you have been assigned one main server with the IP address **192.168.50.10** and the internal domain name **smarttech.local**. Using **BIND9**, configure an internal **DNS server** so that all company services can be accessed by name, and create the necessary **NS and A records** for the following servers: a web server named **web.smarttech.local** (IP: 192.168.50.12), a second virtual website for another department named **hr.smarttech.local** (IP: 192.168.50.12), and a database server named **db.smarttech.local** (IP: 192.168.50.11). Configure **Apache2** as the web server and set up **at least two virtual hosts** using the names **web.smarttech.local** and **hr.smarttech.local**, each displaying different content to show they are working correctly. Install and configure **MySQL Server** as the database service with the hostname **db.smarttech.local**, create at least one database and user for company applications, and ensure the database can be accessed locally by the web application. Finally, upload and configure any simple **web application** (such as a PHP-based internal portal) that is accessible via the configured virtual hosts and connects successfully to the MySQL database, making sure all services are reachable using DNS names rather than IP addresses, and document your work with configuration details and screenshots as proof of successful setup. **Submit the document through email address "gaspari.shiliba@nit.ac.tz"**