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**Computer Programming Laboratory III**

**Midterm Exam**

**Computer Programming III Laboratory Project Report**

**Professional Skill Network (like linkedin)**

**Project Overview:**

**The Professional Network Skills project aims to create a simplified professional networking platform similar to LinkedIn. The project focuses on managing user profiles, connecting users, endorsing skills, and storing user data persistently. The implementation is in C, with separate files for defining the network structure (network.h), implementation of network functions (network.c), and the main application (main.c).**

**Project Components:**

**1. network.h**

**This header file defines the necessary structures and function prototypes for the project. It includes:**

**enum Skill: An enumeration representing various skills (JAVA, LINUX, PYTHON, MYSQL).**

**struct UserProfile: A structure representing user profiles with user ID, username, full name, and an array of skills.**

**struct Connection: A structure representing connections between users.**

**Function prototypes for initialization, user registration, updating user profiles, connecting users, endorsing skills, displaying users and connections, and file I/O functions for saving and loading data.**

**2. network.c**

**This source file contains the implementation of the functions declared in network.h. Key functionalities include initializing the network, registering users, updating user profiles, connecting users, endorsing skills, and saving/loading data from/to files.**

**3. main.c**

**The main application file where the user interacts with the Professional Network Skills platform. It includes a simple command-line interface (CLI) for registering users, updating profiles, connecting users, endorsing skills, and displaying information.**

**Functionality:**

**The project provides the following functionalities:**

**User Registration: Users can register by providing a username and full name. A unique user ID is assigned automatically.**

**Updating User Profiles: Users can update their profiles by providing a user ID, new username, and new full name.**

**Deleting User Profiles: Users can be deleted from the system by providing their user ID.**

**Connecting Users: Users can establish connections by specifying the user IDs of the two individuals.**

**Are users Connected?: Checks if two users are connected in the network.**

**Endorse Skills: Allows users to endorse others for specific skills.**

**Display Users: Displays information about all registered users.**

**Display Connections: Displays connections for a specific user.**

**Usage:**

**The main.c file serves as the entry point for the application. Users interact with the system through a simple CLI, selecting options to perform various operations. The network data is saved to files (users.txt and connections.txt) to ensure persistence between sessions.**