



National University of Computer & Emerging Sciences, Karachi
Software Engineering Department
Spring 2025
Lab 6 Tasks



Course Code: CL-2005	Course: Operating Systems Lab (CL 2006)
Instructor(s):	Fatima Gado

1. A banking system has an ATM process that communicates with a Server process to verify user credentials and retrieve account balances. The ATM process sends an account number and PIN via a Named Pipe (FIFO) to the server, which verifies the details and responds with either "Valid, Balance: \$5000" or "Invalid Credentials." This ensures secure and structured one-way communication, where the server only responds after receiving a request. The FIFO mechanism allows multiple ATMs to communicate with the server asynchronously.
2. A weather station system consists of a Sensor process (Parent Process) and a Processor process (Child Process) that communicate using an Ordinary Pipe. The sensor collects temperature and humidity data and writes it into the pipe, while the processor reads this data and determines if an alert should be triggered. If the temperature is greater than 40°C, the system raises an "ALERT: High Temperature!", otherwise, it prints "Normal Weather Conditions." Since ordinary pipes work for parent-child process communication, this setup allows real-time temperature monitoring with automatic alerts.