

Assessment 1

ATM System

Design a Python class ATM that simulates the basic functionality of an Automated Teller Machine. Your solution should meet the following requirements:

- Card Activation: Prompt the user for their full name and a valid 10-digit mobile number to activate the ATM card.
- PIN Creation: Ask the user to create a 4-digit PIN and re-enter it for verification.
- Initial Deposit: Ensure a minimum deposit of ₹1000 during activation.
- Main Menu: Provide options to:
 - ◆ Change PIN
 - ◆ Deposit Money
 - ◆ Withdraw Money (with applicable transaction charges)
 - ◆ Check Balance
 - ◆ View Last 10 Transactions
 - ◆ Exit the ATM
- Transaction Charges for withdrawals:
 - ◆ ₹0 for \leq ₹1000
 - ◆ ₹100 for \leq ₹20000
 - ◆ ₹1000 for \leq ₹100000
 - ◆ ₹2000 for $>$ ₹100000
- Error Handling: Handle invalid inputs and ensure secure PIN-based access for every operation.
- Transaction History: Maintain a history of all deposits and withdrawals.

Implement this functionality in a single Python class called ATM and demonstrate its usage.