BANKING_APPLICATION

```
import java.util.Scanner;

// BankAccount class to represent a simple bank account
class BankAccount {
    private double balance; // Instance variable to store the account balance

    // Constructor to initialize the bank account with an initial balance
    public BankAccount(double initialBalance) {
        balance = initialBalance;
    }

    // Method to deposit funds into the account
    public void deposit(double amount) {
        if (amount > 0) { // Check if the deposit amount is valid
            balance += amount; // Add the deposit amount to the balance
            System.out.println("Deposited: " + amount);
        } else {
            System.out.println("Invalid amount for deposit."); // Display error message for invalid amount
        }
    }

    // Method to withdraw funds from the account
    public void withdraw(double amount) {
        try {
            if (amount > balance) { // Check if withdrawal amount exceeds the balance
                throw new IllegalArgumentException("Withdrawal amount exceeds balance.");
            } else {
                balance -= amount; // Subtract the withdrawal amount from the balance
                System.out.println("Withdrawn: " + amount);
            }
        } catch (IllegalArgumentException e) { // Catch exception for overdrawing
            System.out.println("Error: " + e.getMessage()); // Display error message
        }
    }

    // Method to display the current balance
    public void displayBalance() {
        System.out.println("Current Balance: " + balance);
    }
}

// Main class for the banking application
public class BankingApplication {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in); // Create a Scanner object for user input

        // Prompt the user to enter initial balance
        System.out.print("Enter initial balance: ");
        double initialBalance = scanner.nextDouble();

        BankAccount account = new BankAccount(initialBalance); // Create a bank account
object

        // Display options to the user in a loop
        while (true) {
            System.out.println("\nChoose an option:");
            System.out.println("1. Deposit");
            System.out.println("2. Withdraw");
            System.out.println("3. Display Balance");
            System.out.println("4. Exit");
            System.out.print("Enter your choice: ");
            int choice = scanner.nextInt(); // Read user's choice

            switch (choice) {
                case 1:
                  // Prompt the user to enter deposit amount and perform deposit
                  System.out.print("Enter deposit amount: ");
                  double depositAmount = scanner.nextDouble();
                  account.deposit(depositAmount);
                  break;
                case 2:
                  // Prompt the user to enter withdrawal amount and perform withdrawal
                  System.out.print("Enter withdrawal amount: ");
                  double withdrawAmount = scanner.nextDouble();
                  account.withdraw(withdrawAmount);
                  break;
                case 3:
                  account.displayBalance(); // Display current balance
                  break;
                case 4:
                  System.out.println("Exiting..."); // Exit the program
                  scanner.close(); // Close the Scanner object
                  System.exit(0);
                default:
                  System.out.println("Invalid choice. Please try again."); // Display error message
for invalid choice
            }
        }
    }
}
```

OUTPUT

```
Enter initial balance: 50000

Choose an option:
1. Deposit
2. Withdraw
3. Display Balance
4. Exit
Enter your choice: 2
Enter withdrawal amount: 20000
Withdrawn: 20000.0

Choose an option:
1. Deposit
2. Withdraw
3. Display Balance
4. Exit
Enter your choice: 3
Current Balance: 30000.0

Choose an option:
1. Deposit
2. Withdraw
3. Display Balance
```

```
4. Exit
Enter your choice: 1
Enter deposit amount: 5000
Deposited: 5000.0

Choose an option:
1. Deposit
2. Withdraw
3. Display Balance
4. Exit
Enter your choice: 3
Current Balance: 35000.0

Choose an option:
1. Deposit
2. Withdraw
3. Display Balance
4. Exit
Enter your choice: 3
Current Balance: 35000.0

Choose an option:
1. Deposit
2. Withdraw
3. Display Balance
4. Exit
Enter your choice: 4
Exiting...
```