CS433P Programming Paradigm Lab

DATE: 31-03-2023   **EXPERIMENT NO** 7   **REGISTER NO**: 2162014

IMPLEMENTATION OF EXCEPTIONS

AIM:
Write a java program that uses the try-catch-finally block to handle exceptions during the bank transfer. An exception should be thrown when the transfer amount exceeds the available balance in the customer's account.

PROGRAM:

```java
/**
 *
 * @author 2162014
 */
public class excep {

    private double balance;

    public excep(double initialBalance) {
        balance = initialBalance;
    }

    public void transfer(double amount, excep recipient) throws
            InsufficientFundsException {
        try {
            if (amount > balance) {
                throw new InsufficientFundsException("Transfer amount exceeds available
balance");
            } else {
                balance -= amount;
                recipient.balance += amount;
                System.out.println("Transfer successful!");
            }
        } catch (InsufficientFundsException e) {
            System.out.println("Transfer failed: " + e.getMessage());
            throw e;
        }
    }

    public static void main(String[] args) {
        excep account1 = new excep(1000.0);
        excep account2 = new excep(500.0);
        try {
            System.out.println("Acc1 balance before transfer: " + account1.balance);
            System.out.println("Acc2 balance before transfer: " + account2.balance);
            account1.transfer(600.0, account2);
            // account2.transfer(400.0, account1);
```

```
        } catch (InsufficientFundsException e) {
          // Handle the exception here
        } finally {
          System.out.println("Acc1 balance after transfer: " + account1.balance);
          System.out.println("Acc2 balance after transfer: " + account2.balance);
        }
    }
}

class InsufficientFundsException extends Exception {

    public InsufficientFundsException(String message) {
        super(message);
    }
}
```

OUTPUTS:

```
PS C:\Users\ashva\                                              \exp7> javac excep.java
PS C:\Users\ashva\                                              \exp7> java excep
Acc1 balance before transfer: 1000.0
Acc2 balance before transfer: 500.0
Transfer failed: Transfer amount exceeds available balance
Acc1 balance after transfer: 1000.0
Acc2 balance after transfer: 500.0
PS C:\Users\ashva\                                              \exp7> javac excep.java
PS C:\Users\ashva\                                              \exp7> java excep
Acc1 balance before transfer: 1000.0
Acc2 balance before transfer: 500.0
Transfer successful!
Acc1 balance after transfer: 400.0
Acc2 balance after transfer: 1100.0
```

RESULTS:
The java program was created successfully to demonstrate the use of the try-catch-finally
block to handle exceptions during the bank transfer