

23/3/2023 Java Lab QP

- 1) Create an abstract class called Account that has datamembers: accno(int), accname(String) and balance(double). The member methods are: parameterized constructor and toString method. abstract methods : void deposit(double amt) and double withdraw(double amt)

Derive two classes from class Account: SavingsAccount and CheckingsAccount. The members of SavingsAccount are noofTransactions(int), parameterized constructor, overridden methods toString(), deposit(double amt) that increments balance with amt, withdraw(double amt) that decrements the balance by amt and noofTransactions is incremented by 1 inside deposit() and withdraw().The members of CheckingAccount are parameterized constructor, overridden methods deposit(double amt) that increments balance with amt,withdraw(double amt) that decrements the balance by amt only if the balance is above 1000 after decrementation and toString().

define TestAccount that instantiates objects of SavingsAccount and CheckingsAccount. The methods of the derived class are tested. Check the SavingsAccount object is an instance of class Account.

```
2) public interface Calculate
{
    public static final int totalTrans = 3;
    double interest_rate = 0.15;
    public double cal_interest();
}
```

Implement the above interface in SavingsAccount and CheckingAccount. The totalTrans gives the total number of transactions the SavingsAccount object can perform while the cal_interest is overridden in CheckingsAccount to calculate the interest for the balance (using the formula $PNR/100$). Validate the above in TestAccount class.