1. **Abstraction:**

package com.abstraction;

abstract class Vehicle

{

abstract void fuelType();

void display()

{

System.out.println("All Petrol based vehicle");

}

}

class Car extends Vehicle

{

void fuelType()

{

System.out.println("Four wheeler car");

}

}

public class TestAbstraction

{

public static void main(String[] args)

{

Car c=new Car();

c.fuelType();

c.display();

Vehicle v;

v=new Car();

v.fuelType();

v.display();

}

}

**2.Thread Synchronization**

**package** com.abstraction;

**abstract** **class** BankAccount1{

**private** **int** balance;

**public** **int** getBalance()

{

**return** balance;

}

**public** **void** setBalance(**int** balance)

{

**this**.balance=balance;

}

**abstract** **void** deposit(**int** amount);

**abstract** **void** withdraw(**int** amount);

}

**class** SavingAccount1 **extends** BankAccount1

{

**void** deposit(**int** amount)

{

setBalance(getBalance()+amount);

System.***out***.println("Amount deposit"+amount+" now balance is"+getBalance());

}

**void** withdraw(**int** amount) {

System.***out***.println("current balance:"+getBalance());

System.***out***.println("withdrawl amount is"+amount);

**if**(getBalance()>=amount)

{

setBalance(getBalance()-amount);

System.***out***.println("total balance after withdrawl:"+getBalance());

}

**else**

System.***err***.println("Insufficient balance");

}

}

**class** CurrentAccount1 **extends** BankAccount1

{

**void** deposit(**int** amount)

{

setBalance(getBalance()+amount);

System.***out***.println("Amount deposit"+amount+" now balance is"+getBalance());

}

**void** withdraw(**int** amount) {

System.***out***.println("current balance:"+getBalance());

System.***out***.println("withdrawl amount is"+amount);

**if**(getBalance()>=amount)

{

setBalance(getBalance()-amount);

System.***out***.println("total balance after withdrawl:"+getBalance());

}

**else**

System.***err***.println("Insufficient balance");

}

}

**public** **class** TestAbstraction3 {

**public** **static** **void** main(String[] args) {

BankAccount1 bank=**new** SavingAccount1();

bank.setBalance(10000);

System.***out***.println("Saving bank"+bank.getBalance());

bank.deposit(5000);

bank.withdraw(2000);

BankAccount1 bank1=**new** CurrentAccount1();

bank1.setBalance(10000);

System.***out***.println("Saving bank"+bank1.getBalance());

bank1.deposit(5000);

bank1.withdraw(2000);

}

}