Java Lab File

Lab 4:-

Program 10: Write a java program to implement Inhertiance: Single, Multilevel, and Hierarchical.

Code:-

```java
class Vehicle {
    void move() {
        System.out.println("Vehicle is moving...");
    }
}
class Car extends Vehicle {
    void accelerate() {
        System.out.println("Car is accelerating...");
    }
}
// Multilevel Inheritance
class Airplane extends Vehicle {
    void fly() {
        System.out.println("Airplane is flying...");
    }
}
class Jet extends Airplane {
    void supersonic() {
        System.out.println("Jet is flying at supersonic speed...");
    }
}
// Hierarchical Inheritance
class Bicycle extends Vehicle {
    void pedal() {
        System.out.println("Bicycle is being pedaled...");
    }
}
class Motorcycle extends Vehicle {
    void revEngine() {
        System.out.println("Motorcycle is revving its engine...");
    }
}
public class Kartik{
    public static void main(String args[]){
        // Single level Inheritance
        Car car = new Car();
        car.move(); // Output: Vehicle is moving...
        car.accelerate(); // Output: Car is accelerating...
```

```
        // Multilevel Inheritance
        Jet jet = new Jet();
        jet.move(); // Output: Vehicle is moving...
        jet.fly(); // Output: Airplane is flying...
        jet.supersonic(); // Output: Jet is flying at supersonic
speed...
        // Hierarchical Inheritance
        Bicycle bicycle = new Bicycle();
        bicycle.move(); // Output: Vehicle is moving...
        bicycle.pedal(); // Output: Bicycle is being pedaled...
        Motorcycle motorcycle = new Motorcycle();
        motorcycle.move(); // Output: Vehicle is moving...
        motorcycle.revEngine();
    }
}
```

Output

```
[Running] cd "c:\Users\Kartik Verma\O
Vehicle is moving...
Car is accelerating...

Vehicle is moving...
Airplane is flying...
Jet is flying at supersonic speed...
|
Vehicle is moving...
Bicycle is being pedaled...

Vehicle is moving...
Motorcycle is revving its engine...
```