

A factory design pattern is used in the example.

```
interface Vehicle {  
  
    int set_num_of_wheels()  
    int set_num_of_passengers()  
    boolean has_gas()  
}
```

The pattern can be used to create car and planes using the following.
Planes and Cars classes are created:

```
public class Planes implements Vehicle {  
  
    @Override  
    public void set_num_of_wheels() {  
  
    }  
    public void set_num_of_passengers() {  
  
    }  
    public void has_gas() {  
  
    }  
}
```

```
public class Cars implements Vehicle{  
  
    @Override  
    public void set_num_of_wheels() {  
  
    }  
    public void set_num_of_passengers() {  
  
    }  
    public void has_gas() {  
  
    }  
}
```

Factory class is designed:

```
public class VehicleFactory {
    public Vehicle getVehicle(String vehicleType) {
        if(vehicleType == null){
            return null;
        }
        if(vehicleType.equalsIgnoreCase("CAR")){
            return new Cars();
        } else if(vehicleType.equalsIgnoreCase("PLANE")){
            return new Planes();
        }
        return null;
    }
}
```

Finally, a concrete class is created

```
public class FactoryPatternDemo {

    public static void main(String[] args) {
        VehicleFactory vehicleFactory = new VehicleFactory();

        Vehicle vehicle1 = vehicleFactory.getVehicle("CAR");

        Vehicle vehicle2 = vehicleFactory.getVehicle("Plane");
        // methods of respective vehicles can be drawn here

    }
}
```