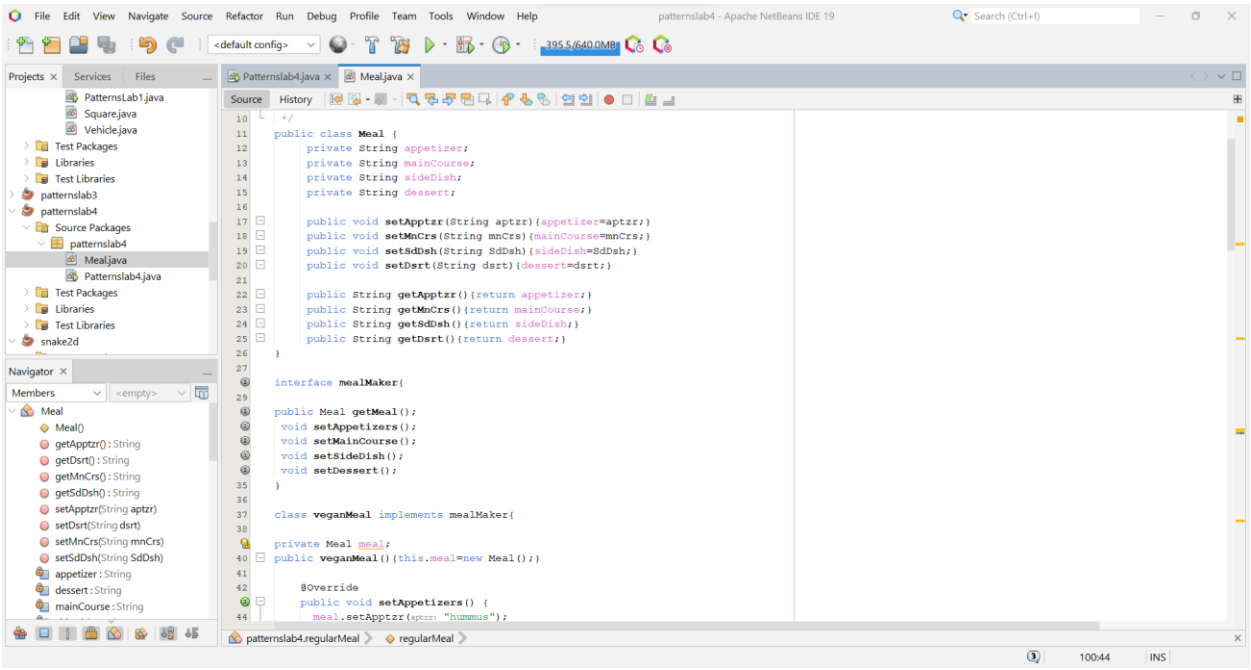
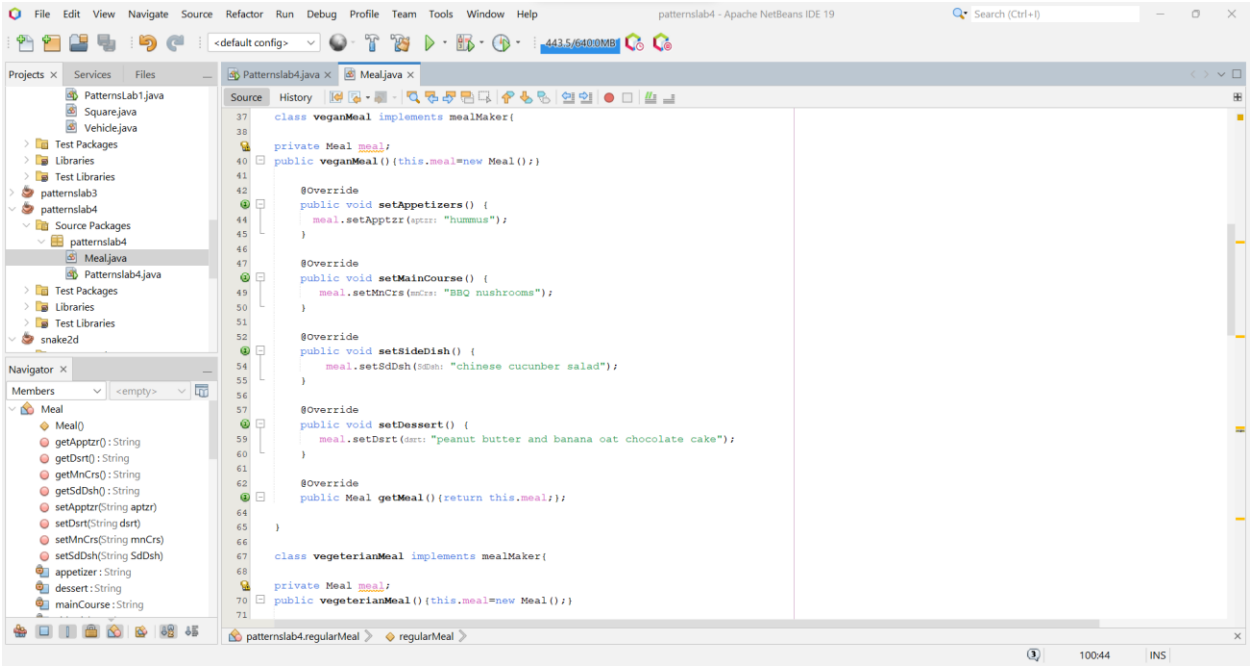
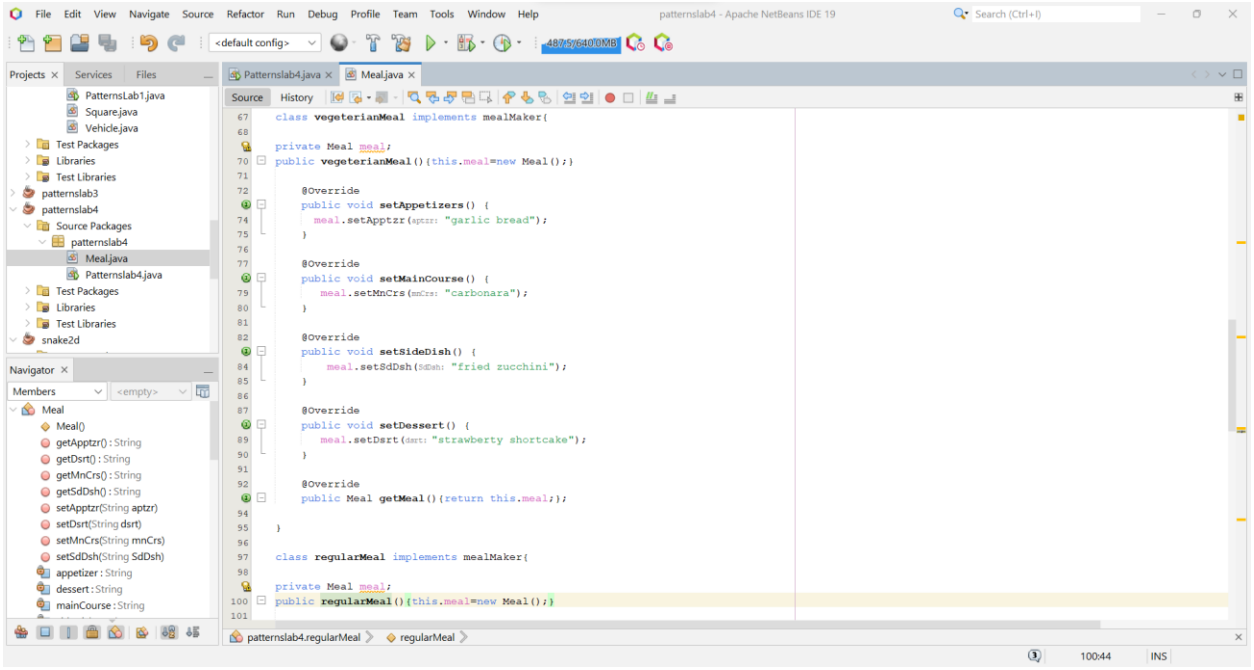
Assignment 1:



```
*/
public class Meal {
    private String appetizer;
    private String mainCourse;
    private String sideDish;
    private String dessert;

    public void setApptzr(String aptzr){appetizer=aptzr;}
    public void setMnCrs(String mnCrs){mainCourse=mnCrs;}
    public void setSdDsh(String SdDsh){sideDish=SdDsh;}
    public void setDsrt(String dsrt){dessert=dsrt;}

    public String getApptzr(){return appetizer;}
    public String getMnCrs(){return mainCourse;}
    public String getSdDsh(){return sideDish;}
    public String getDsrt(){return dessert;}
}

interface mealMaker{

public Meal getMeal();
 void setAppetizers();
 void setMainCourse();
 void setSideDish();
 void setDessert();
}

class veganMeal implements mealMaker{

private Meal meal;
public veganMeal(){this.meal=new Meal();}

    @Override
    public void setAppetizers() {
      meal.setApptzr(aptzr: "hummus");
```



```
class veganMeal implements mealMaker{

private Meal meal;
public veganMeal(){this.meal=new Meal();}

    @Override
    public void setAppetizers() {
      meal.setApptzr(aptzr: "hummus");
    }

    @Override
    public void setMainCourse() {
       meal.setMnCrs(mnCrs: "BBQ mushrooms");
    }

    @Override
    public void setSideDish() {
        meal.setSdDsh(SdDsh: "chinese cucunber salad");
    }

    @Override
    public void setDessert() {
       meal.setDsrt(dsrt: "peanut butter and banana oat chocolate cake");
    }

    @Override
    public Meal getMeal(){return this.meal;};


}

class vegeterianMeal implements mealMaker{

private Meal meal;
public vegeterianMeal(){this.meal=new Meal();}
```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Meal()
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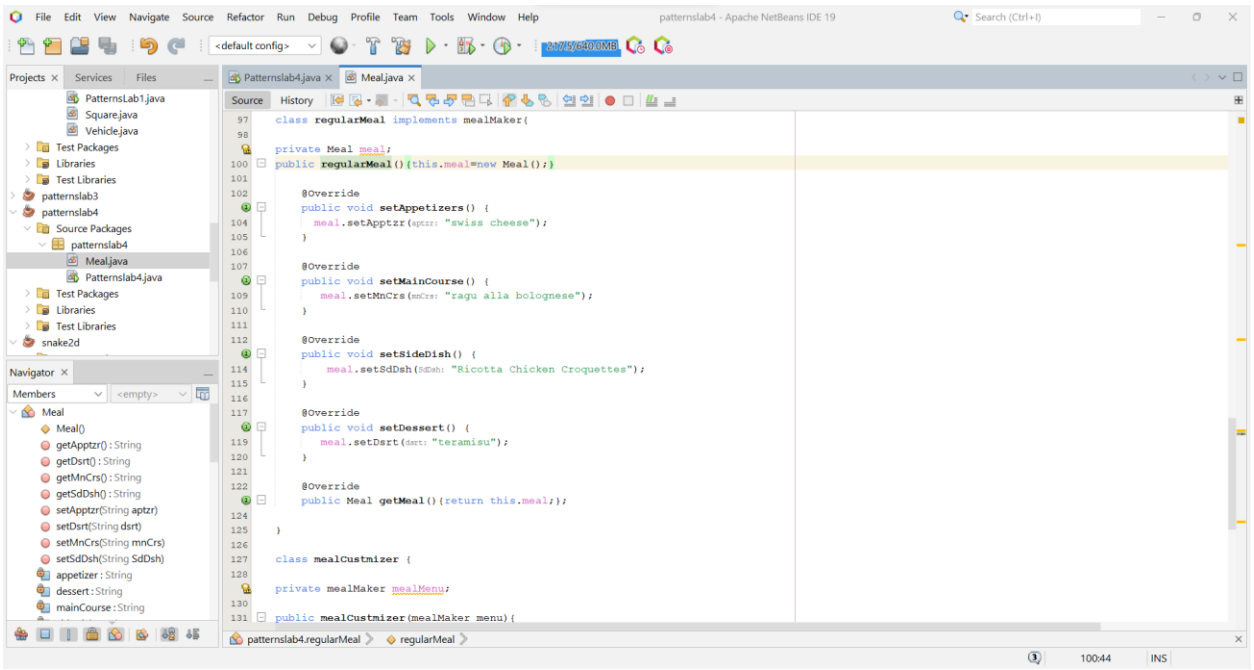
getDsrt() : String
getMnCrs() : String
getSdDsh() : String
setApptzr(String aptzr)
setDsrt(String dsrt)
setMnCrs(String mnCrs)
setSdDsh(String SdDsh)
appetizer : String
dessert : String
mainCourse : String
Patternslab4.java
Meal.java
Source
History
class vegeterianMeal implements mealMaker{
private Meal meal;
public vegeterianMeal(){this.meal=new Meal();}
@Override
public void setAppetizers() {
meal.setApptzr(aptzr: "garlic bread");
}
@Override
public void setMainCourse() {
meal.setMnCrs(mnCrs: "carbonara");
}
@Override
public void setSideDish() {
meal.setSdDsh(SdDsh: "fried zucchini");
}
@Override
public void setDessert() {
meal.setDsrt(dsrt: "strawberty shortcake");
}
@Override
public Meal getMeal(){return this.meal;};
}
class regularMeal implements mealMaker{
private Meal meal;
public regularMeal(){this.meal=new Meal();}
patternslab4.regularMeal
regularMeal
100:44
INS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<empty>
Meal
Meal()
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getDsrt() : String
getMnCrs() : String
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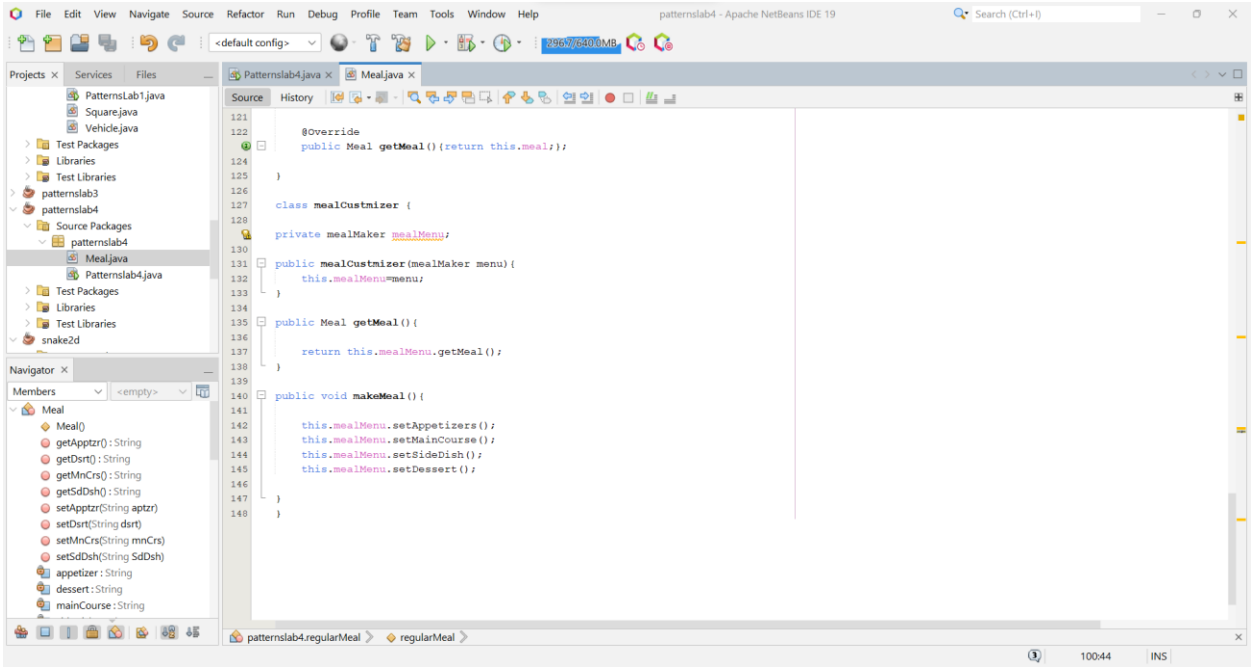
setApptzr(String aptzr)
setDsrt(String dsrt)
setMnCrs(String mnCrs)
setSdDsh(String SdDsh)
appetizer : String
dessert : String
mainCourse : String
Patternslab4.java
Meal.java
Source
History
class regularMeal implements mealMaker{
private Meal meal;
public regularMeal(){this.meal=new Meal();}
@Override
public void setAppetizers() {
meal.setApptzr(aptzr: "swiss cheese");
}
@Override
public void setMainCourse() {
meal.setMnCrs(mnCrs: "ragu alla bolognese");
}
@Override
public void setSideDish() {
meal.setSdDsh(SdDsh: "Ricotta Chicken Croquettes");
}
@Override
public void setDessert() {
meal.setDsrt(dsrt: "teramisu");
}
@Override
public Meal getMeal(){return this.meal;};
}
class mealCustmizer {
private mealMaker mealMenu;
public mealCustmizer(mealMaker menu){
patternslab4.regularMeal
regularMeal
100:44
INS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Meal
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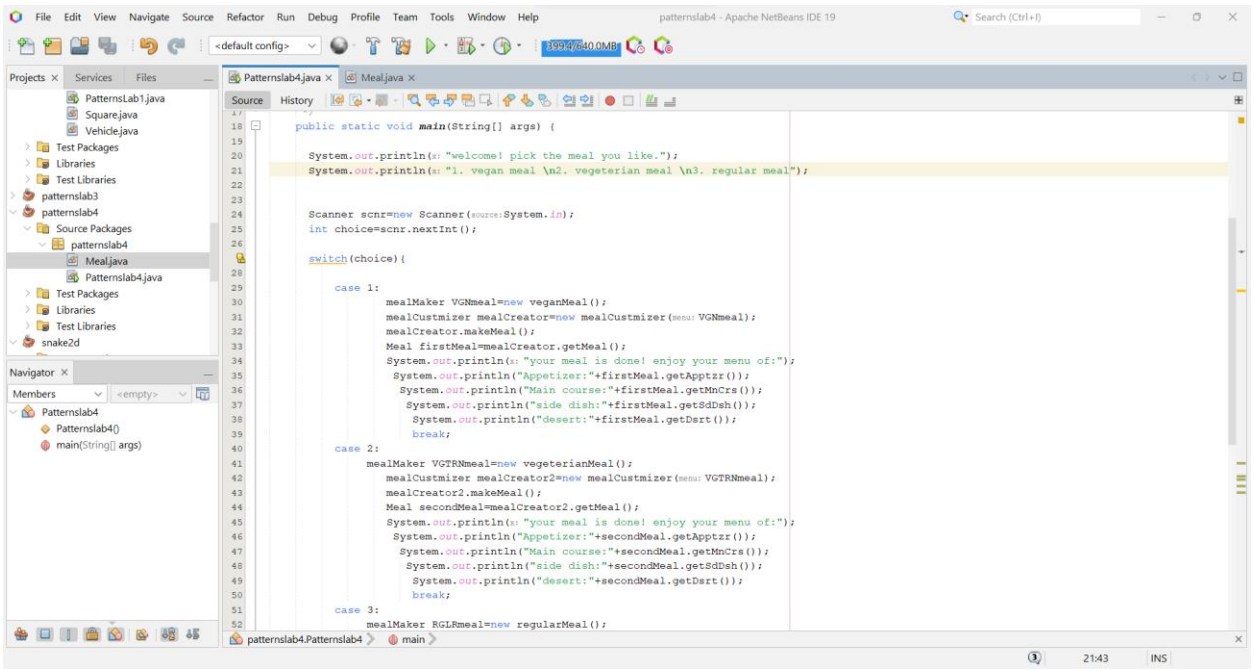
getApptzr() : String
getDsrt() : String
getMnCrs() : String
getSdDsh() : String
setApptzr(String aptzr)
setDsrt(String dsrt)
setMnCrs(String mnCrs)
setSdDsh(String SdDsh)
appetizer : String
dessert : String
mainCourse : String
Patternslab4.java
Meal.java
Source
History
@Override
public Meal getMeal(){return this.meal;};
}
class mealCustmizer {
private mealMaker mealMenu;
public mealCustmizer(mealMaker menu){
this.mealMenu=menu;
}
public Meal getMeal(){
return this.mealMenu.getMeal();
}
public void makeMeal(){
this.mealMenu.setAppetizers();
this.mealMenu.setMainCourse();
this.mealMenu.setSideDish();
this.mealMenu.setDessert();
}
}
patternslab4.regularMeal
regularMeal
100:44
INS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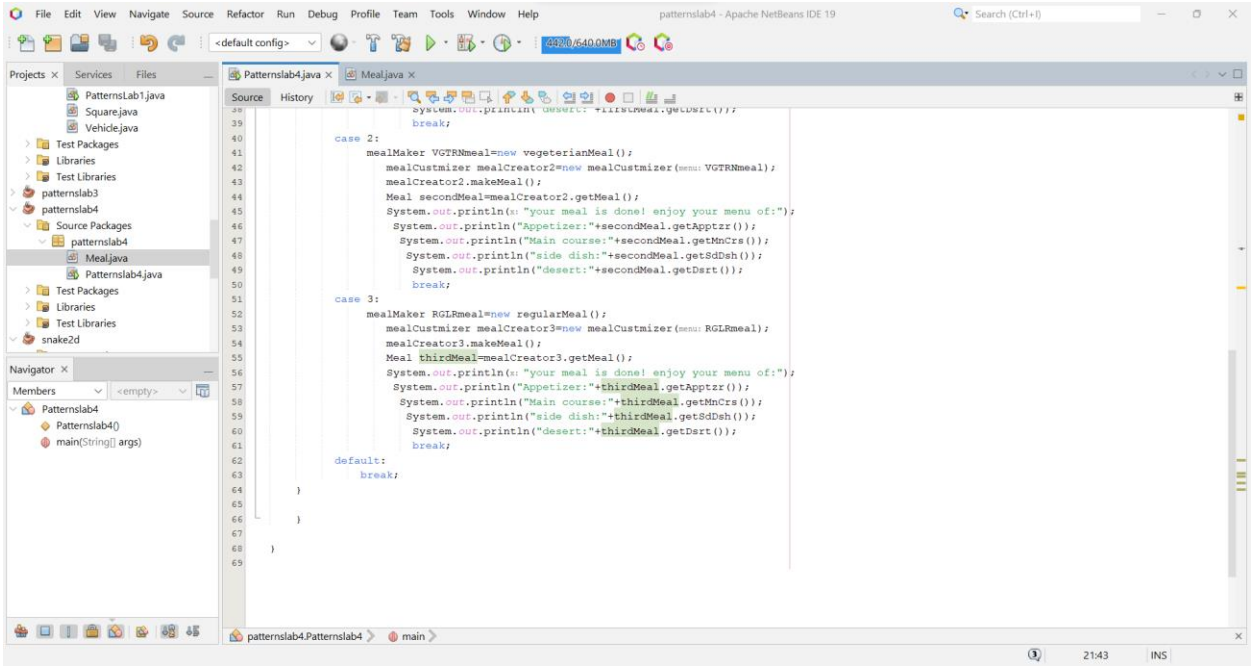
Patternslab4
Patternslab4()
main(String[] args)
Patternslab4.java
Meal.java
Source
History
public static void main(String[] args) {
System.out.println(x: "welcome! pick the meal you like.");
System.out.println(x: "1. vegan meal \n2. vegeterian meal \n3. regular meal");
Scanner scnr=new Scanner(source:System.in);
int choice=scnr.nextInt();
switch(choice){
case 1:
mealMaker VGNmeal=new veganMeal();
mealCustmizer mealCreator=new mealCustmizer(menu: VGNmeal);
mealCreator.makeMeal();
Meal firstMeal=mealCreator.getMeal();
System.out.println(x: "your meal is done! enjoy your menu of:");
System.out.println("Appetizer:"+firstMeal.getApptzr());
System.out.println("Main course:"+firstMeal.getMnCrs());
System.out.println("side dish:"+firstMeal.getSdDsh());
System.out.println("desert:"+firstMeal.getDsrt());
break;
case 2:
mealMaker VGTRNmeal=new vegeterianMeal();
mealCustmizer mealCreator2=new mealCustmizer(menu: VGTRNmeal);
mealCreator2.makeMeal();
Meal secondMeal=mealCreator2.getMeal();
System.out.println(x: "your meal is done! enjoy your menu of:");
System.out.println("Appetizer:"+secondMeal.getApptzr());
System.out.println("Main course:"+secondMeal.getMnCrs());
System.out.println("side dish:"+secondMeal.getSdDsh());
System.out.println("desert:"+secondMeal.getDsrt());
break;
case 3:
mealMaker RGLRmeal=new regularMeal();
patternslab4.Patternslab4
main
21:43
INS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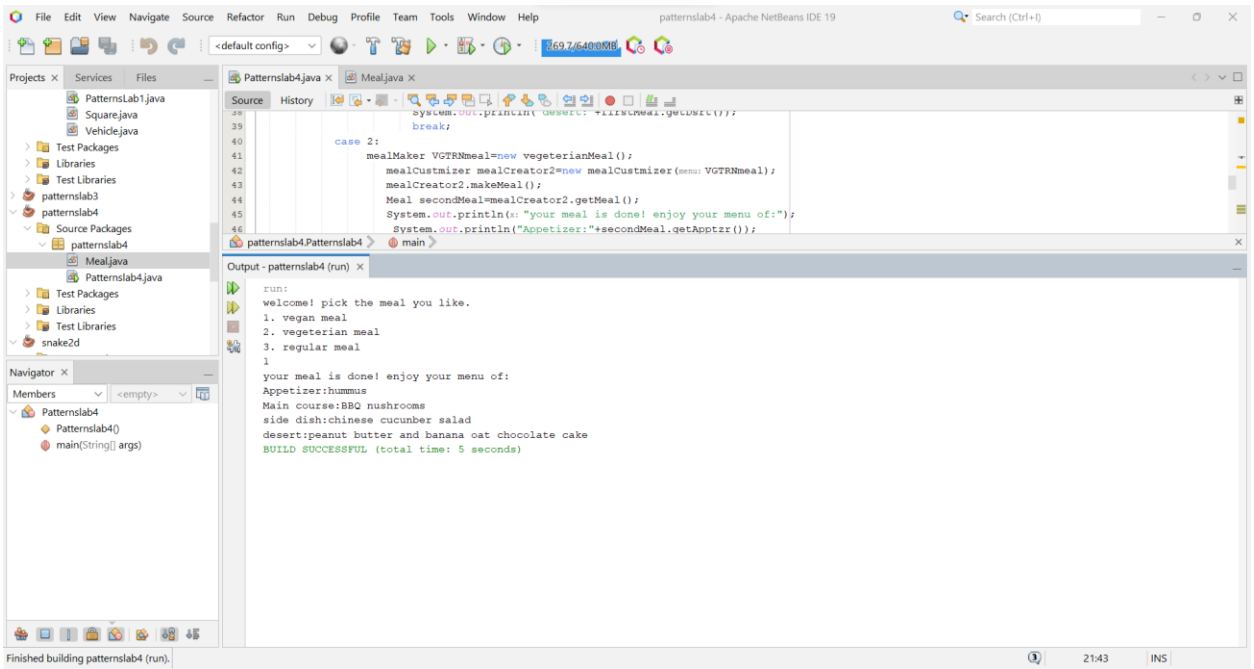
break;
case 2:
mealMaker VGTRNmeal=new vegeterianMeal();
mealCustmizer mealCreator2=new mealCustmizer(menu: VGTRNmeal);
mealCreator2.makeMeal();
Meal secondMeal=mealCreator2.getMeal();
System.out.println(x: "your meal is done! enjoy your menu of:");
System.out.println("Appetizer:"+secondMeal.getApptzr());
System.out.println("Main course:"+secondMeal.getMnCrs());
System.out.println("side dish:"+secondMeal.getSdDsh());
System.out.println("desert:"+secondMeal.getDsrt());
break;
case 3:
mealMaker RGLRmeal=new regularMeal();
mealCustmizer mealCreator3=new mealCustmizer(menu: RGLRmeal);
mealCreator3.makeMeal();
Meal thirdMeal=mealCreator3.getMeal();
System.out.println(x: "your meal is done! enjoy your menu of:");
System.out.println("Appetizer:"+thirdMeal.getApptzr());
System.out.println("Main course:"+thirdMeal.getMnCrs());
System.out.println("side dish:"+thirdMeal.getSdDsh());
System.out.println("desert:"+thirdMeal.getDsrt());
break;
default:
break;
patternslab4.Patternslab4
main
21:43
INS

Run: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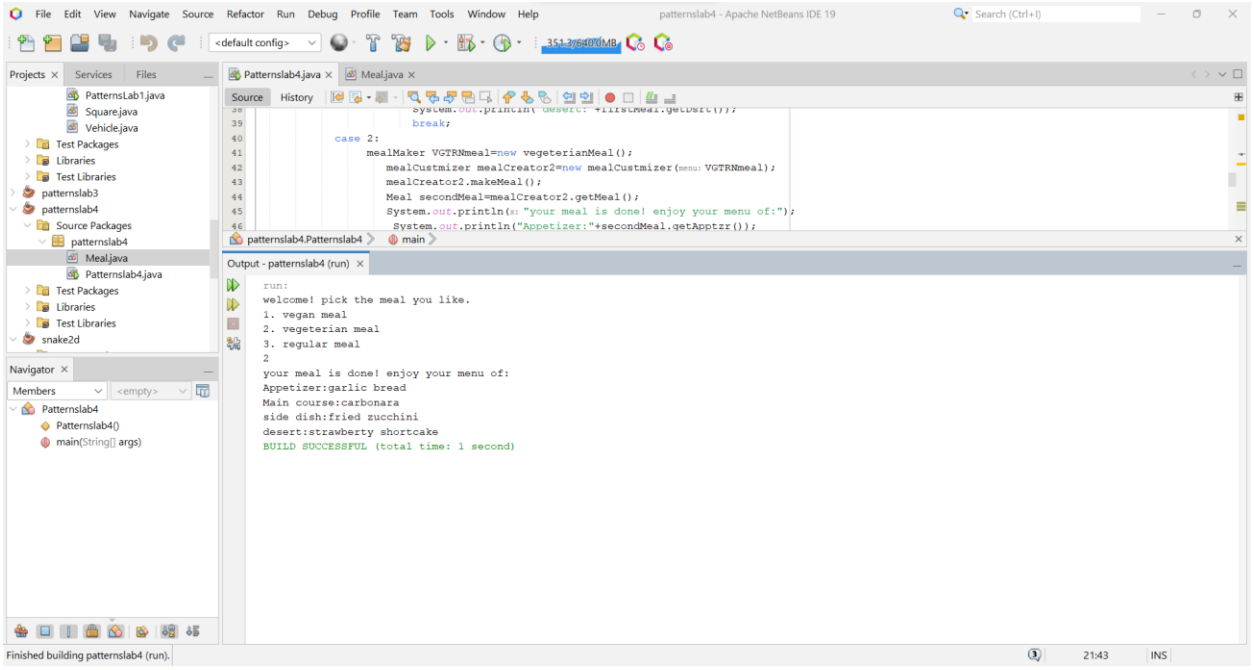
Source
History
Output - patternslab4 (run)
run:
welcome! pick the meal you like.
1. vegan meal
2. vegeterian meal
3. regular meal
1
your meal is done! enjoy your menu of:
Appetizer:hummus
Main course:BBQ nushrooms
side dish:chinese cucunber salad
desert:peanut butter and banana oat chocolate cake
BUILD SUCCESSFUL (total time: 5 seconds)
Finished building patternslab4 (run).
21:43
INS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Patternslab4()
main(String[] args)
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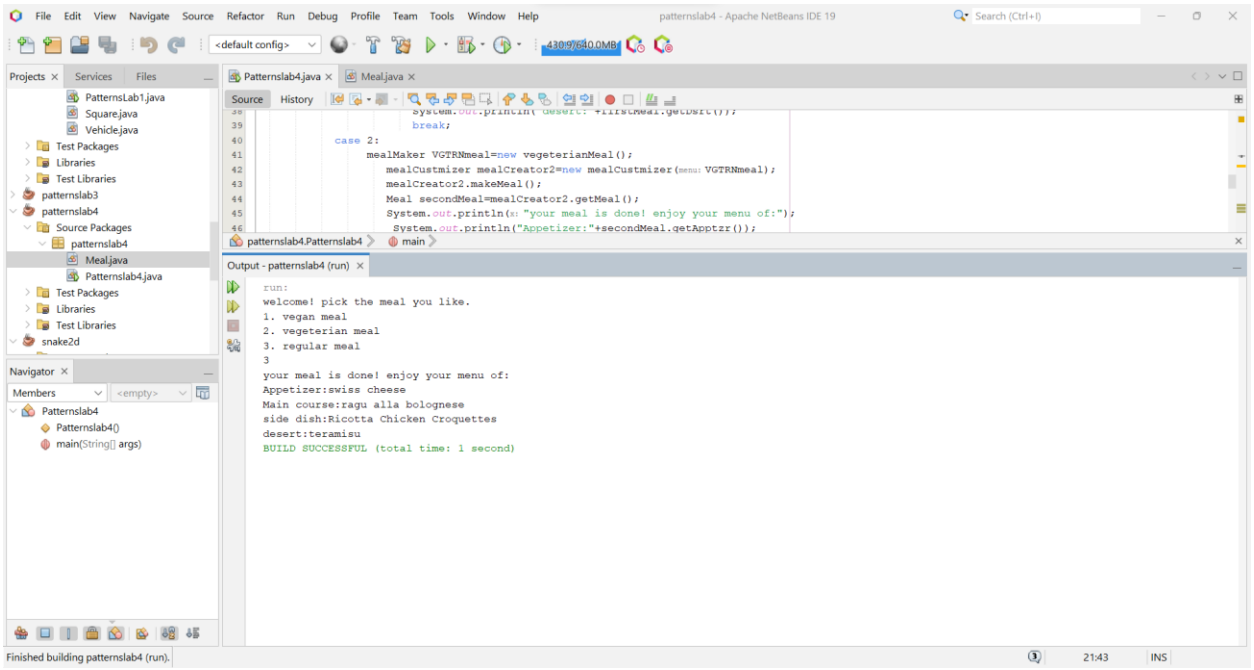
Meal.java
Source
History
39 break;
40 case 2:
41 mealMaker VGTRNmeal=new vegeterianMeal();
42 mealCustmizer mealCreator2=new mealCustmizer(menu: VGTRNmeal);
43 mealCreator2.makeMeal();
44 Meal secondMeal=mealCreator2.getMeal();
45 System.out.println(x: "your meal is done! enjoy your menu of:");
46 System.out.println("Appetizer:"+secondMeal.getApptzr());
patternslab4.Patternslab4
main
Output - patternslab4 (run)
run:
welcome! pick the meal you like.
1. vegan meal
2. vegeterian meal
3. regular meal
2
your meal is done! enjoy your menu of:
Appetizer:garlic bread
Main course:carbonara
side dish:fried zucchini
desert:strawberty shortcake
BUILD SUCCESSFUL (total time: 1 second)
Finished building patternslab4 (run).
21:43
INS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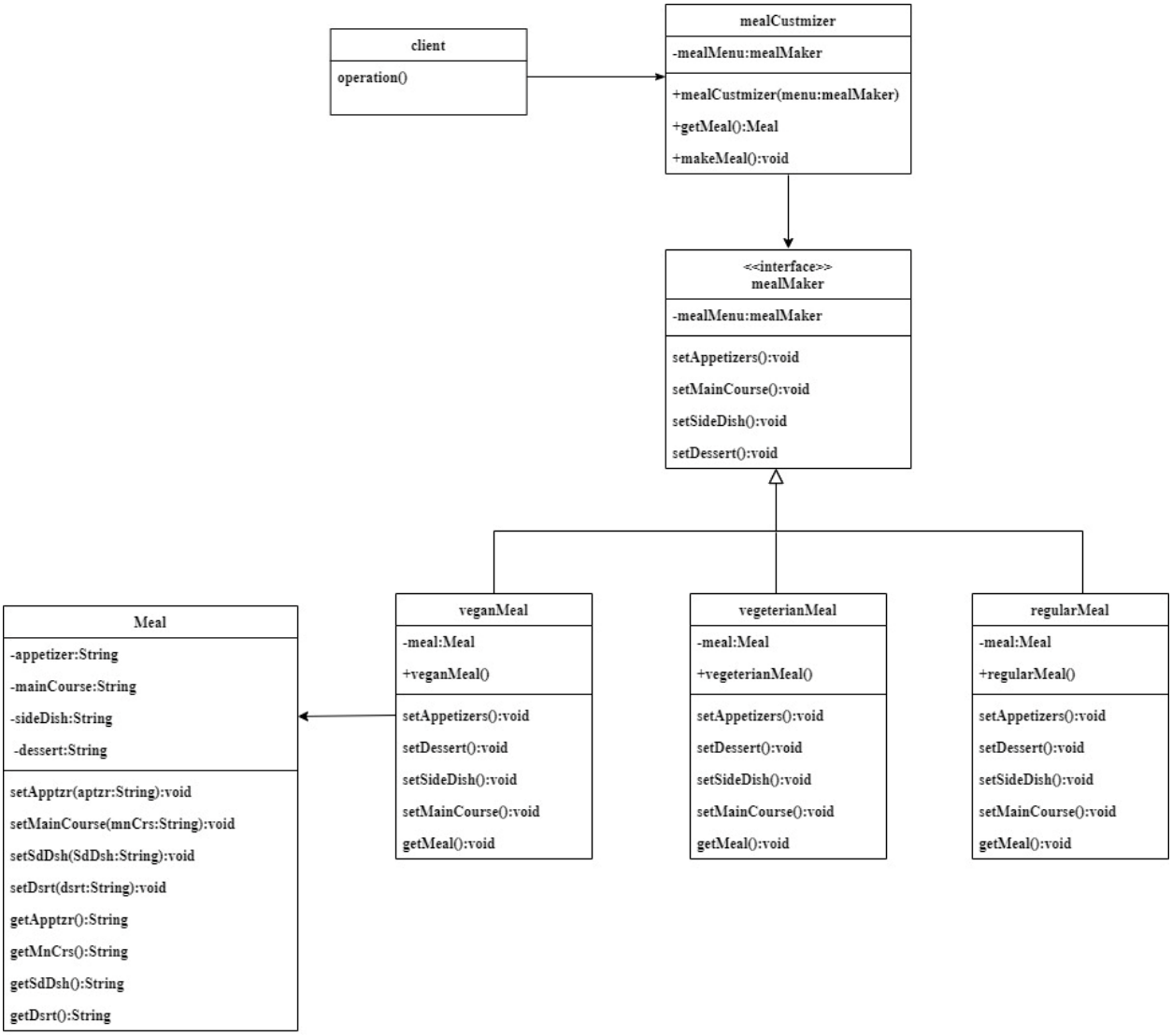
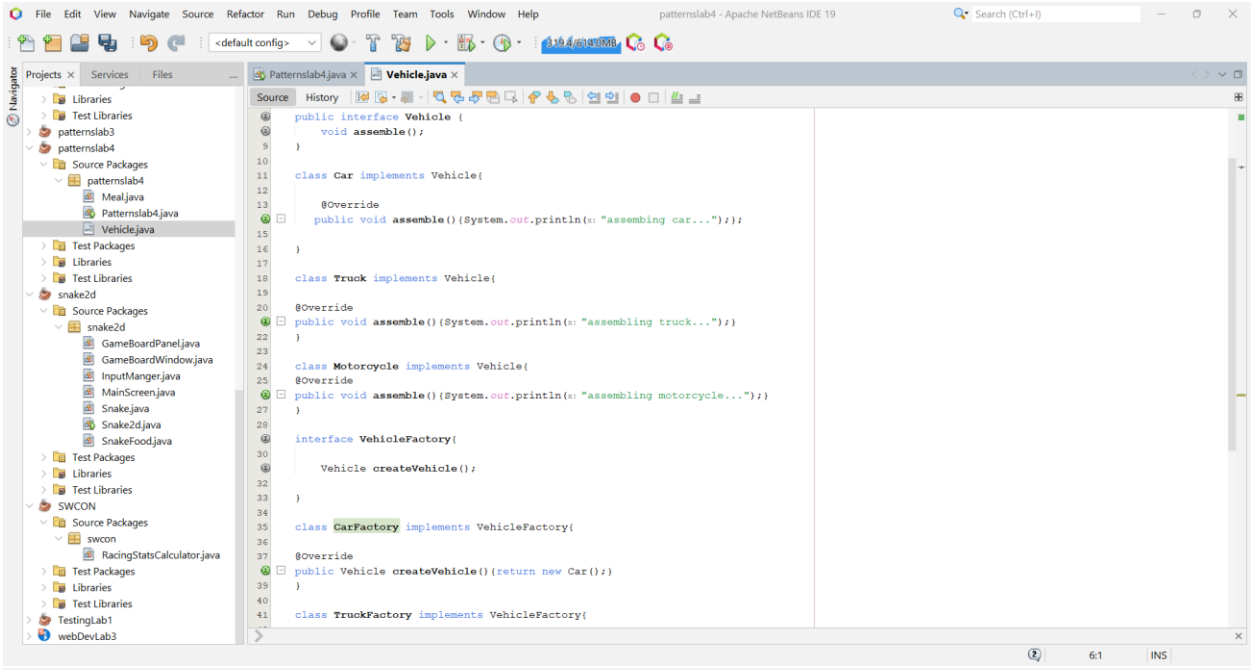
Source
History
39 break;
40 case 2:
41 mealMaker VGTRNmeal=new vegeterianMeal();
42 mealCustmizer mealCreator2=new mealCustmizer(menu: VGTRNmeal);
43 mealCreator2.makeMeal();
44 Meal secondMeal=mealCreator2.getMeal();
45 System.out.println(x: "your meal is done! enjoy your menu of:");
46 System.out.println("Appetizer:"+secondMeal.getApptzr());
patternslab4.Patternslab4
main
Output - patternslab4 (run)
run:
welcome! pick the meal you like.
1. vegan meal
2. vegeterian meal
3. regular meal
3
your meal is done! enjoy your menu of:
Appetizer:swiss cheese
Main course:ragu alla bolognese
side dish:Ricotta Chicken Croquettes
desert:teramisu
BUILD SUCCESSFUL (total time: 1 second)
Finished building patternslab4 (run).
21:43
INS

Class diagram:



Assignment 2: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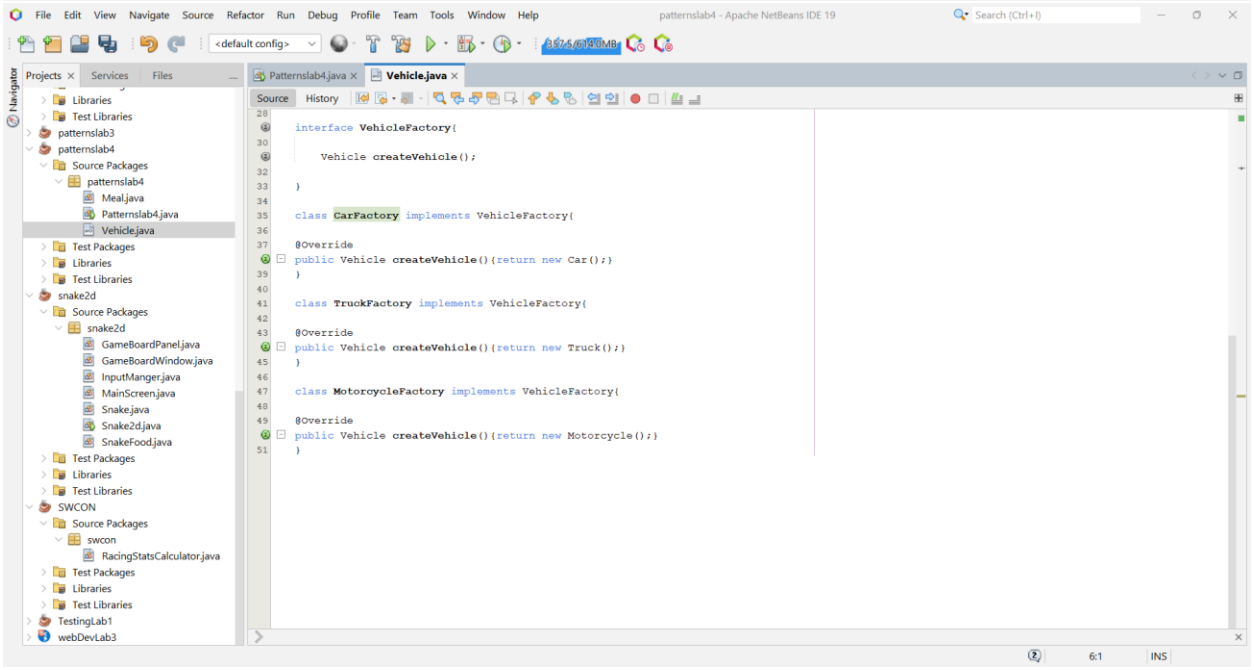
Vehicle.java
Source
History
public interface Vehicle {
void assemble();
}
class Car implements Vehicle{
@Override
public void assemble(){System.out.println("assembing car...");};
}
class Truck implements Vehicle{
@Override
public void assemble(){System.out.println("assembling truck...");}
}
class Motorcycle implements Vehicle{
@Override
public void assemble(){System.out.println("assembling motorcycle...");}
}
interface VehicleFactory{
Vehicle createVehicle();
}
class CarFactory implements VehicleFactory{
@Override
public Vehicle createVehicle(){return new Car();}
}
class TruckFactory implements VehicleFactory{
6:1
INS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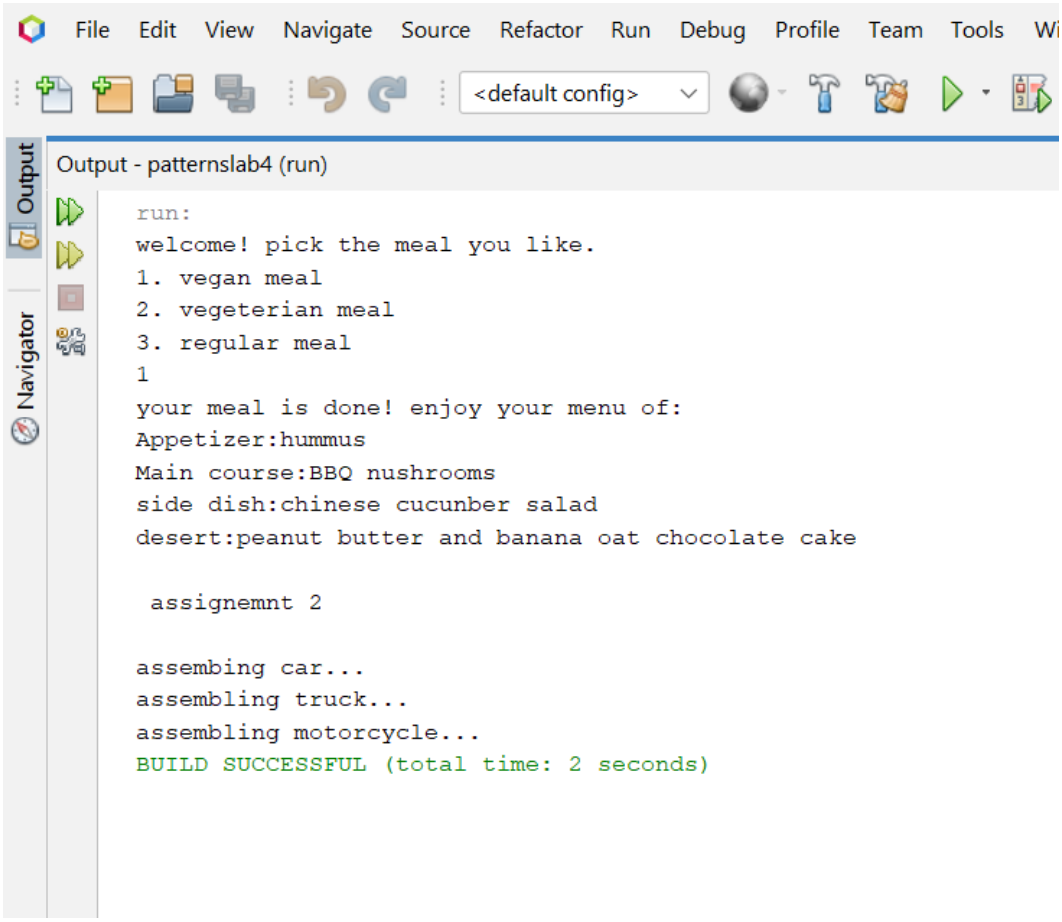
Vehicle.java
Source
History
interface VehicleFactory{
Vehicle createVehicle();
}
class CarFactory implements VehicleFactory{
@Override
public Vehicle createVehicle(){return new Car();}
}
class TruckFactory implements VehicleFactory{
@Override
public Vehicle createVehicle(){return new Truck();}
}
class MotorcycleFactory implements VehicleFactory{
@Override
public Vehicle createVehicle(){return new Motorcycle();}
}
6:1
INS

```
                break;
            }
            System.out.println(x: "\n assignemnt 2\n");

            VehicleFactory car=new CarFactory();
            car.createVehicle().assemble();

            VehicleFactory truck=new TruckFactory();
            truck.createVehicle().assemble();

            VehicleFactory motorcycle=new MotorcycleFactory();
            motorcycle.createVehicle().assemble();

        }

    }
```