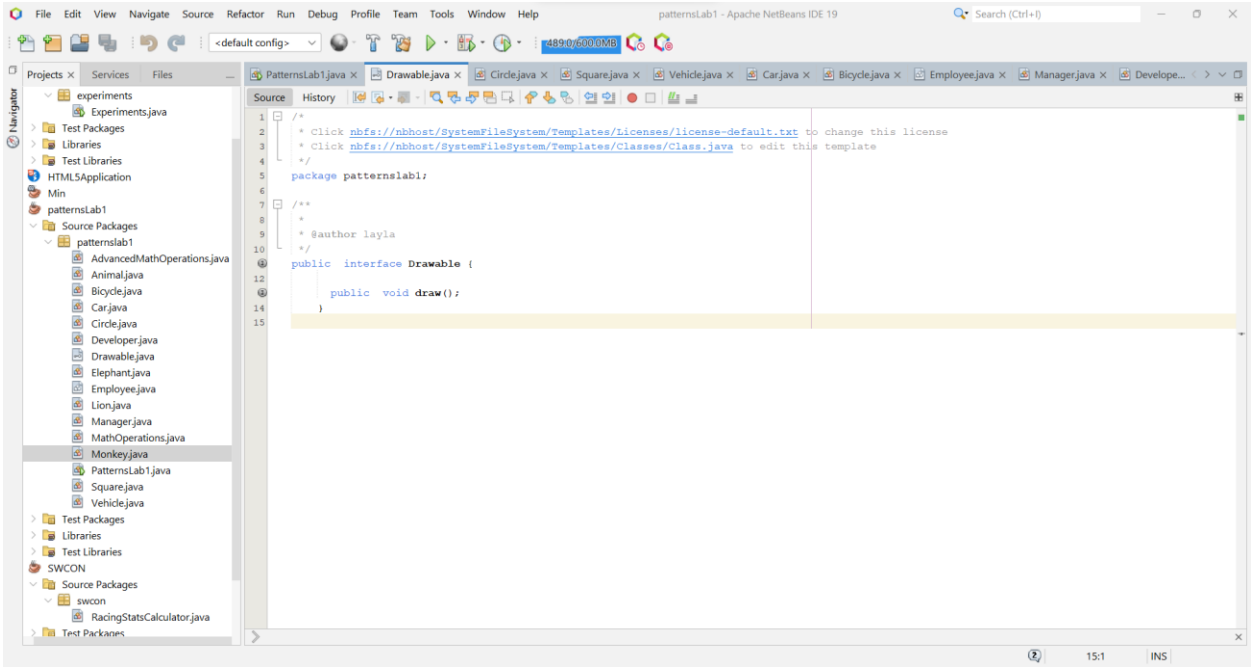
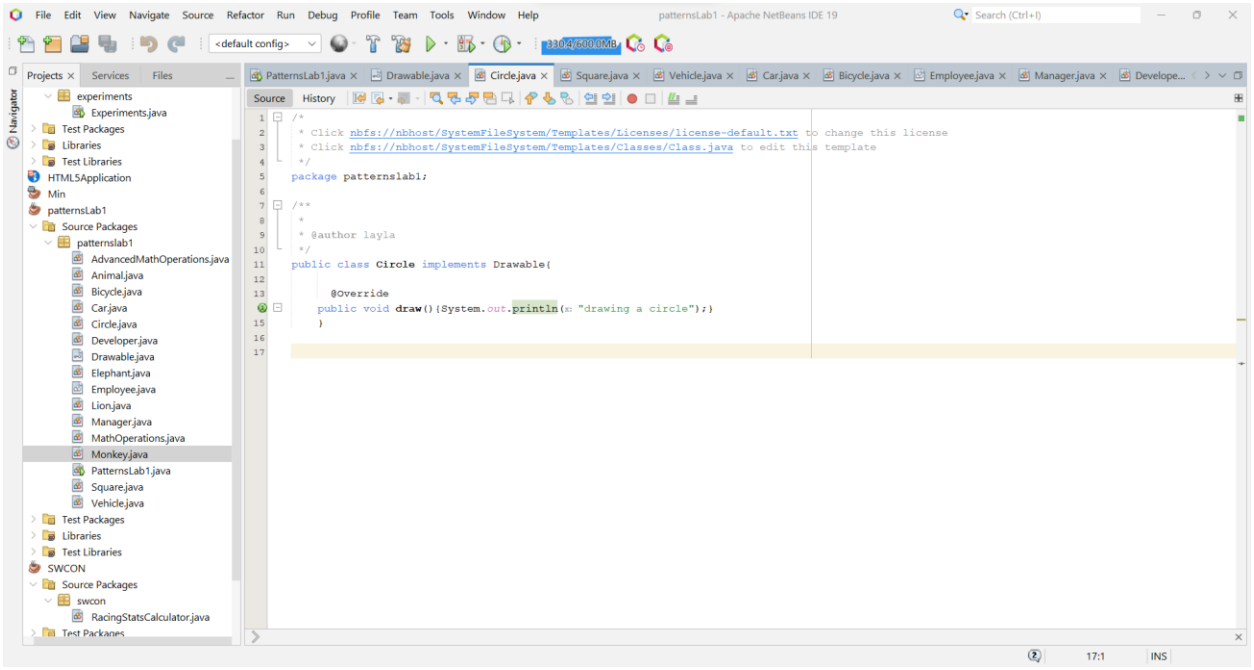
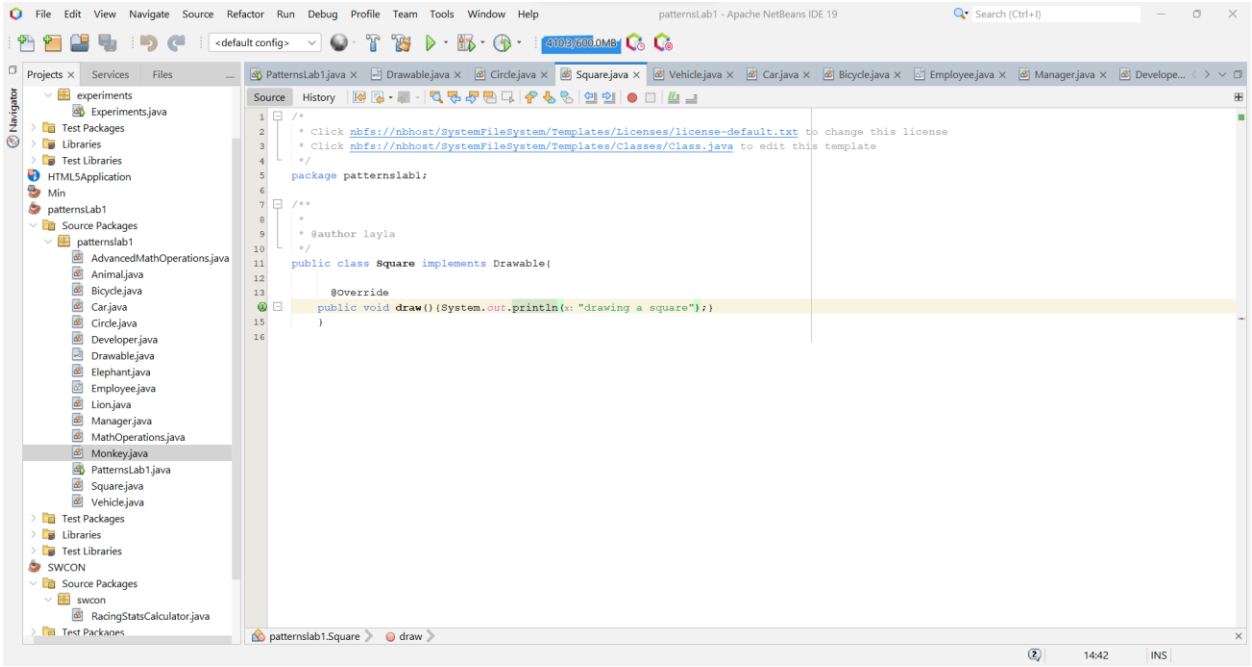
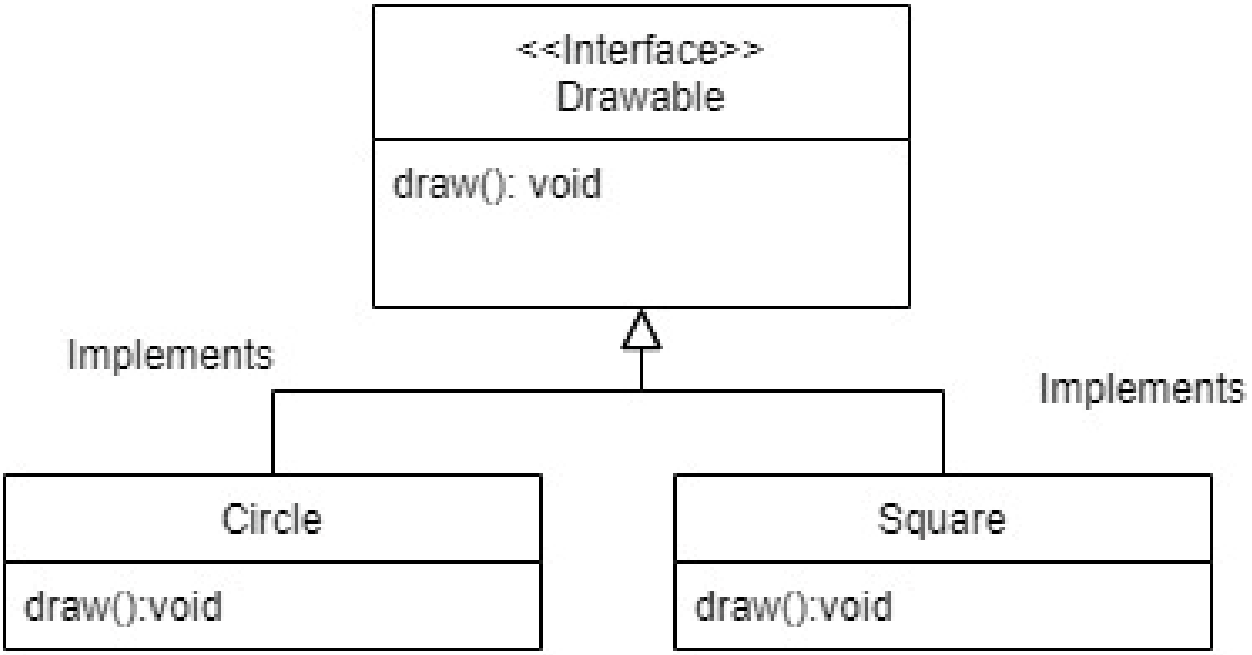
Task 1:

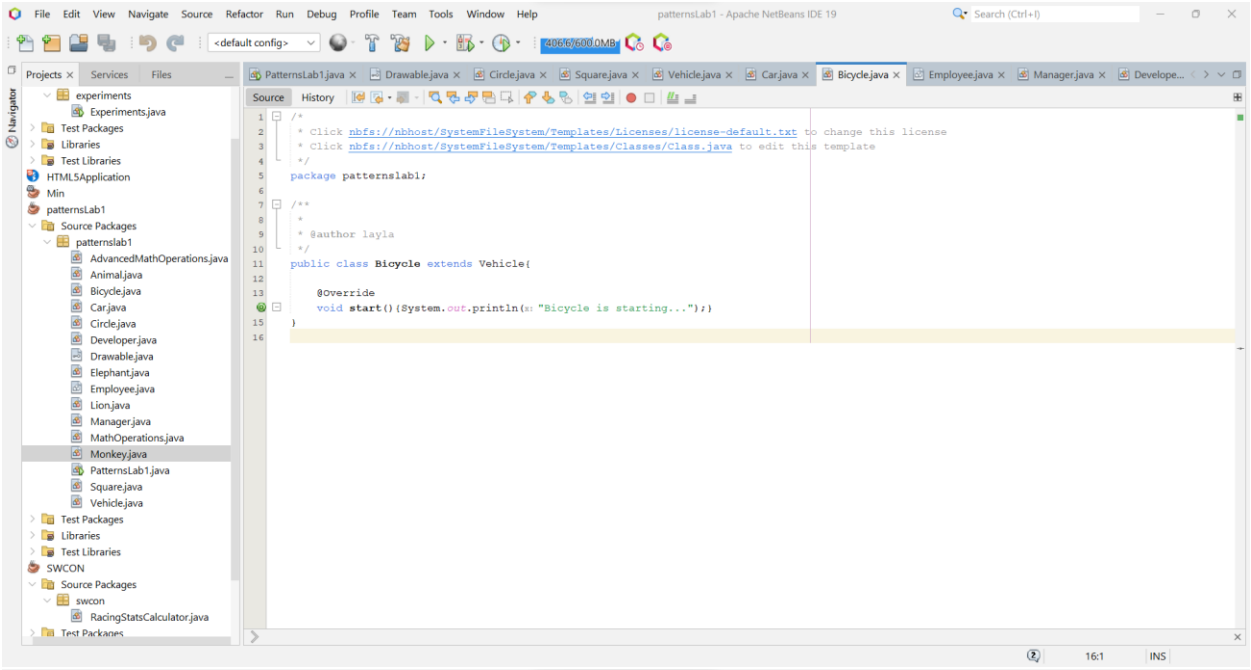

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
patternsLab1 - Apache NetBeans IDE 19
Search (Ctrl+I)
<default config>
Projects
Services
Files
PatternsLab1.java
Drawable.java
Circle.java
Square.java
Vehicle.java
Car.java
Bicycle.java
Employee.java
Manager.java
Source
History
/*
* Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
* Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit this template
*/
package patternslab1;
/**
*
* @author layla
*/
public interface Drawable {
public void draw();
}
15:1
INS


File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
patternsLab1 - Apache NetBeans IDE 19
Search (Ctrl+I)
<default config>
Projects
Services
Files
PatternsLab1.java
Drawable.java
Circle.java
Square.java
Vehicle.java
Car.java
Bicycle.java
Employee.java
Manager.java
Source
History
/*
* Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
* Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit this template
*/
package patternslab1;
/**
*
* @author layla
*/
public class Circle implements Drawable{
@Override
public void draw(){System.out.println(x: "drawing a circle");}
}
17:1
INS

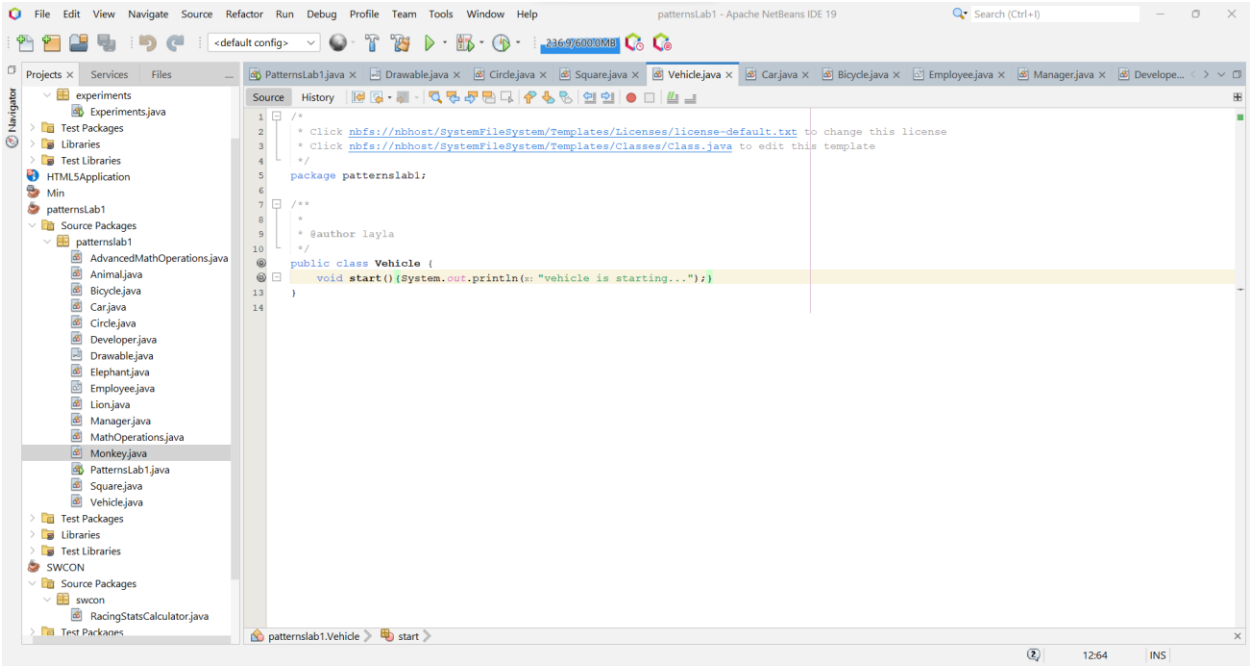

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
patternsLab1 - Apache NetBeans IDE 19
Search (Ctrl+I)
<default config>
Projects
Services
Files
experiments
Experiments.java
Test Packages
Libraries
Test Libraries
HTML5Application
Min
patternsLab1
Source Packages
patternslab1
AdvancedMathOperations.java
Animal.java
Bicycle.java
Car.java
Circle.java
Developer.java
Drawable.java
Elephant.java
Employee.java
Lion.java
Manager.java
MathOperations.java
Monkey.java
PatternsLab1.java
Square.java
Vehicle.java
Test Packages
Libraries
Test Libraries
SWCON
Source Packages
swcon
RacingStatsCalculator.java
PatternsLab1.java
Drawable.java
Circle.java
Square.java
Vehicle.java
Car.java
Bicycle.java
Employee.java
Manager.java
Source
History
/*
* Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
* Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit this template
*/
package patternslab1;
/**
*
* @author layla
*/
public class Square implements Drawable{
@Override
public void draw(){System.out.println(x: "drawing a square");}
}
patternslab1.Square
draw
14:42
INS


<<Interface>>
Drawable
draw(): void
Implements
Implements
Circle
draw():void
Square
draw():void

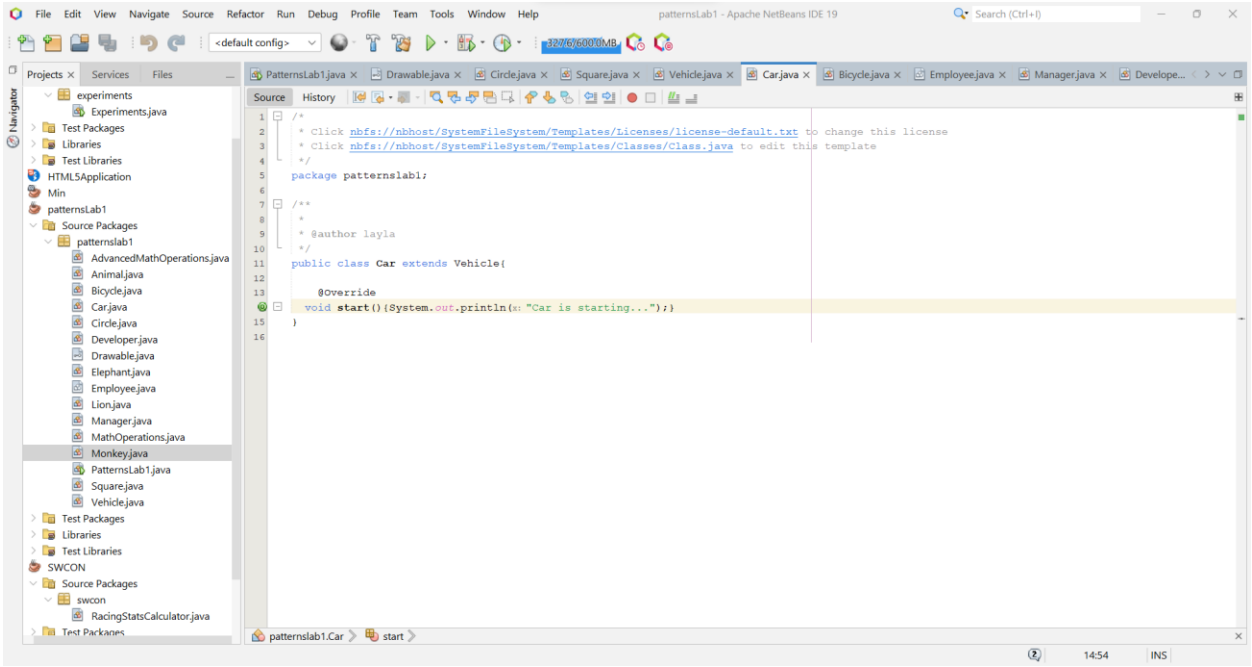
Task 2:

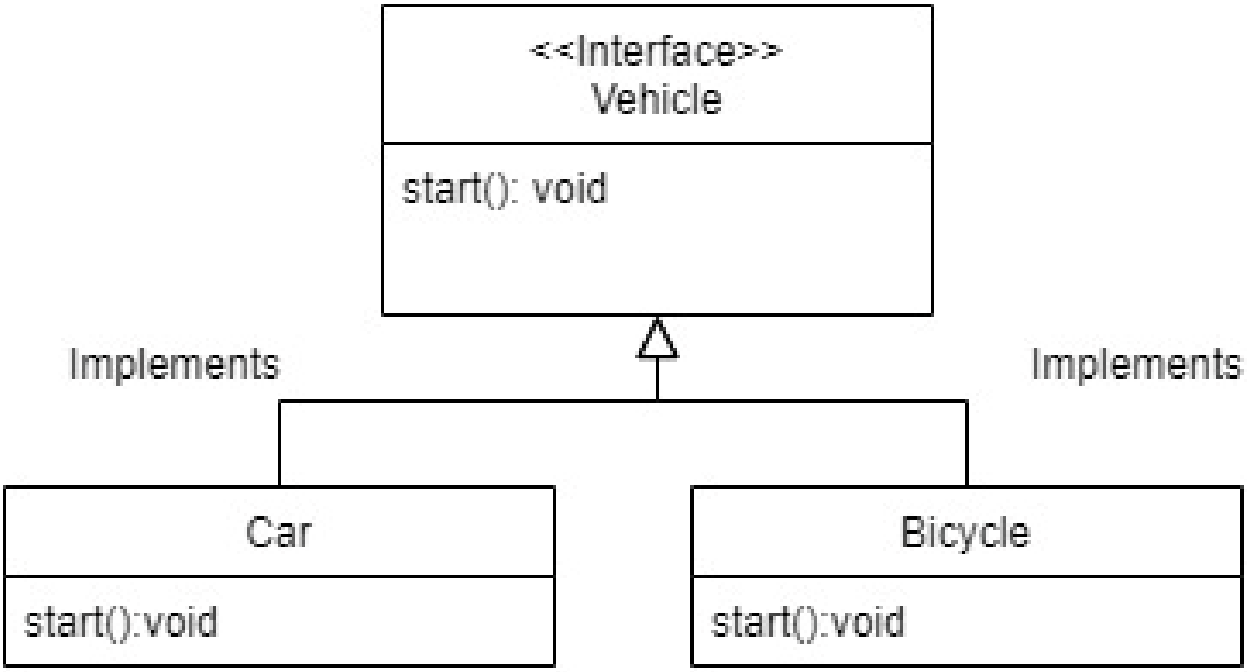


/*
* Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
* Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit this template
*/
package patternslab1;
/**
*
* @author layla
*/
public class Bicycle extends Vehicle{
@Override
void start(){System.out.println("Bicycle is starting...");}
}

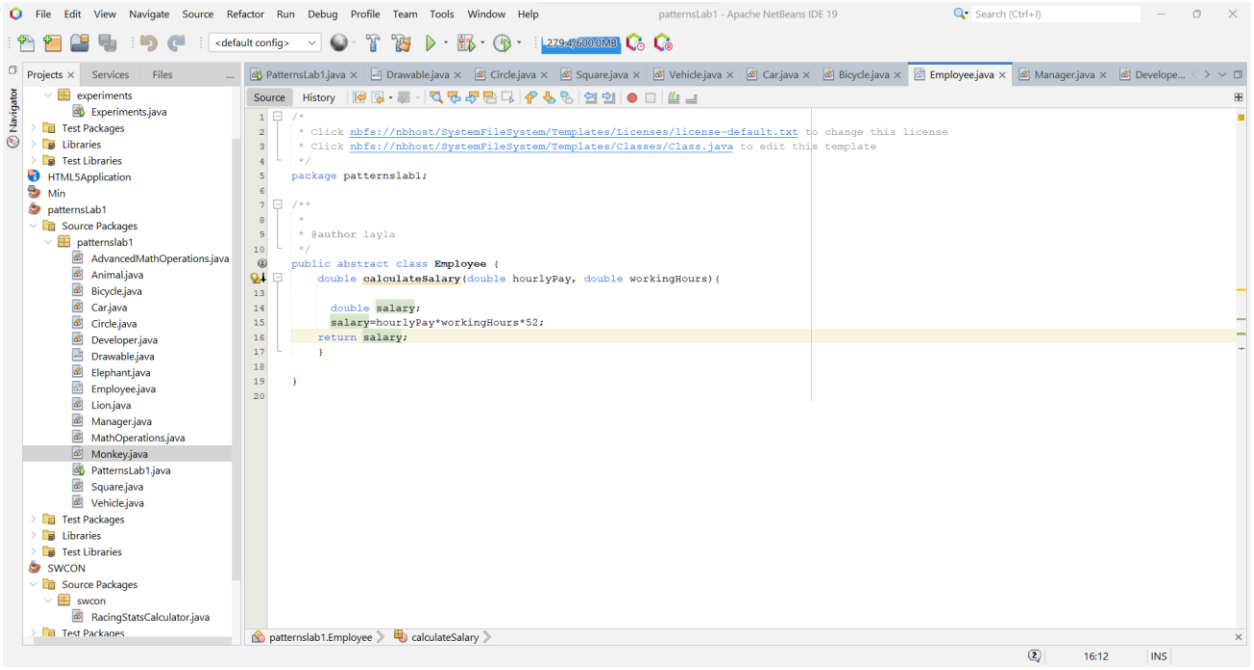


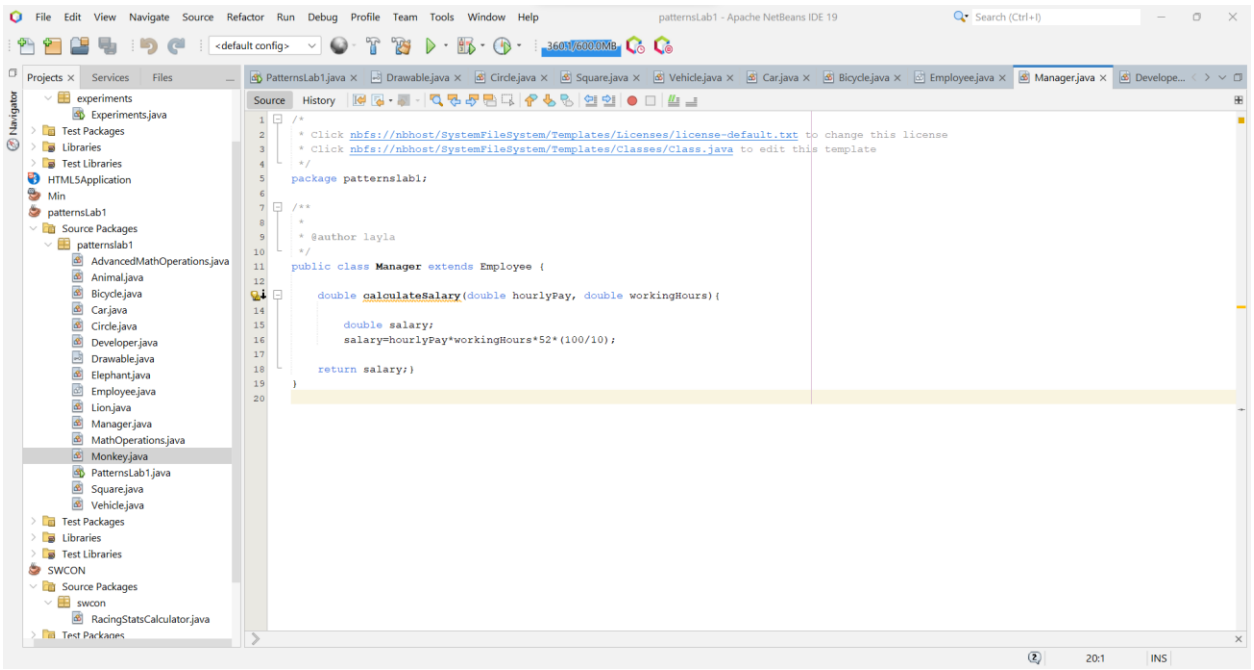
/*
* Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
* Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit this template
*/
package patternslab1;
/**
*
* @author layla
*/
public class Vehicle {
void start(){System.out.println("vehicle is starting...");}
}

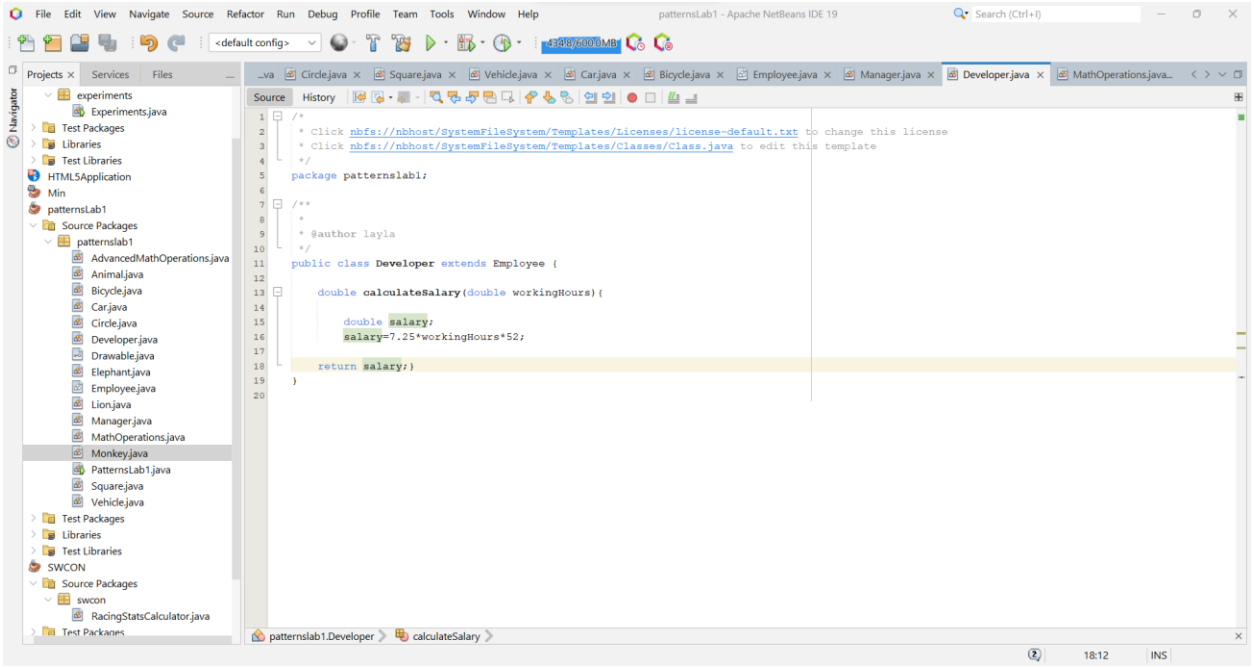

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
patternsLab1 - Apache NetBeans IDE 19
Search (Ctrl+I)
<default config>
Projects
Services
Files
experiments
Experiments.java
Test Packages
Libraries
Test Libraries
HTML5Application
Min
patternsLab1
Source Packages
patternslab1
AdvancedMathOperations.java
Animal.java
Bicycle.java
Car.java
Circle.java
Developer.java
Drawable.java
Elephant.java
Employee.java
Lion.java
Manager.java
MathOperations.java
Monkey.java
PatternsLab1.java
Square.java
Vehicle.java
Test Packages
Libraries
Test Libraries
SWCON
Source Packages
swcon
RacingStatsCalculator.java
PatternsLab1.java
Drawable.java
Circle.java
Square.java
Vehicle.java
Car.java
Bicycle.java
Employee.java
Manager.java
Source
History
1 /*
2 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
3 * Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit this template
4 */
5 package patternslab1;
6
7 /**
8 *
9 * @author layla
10 */
11 public class Car extends Vehicle{
12
13 @Override
14 void start(){System.out.println(x: "Car is starting...");}
15 }
16
patternslab1.Car
start
14:54
INS

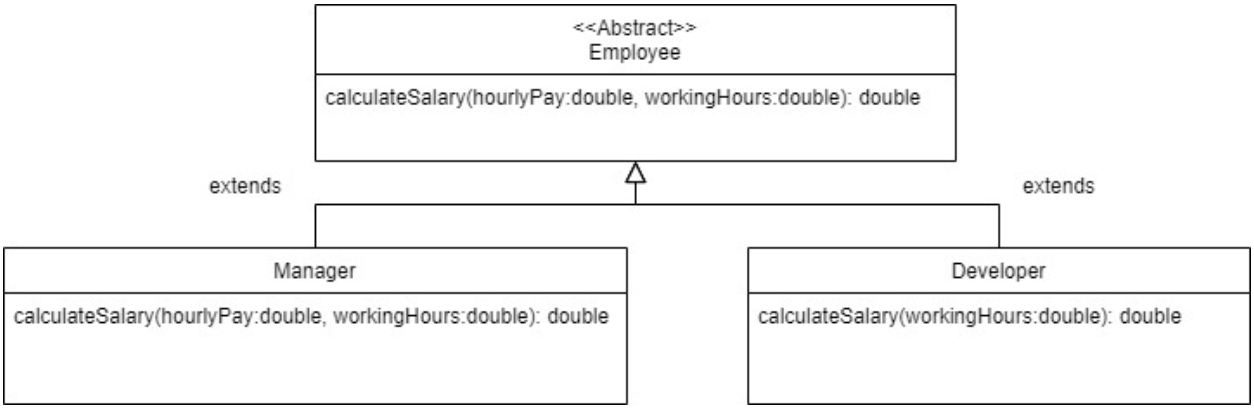

<<Interface>>
Vehicle
start(): void
Implements
Implements
Car
start():void
Bicycle
start():void

Task 3:

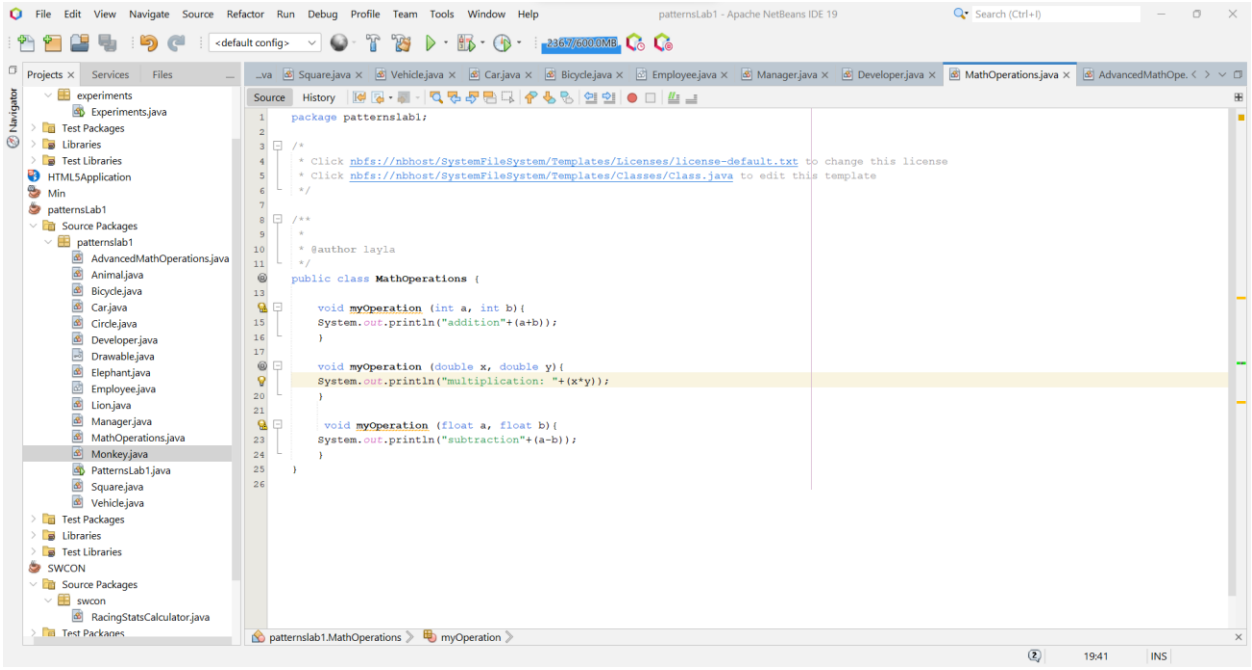

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
patternsLab1 - Apache NetBeans IDE 19
Search (Ctrl+I)
<default config>
Projects
Services
Files
PatternsLab1.java
Drawable.java
Circle.java
Square.java
Vehicle.java
Car.java
Bicycle.java
Employee.java
Manager.java
Source
History
/*
* Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
* Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit this template
*/
package patternslab1;
/**
*
* @author layla
*/
public abstract class Employee {
double calculateSalary(double hourlyPay, double workingHours){
double salary;
salary=hourlyPay*workingHours*52;
return salary;
}
}
patternslab1.Employee
calculateSalary
16:12
INS

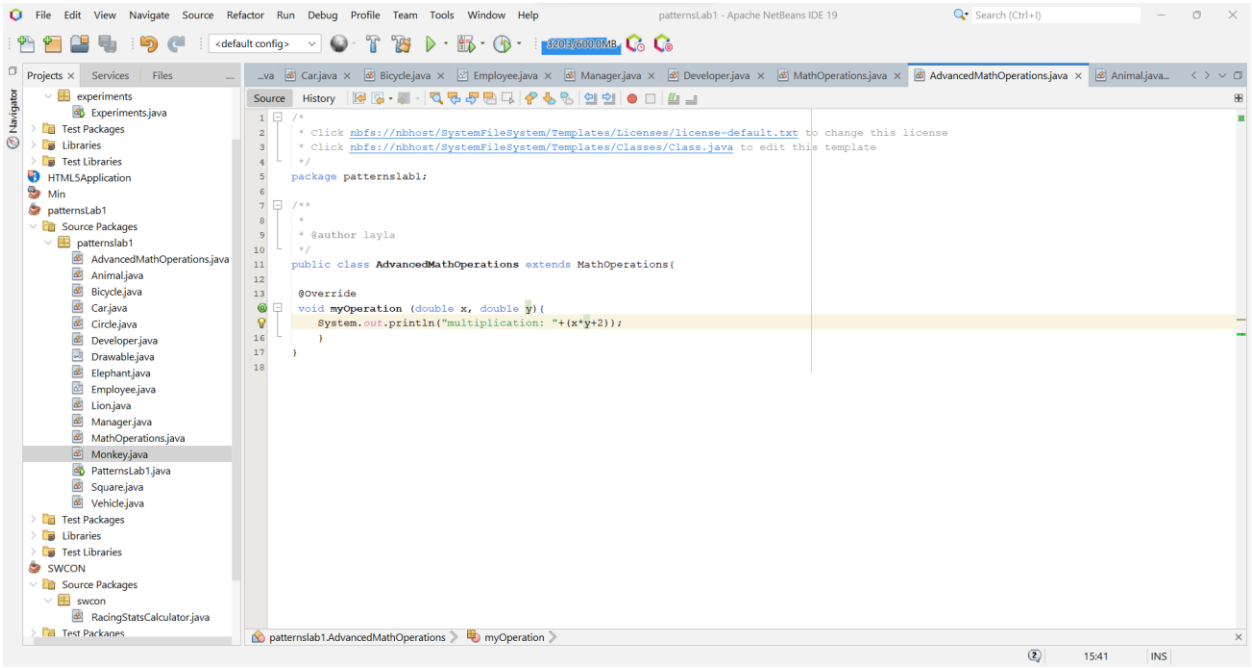

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
patternsLab1 - Apache NetBeans IDE 19
Search (Ctrl+I)
<default config>
Projects
Services
Files
PatternsLab1.java
Drawable.java
Circle.java
Square.java
Vehicle.java
Car.java
Bicycle.java
Employee.java
Manager.java
Source
History
/*
* Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
* Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit this template
*/
package patternslab1;
/**
*
* @author layla
*/
public class Manager extends Employee {
double calculateSalary(double hourlyPay, double workingHours){
double salary;
salary=hourlyPay*workingHours*52*(100/10);
return salary;}
}
20:1
INS

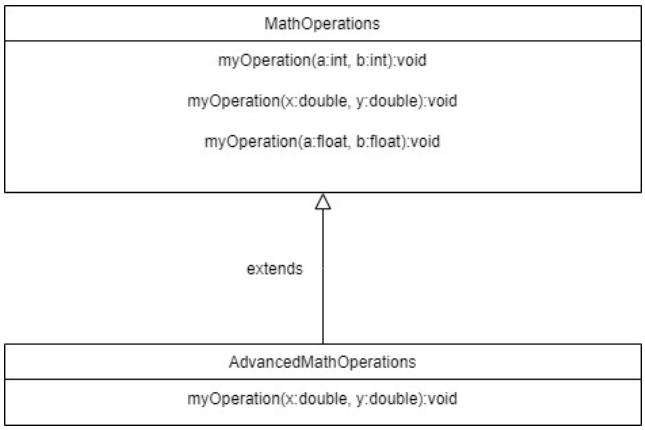

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
patternsLab1 - Apache NetBeans IDE 19
Search (Ctrl+I)
<default config>
Projects
Services
Files
Navigator
experiments
Experiments.java
Test Packages
Libraries
Test Libraries
HTML5Application
Min
patternsLab1
Source Packages
patternslab1
AdvancedMathOperations.java
Animal.java
Bicycle.java
Car.java
Circle.java
Developer.java
Drawable.java
Elephant.java
Employee.java
Lion.java
Manager.java
MathOperations.java
Monkey.java
PatternsLab1.java
Square.java
Vehicle.java
Test Packages
Libraries
Test Libraries
SWCON
Source Packages
swcon
RacingStatsCalculator.java
Test Packages
Circle.java
Square.java
Vehicle.java
Car.java
Bicycle.java
Employee.java
Manager.java
Developer.java
MathOperations.java...
Source
History
/*
* Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
* Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit this template
*/
package patternslab1;
/**
*
* @author layla
*/
public class Developer extends Employee {
double calculateSalary(double workingHours){
double salary;
salary=7.25*workingHours*52;
return salary;}
}
patternslab1.Developer
calculateSalary
18:12
INS


<<Abstract>>
Employee
calculateSalary(hourlyPay:double, workingHours:double): double
extends
extends
Manager
calculateSalary(hourlyPay:double, workingHours:double): double
Developer
calculateSalary(workingHours:double): double

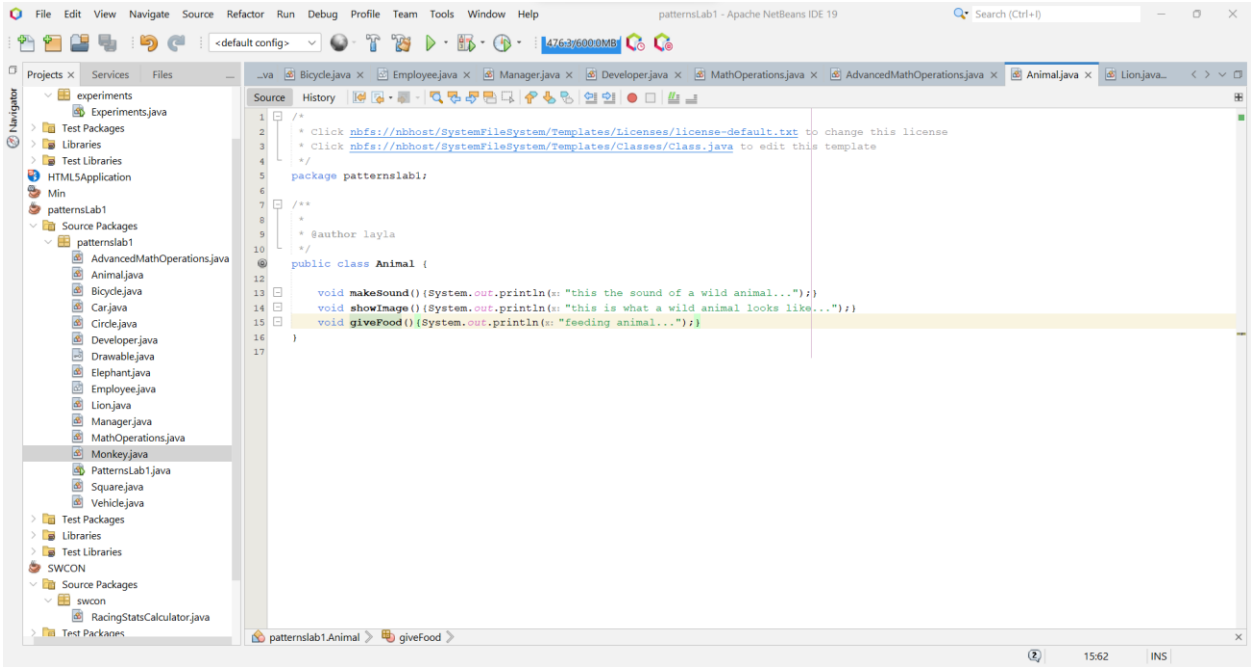
Task 4:

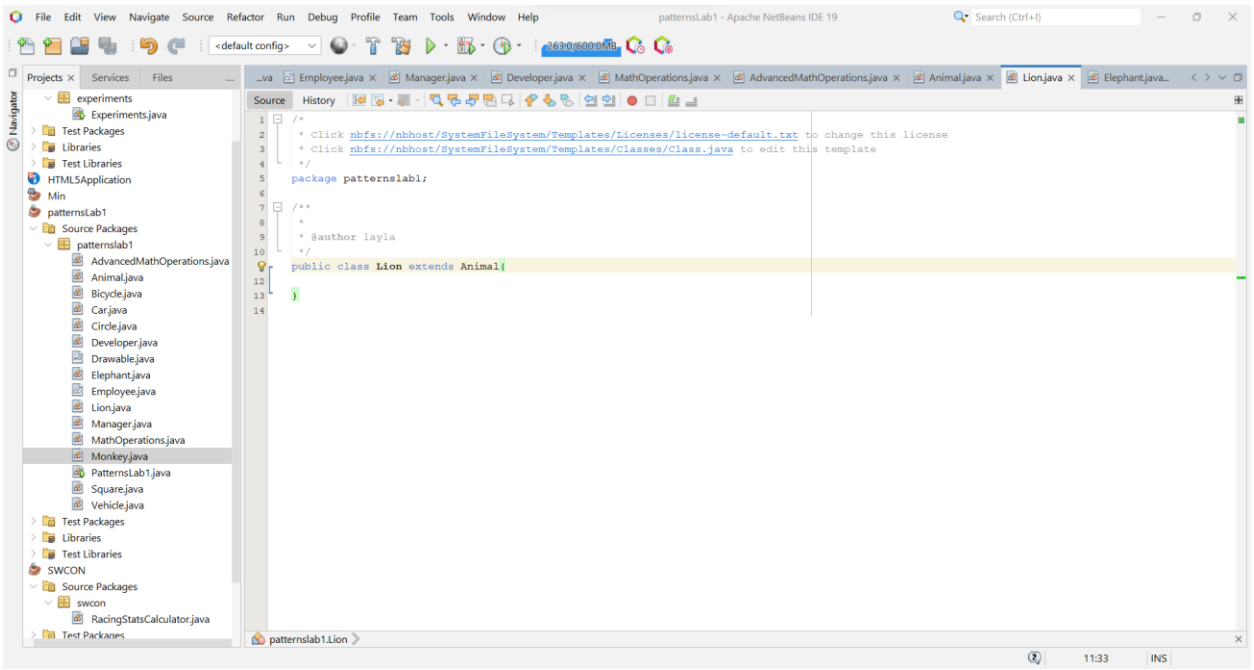

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
patternsLab1 - Apache NetBeans IDE 19
Search (Ctrl+I)
<default config>
Projects
Services
Files
Square.java
Vehicle.java
Car.java
Bicycle.java
Employee.java
Manager.java
Developer.java
MathOperations.java
AdvancedMathOpe...
Source
History
1 package patternslab1;
2
3 /*
4 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
5 * Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit this template
6 */
7
8 /**
9 *
10 * @author layla
11 */
12 public class MathOperations {
13
14 void myOperation (int a, int b){
15 System.out.println("addition"+(a+b));
16 }
17
18 void myOperation (double x, double y){
19 System.out.println("multiplication: "+(x*y));
20 }
21
22 void myOperation (float a, float b){
23 System.out.println("subtraction"+(a-b));
24 }
25 }
26
patternslab1.MathOperations
myOperation
19:41
INS

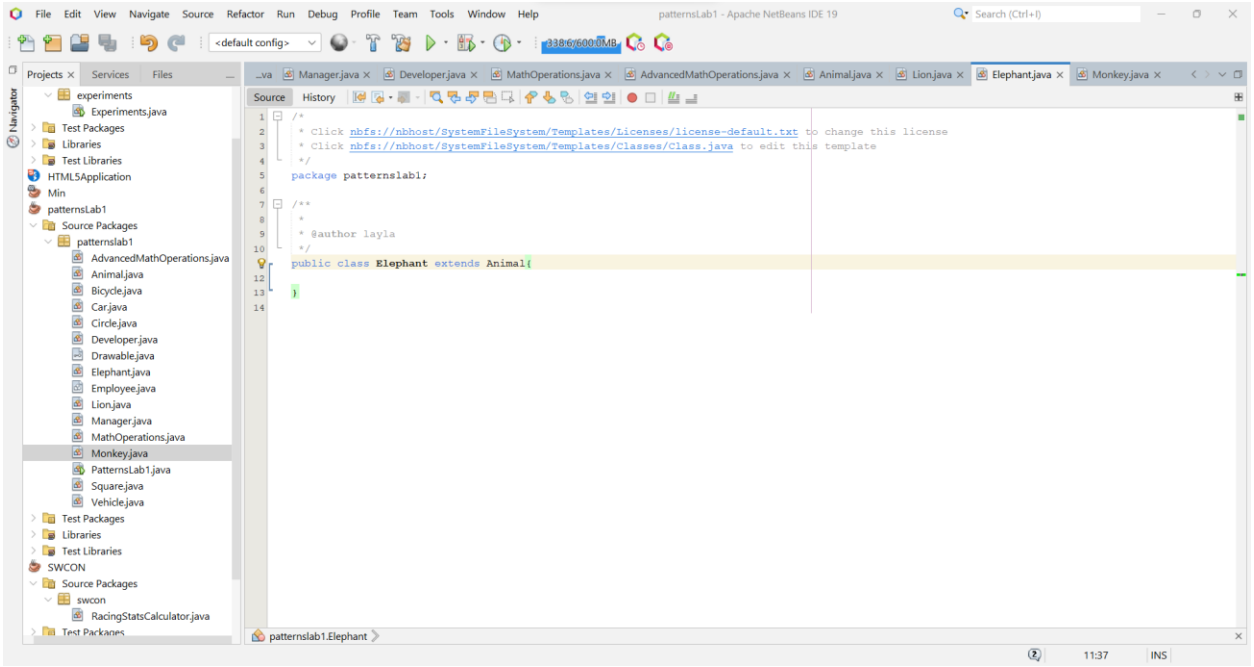

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
patternsLab1 - Apache NetBeans IDE 19
Search (Ctrl+I)
<default config>
Projects
Services
Files
Car.java
Bicycle.java
Employee.java
Manager.java
Developer.java
MathOperations.java
AdvancedMathOperations.java
Animal.java...
Source
History
1 /*
2 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
3 * Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit this template
4 */
5 package patternslab1;
6
7 /**
8 *
9 * @author layla
10 */
11 public class AdvancedMathOperations extends MathOperations{
12
13 @Override
14 void myOperation (double x, double y){
15 System.out.println("multiplication: "+(x*y+2));
16 }
17 }
18
patternslab1.AdvancedMathOperations
myOperation
15:41
INS

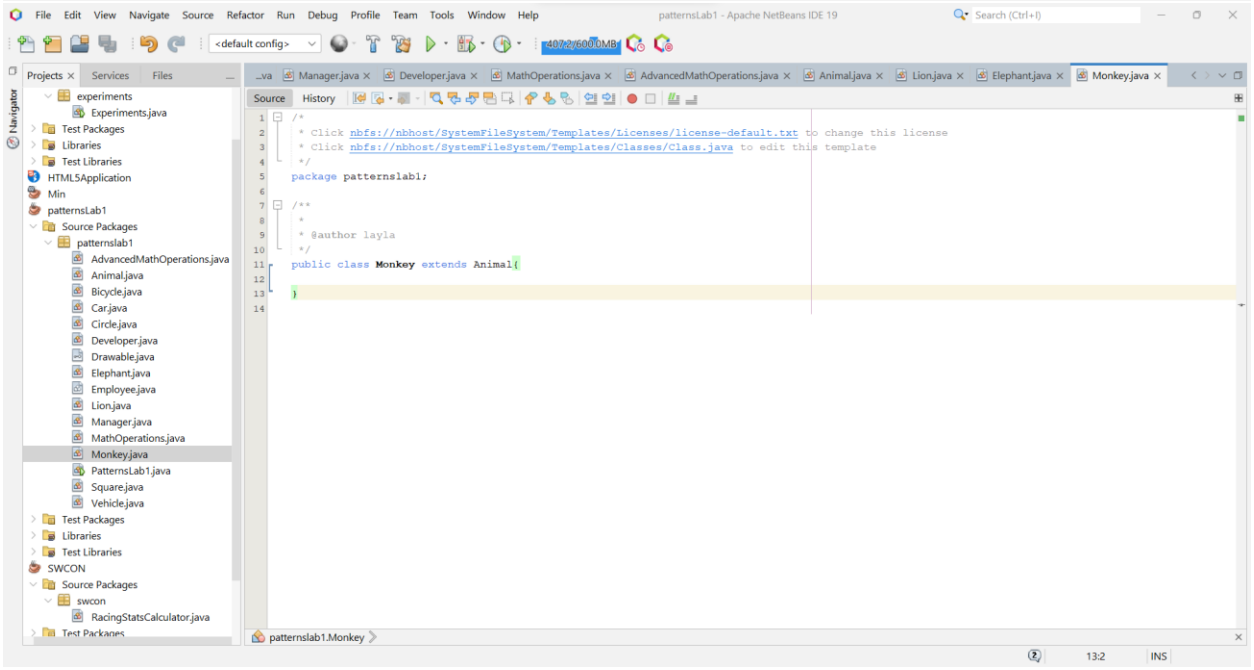

MathOperations
myOperation(a:int, b:int):void
myOperation(x:double, y:double):void
myOperation(a:float, b:float):void
extends
AdvancedMathOperations
myOperation(x:double, y:double):void

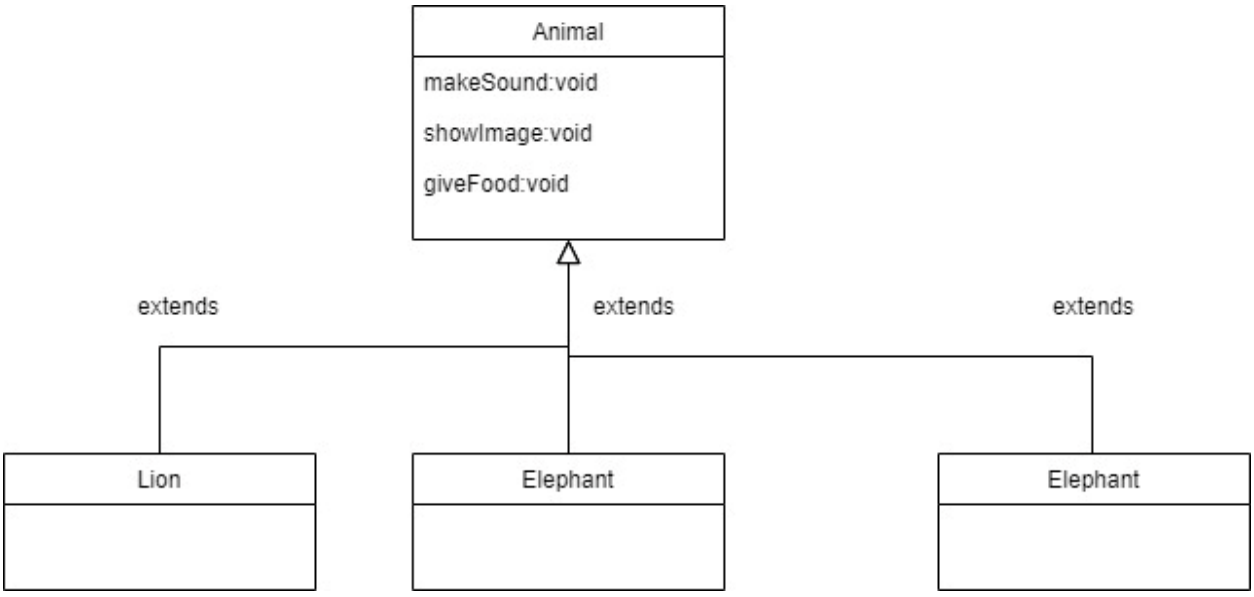
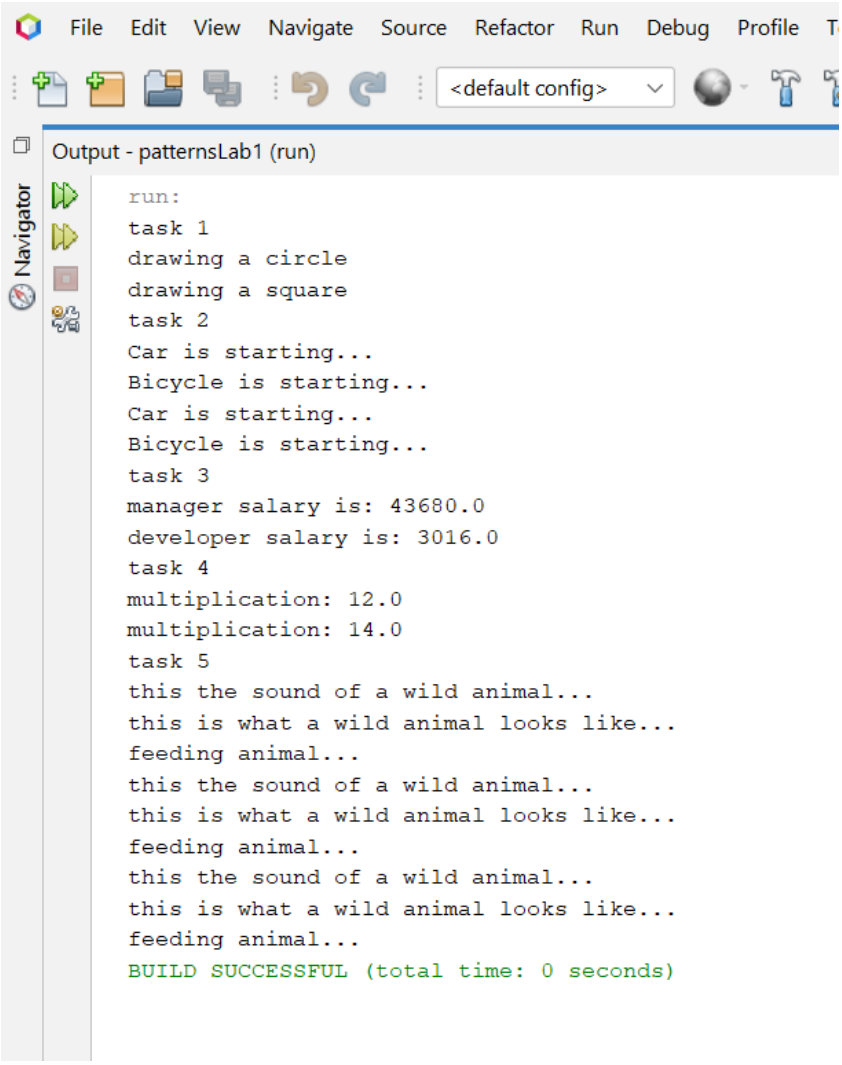
Task 5:


File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
patternsLab1 - Apache NetBeans IDE 19
Search (Ctrl+I)
<default config>
Projects
Services
Files
Bicycle.java
Employee.java
Manager.java
Developer.java
MathOperations.java
AdvancedMathOperations.java
Animal.java
Lion.java
Source
History
/*
* Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
* Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit this template
*/
package patternslab1;
/**
*
* @author layla
*/
public class Animal {
void makeSound(){System.out.println("this the sound of a wild animal...");}
void showImage(){System.out.println("this is what a wild animal looks like...");}
void giveFood(){System.out.println("feeding animal...");}
}
patternslab1.Animal
giveFood
15:62
INS


File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
patternsLab1 - Apache NetBeans IDE 19
Search (Ctrl+I)
<default config>
Projects
Services
Files
Employee.java
Manager.java
Developer.java
MathOperations.java
AdvancedMathOperations.java
Animal.java
Lion.java
Elephant.java
Source
History
/*
* Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
* Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit this template
*/
package patternslab1;
/**
*
* @author layla
*/
public class Lion extends Animal{
}
patternslab1.Lion
11:33
INS


File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
patternsLab1 - Apache NetBeans IDE 19
Search (Ctrl+I)
<default config>
338/600MB
Projects
Services
Files
Manager.java
Developer.java
MathOperations.java
AdvancedMathOperations.java
Animal.java
Lion.java
Elephant.java
Monkey.java
Source
History
/*
* Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
* Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit this template
*/
package patternslab1;
/**
*
* @author layla
*/
public class Elephant extends Animal{
}
patternslab1.Elephant
11:37
INS


File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
patternsLab1 - Apache NetBeans IDE 19
Search (Ctrl+I)
<default config>
407/2/600MB
Projects
Services
Files
Manager.java
Developer.java
MathOperations.java
AdvancedMathOperations.java
Animal.java
Lion.java
Elephant.java
Monkey.java
Source
History
/*
* Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
* Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit this template
*/
package patternslab1;
/**
*
* @author layla
*/
public class Monkey extends Animal{
}
patternslab1.Monkey
13:2
INS



Run for all tasks: