Java Lab – 4

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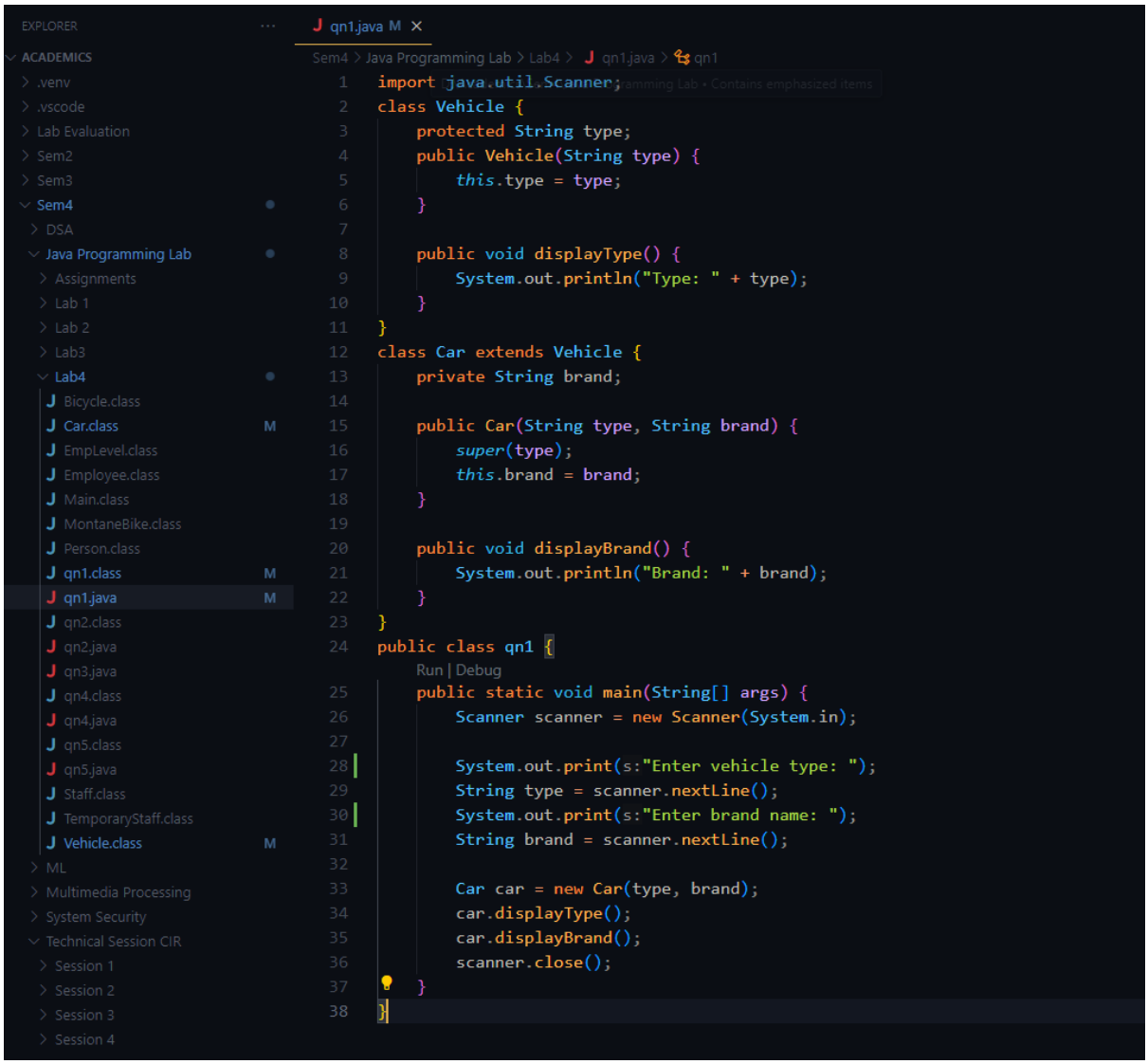
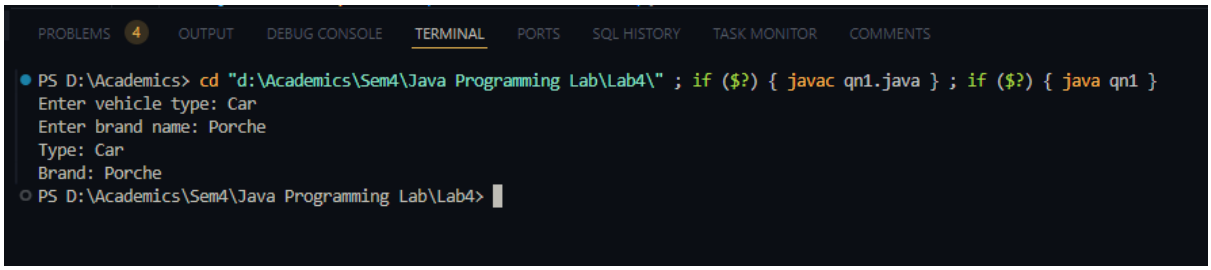
CB.SC.U4CYS23036

Qn1,

Code:

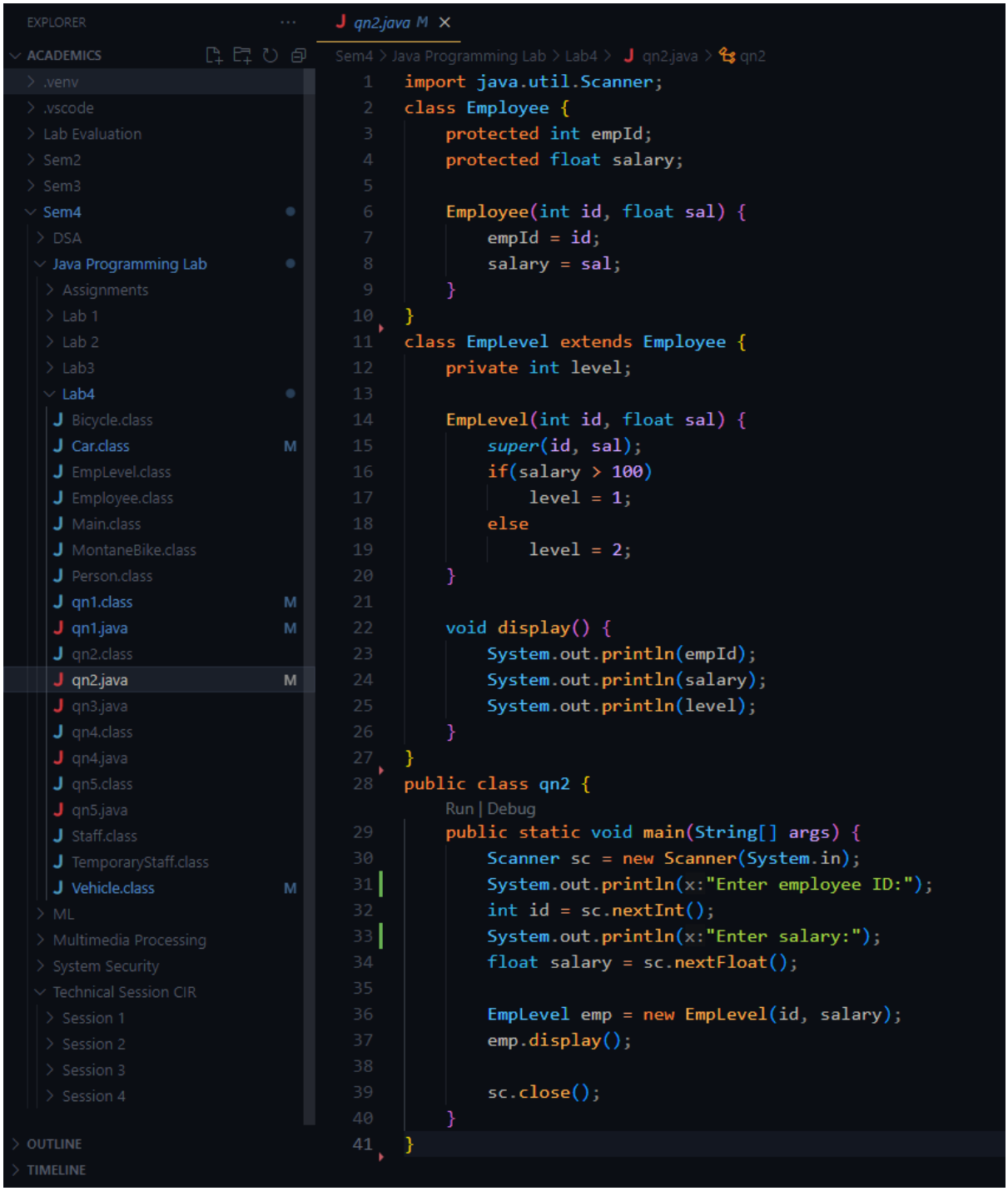


Output:



Qn2,

Code:

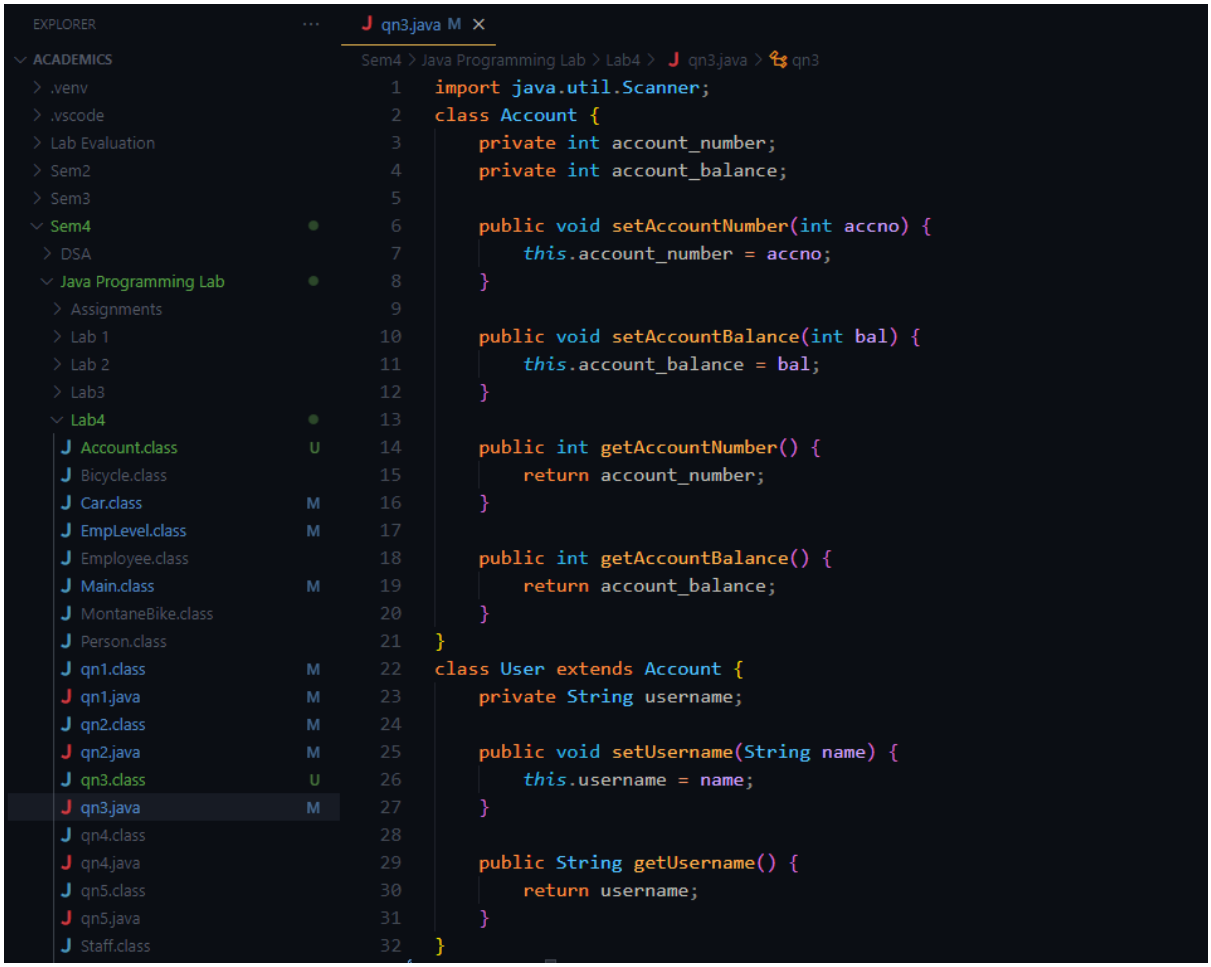

EXPLORER
qn2.java M
ACADEMICS
Sem4 > Java Programming Lab > Lab4 > qn2.java > qn2
.venv
.vscode
Lab Evaluation
Sem2
Sem3
Sem4
DSA
Java Programming Lab
Assignments
Lab 1
Lab 2
Lab3
Lab4
Bicycle.class
Car.class M
EmpLevel.class
Employee.class
Main.class
MontaneBike.class
Person.class
qn1.class M
qn1.java M
qn2.class
qn2.java M
qn3.java
qn4.class
qn4.java
qn5.class
qn5.java
Staff.class
TemporaryStaff.class
Vehicle.class M
ML
Multimedia Processing
System Security
Technical Session CIR
Session 1
Session 2
Session 3
Session 4
OUTLINE
TIMELINE
1 import java.util.Scanner;
2 class Employee {
3 protected int empId;
4 protected float salary;
5
6 Employee(int id, float sal) {
7 empId = id;
8 salary = sal;
9 }
10 }
11 class EmpLevel extends Employee {
12 private int level;
13
14 EmpLevel(int id, float sal) {
15 super(id, sal);
16 if(salary > 100)
17 level = 1;
18 else
19 level = 2;
20 }
21
22 void display() {
23 System.out.println(empId);
24 System.out.println(salary);
25 System.out.println(level);
26 }
27 }
28 public class qn2 {
Run | Debug
29 public static void main(String[] args) {
30 Scanner sc = new Scanner(System.in);
31 System.out.println(x:"Enter employee ID:");
32 int id = sc.nextInt();
33 System.out.println(x:"Enter salary:");
34 float salary = sc.nextFloat();
35
36 EmpLevel emp = new EmpLevel(id, salary);
37 emp.display();
38
39 sc.close();
40 }
41 }

Output:


PROBLEMS 4
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
SQL HISTORY
TASK MONITOR
COMMENTS
PS D:\Academics> cd "d:\Academics\Sem4\Java Programming Lab\Lab4\" ; if ($?) { javac qn2.java } ; if ($?) { java qn2 }
Enter employee ID:
23036
Enter salary:
200000
23036
200000.0
1
PS D:\Academics\Sem4\Java Programming Lab\Lab4>

Qn3,

Code:


EXPLORER
qn3.java M
ACADEMICS
.venv
.vscode
Lab Evaluation
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Sem4
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Java Programming Lab
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Account.class
Bicycle.class
Car.class
EmpLevel.class
Employee.class
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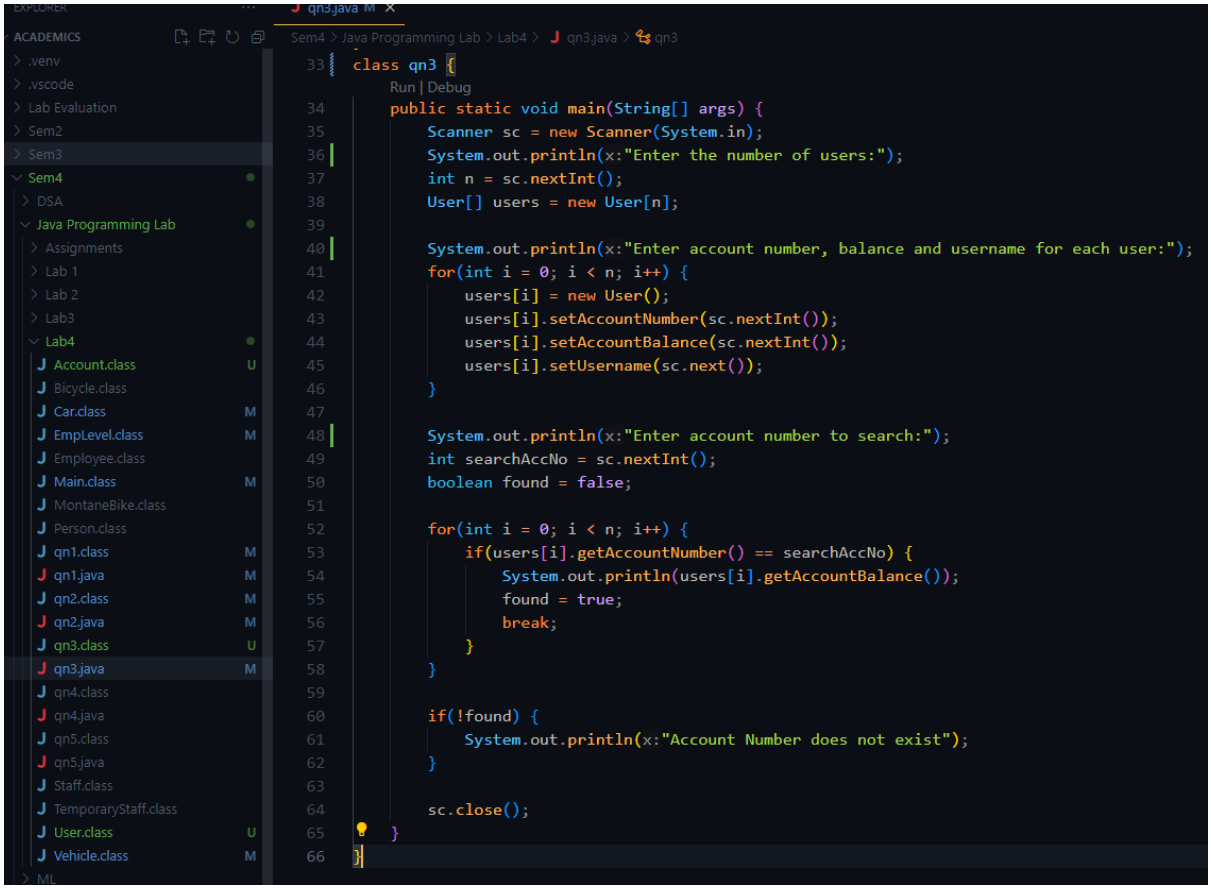
MontaneBike.class
Person.class
qn1.class
qn1.java
qn2.class
qn2.java
qn3.class
qn3.java
qn4.class
qn4.java
qn5.class
qn5.java
Staff.class
Sem4 > Java Programming Lab > Lab4 > qn3.java > qn3
import java.util.Scanner;
class Account {
private int account_number;
private int account_balance;
public void setAccountNumber(int accno) {
this.account_number = accno;
}
public void setAccountBalance(int bal) {
this.account_balance = bal;
}
public int getAccountNumber() {
return account_number;
}
public int getAccountBalance() {
return account_balance;
}
}
class User extends Account {
private String username;
public void setUsername(String name) {
this.username = name;
}
public String getUsername() {
return username;
}
}


ACADEMICS
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.vscode
Lab Evaluation
Sem2
Sem3
Sem4
DSA
Java Programming Lab
Assignments
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Lab3
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MontaneBike.class
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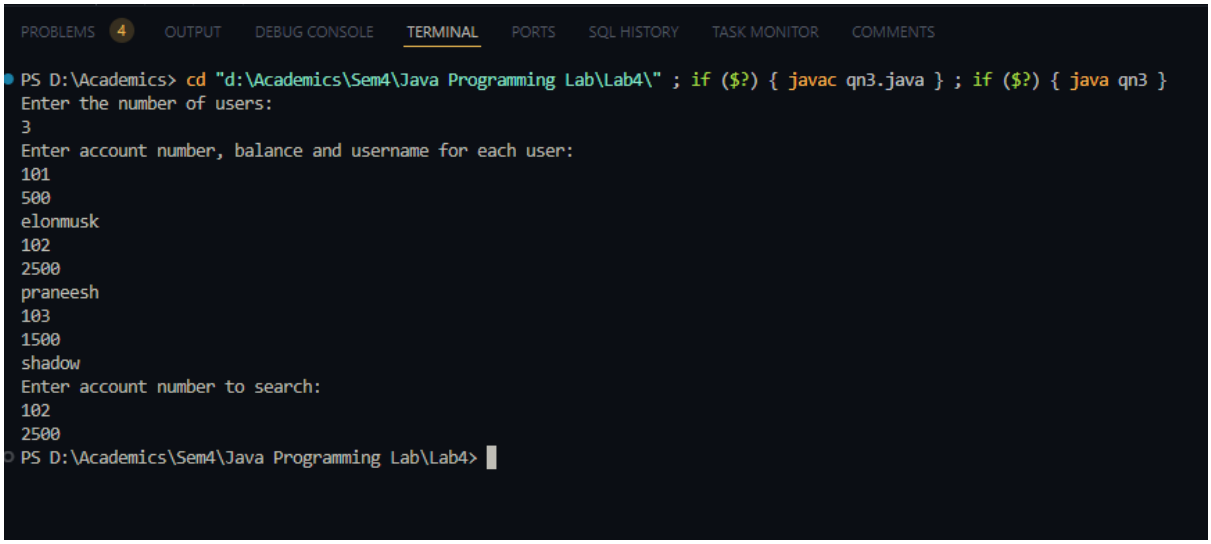
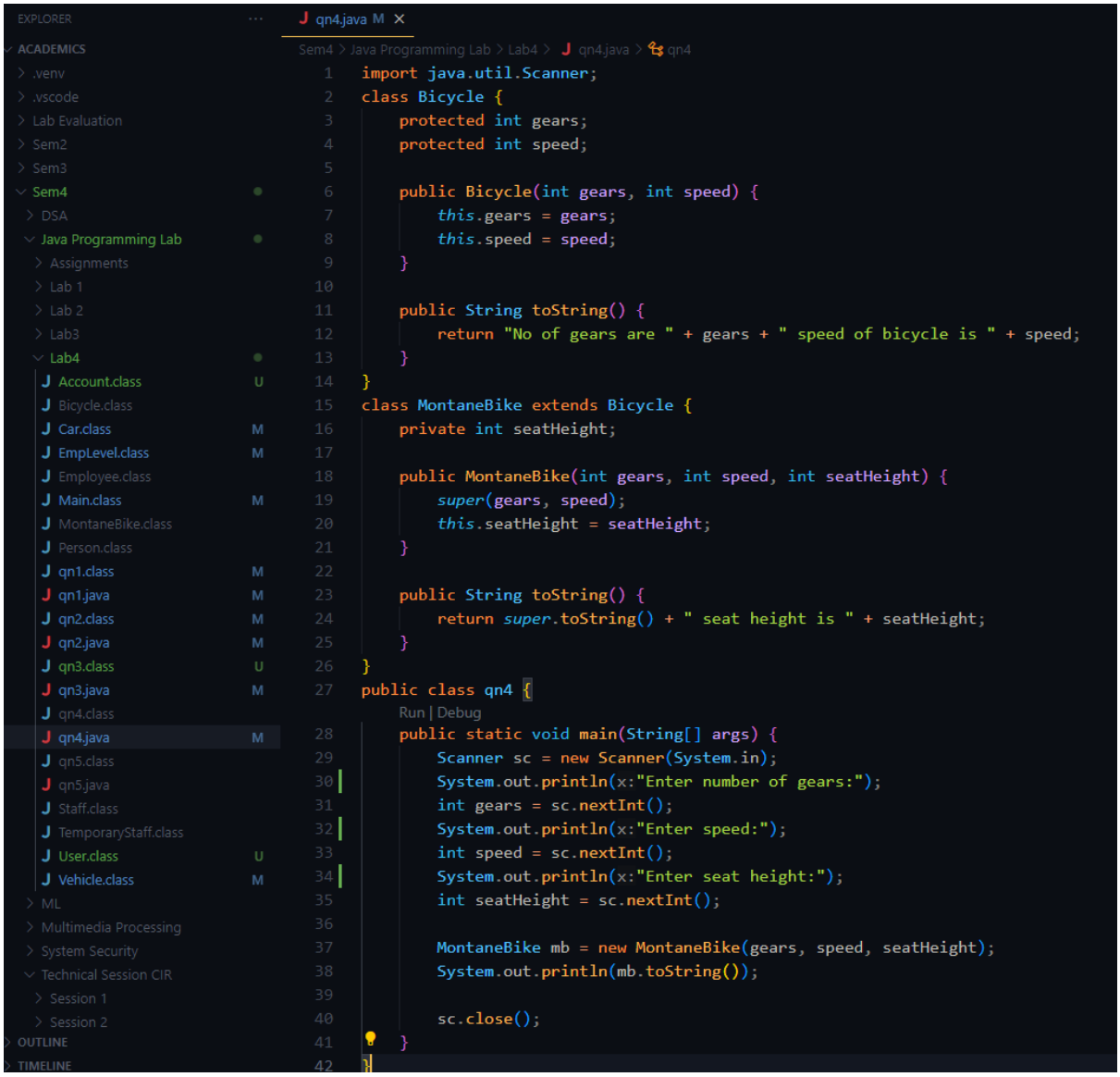
qn1.class
qn1.java
qn2.class
qn2.java
qn3.class
qn3.java
qn4.class
qn4.java
qn5.class
qn5.java
Staff.class
TemporaryStaff.class
User.class
Vehicle.class
ML
qn3.java M
Sem4 > Java Programming Lab > Lab4 > qn3.java > qn3
class qn3 {
Run | Debug
public static void main(String[] args) {
Scanner sc = new Scanner(System.in);
System.out.println(x:"Enter the number of users:");
int n = sc.nextInt();
User[] users = new User[n];
System.out.println(x:"Enter account number, balance and username for each user:");
for(int i = 0; i < n; i++) {
users[i] = new User();
users[i].setAccountNumber(sc.nextInt());
users[i].setAccountBalance(sc.nextInt());
users[i].setUsername(sc.next());
}
System.out.println(x:"Enter account number to search:");
int searchAccNo = sc.nextInt();
boolean found = false;
for(int i = 0; i < n; i++) {
if(users[i].getAccountNumber() == searchAccNo) {
System.out.println(users[i].getAccountBalance());
found = true;
break;
}
}
if(!found) {
System.out.println(x:"Account Number does not exist");
}
sc.close();
}
}

Output:

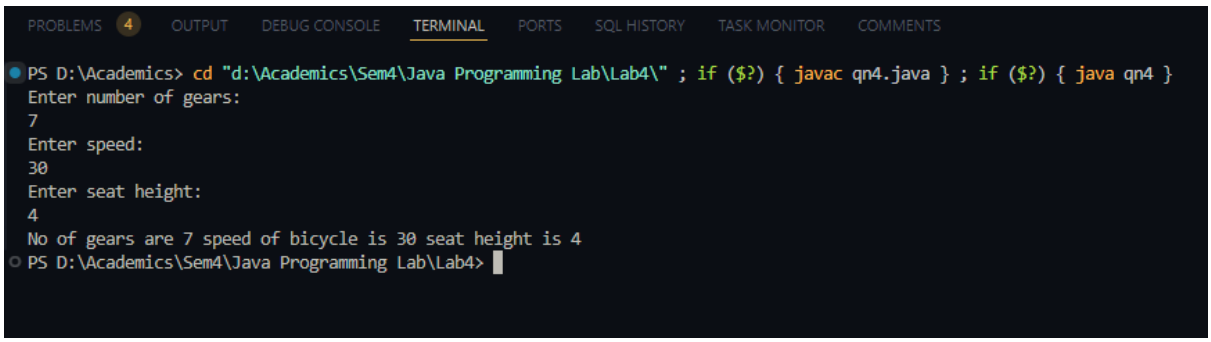

PROBLEMS 4
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
SQL HISTORY
TASK MONITOR
COMMENTS
PS D:\Academics> cd "d:\Academics\Sem4\Java Programming Lab\Lab4\" ; if ($?) { javac qn3.java } ; if ($?) { java qn3 }
Enter the number of users:
3
Enter account number, balance and username for each user:
101
500
elonmusk
102
2500
praneesh
103
1500
shadow
Enter account number to search:
102
2500
PS D:\Academics\Sem4\Java Programming Lab\Lab4>

Qn4,

Code:

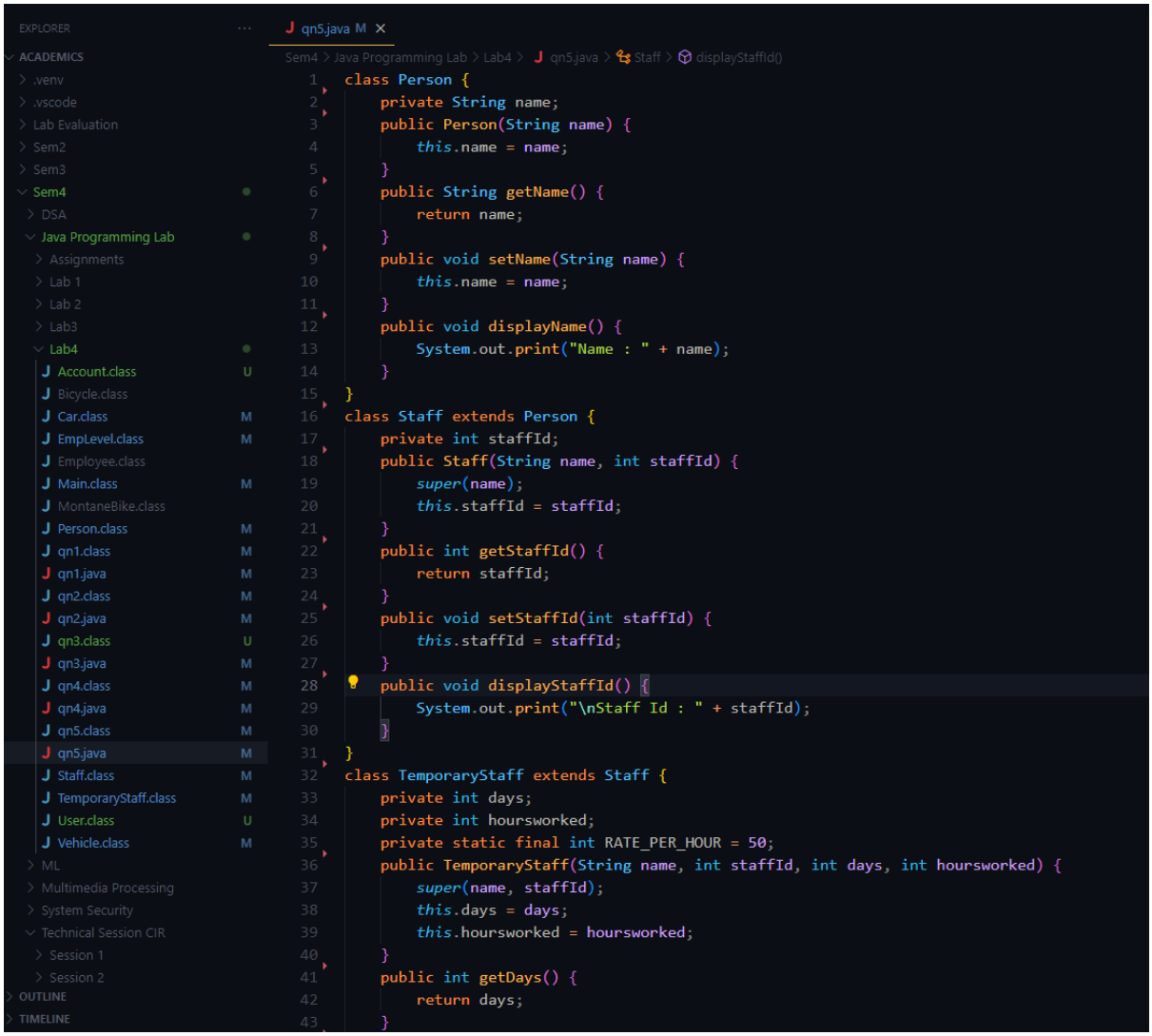


Output:



Qn5,

Code:


EXPLORER
qn5.java M
ACADEMICS
.venv
.vscode
Lab Evaluation
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Sem4
DSA
Java Programming Lab
Assignments
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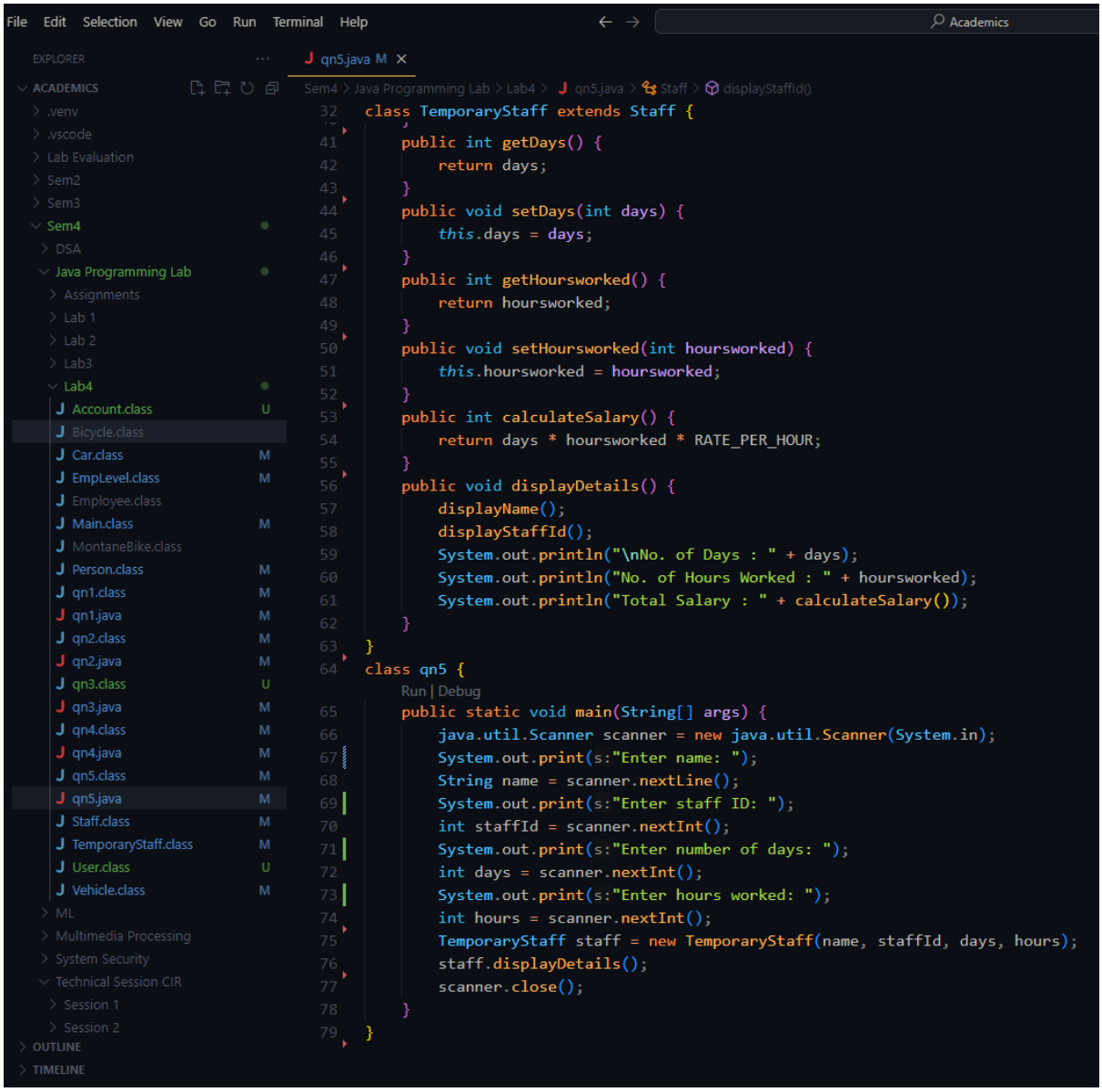
Person.class
qn1.class
qn1.java
qn2.class
qn2.java
qn3.class
qn3.java
qn4.class
qn4.java
qn5.class
qn5.java
Staff.class
TemporaryStaff.class
User.class
Vehicle.class
ML
Multimedia Processing
System Security
Technical Session CIR
Session 1
Session 2
OUTLINE
TIMELINE
Sem4 > Java Programming Lab > Lab4 > qn5.java > Staff > displayStaffId()
class Person {
private String name;
public Person(String name) {
this.name = name;
}
public String getName() {
return name;
}
public void setName(String name) {
this.name = name;
}
public void displayName() {
System.out.print("Name : " + name);
}
}
class Staff extends Person {
private int staffId;
public Staff(String name, int staffId) {
super(name);
this.staffId = staffId;
}
public int getStaffId() {
return staffId;
}
public void setStaffId(int staffId) {
this.staffId = staffId;
}
public void displayStaffId() {
System.out.print("\nStaff Id : " + staffId);
}
}
class TemporaryStaff extends Staff {
private int days;
private int hoursworked;
private static final int RATE_PER_HOUR = 50;
public TemporaryStaff(String name, int staffId, int days, int hoursworked) {
super(name, staffId);
this.days = days;
this.hoursworked = hoursworked;
}
public int getDays() {
return days;
}



```
class TemporaryStaff extends Staff {
    public int getDays() {
        return days;
    }
    public void setDays(int days) {
        this.days = days;
    }
    public int getHoursworked() {
        return hoursworked;
    }
    public void setHoursworked(int hoursworked) {
        this.hoursworked = hoursworked;
    }
    public int calculateSalary() {
        return days * hoursworked * RATE_PER_HOUR;
    }
    public void displayDetails() {
        displayName();
        displayStaffId();
        System.out.println("\nNo. of Days : " + days);
        System.out.println("No. of Hours Worked : " + hoursworked);
        System.out.println("Total Salary : " + calculateSalary());
    }
}
class qn5 {
    Run | Debug
    public static void main(String[] args) {
        java.util.Scanner scanner = new java.util.Scanner(System.in);
        System.out.print(s:"Enter name: ");
        String name = scanner.nextLine();
        System.out.print(s:"Enter staff ID: ");
        int staffId = scanner.nextInt();
        System.out.print(s:"Enter number of days: ");
        int days = scanner.nextInt();
        System.out.print(s:"Enter hours worked: ");
        int hours = scanner.nextInt();
        TemporaryStaff staff = new TemporaryStaff(name, staffId, days, hours);
        staff.displayDetails();
        scanner.close();
    }
}
```

Output:

```
PS D:\Academics> cd "d:\Academics\Sem4\Java Programming Lab\Lab4\" ; if ($?) { javac qn5.java } ; if ($?) { java qn5 }
Enter name: Praneesh
Enter staff ID: 420
Enter number of days: 29
Enter hours worked: 225
Name : Praneesh
Staff Id : 420
No. of Days : 29
No. of Hours Worked : 225
Total Salary : 326250
PS D:\Academics\Sem4\Java Programming Lab\Lab4>
```