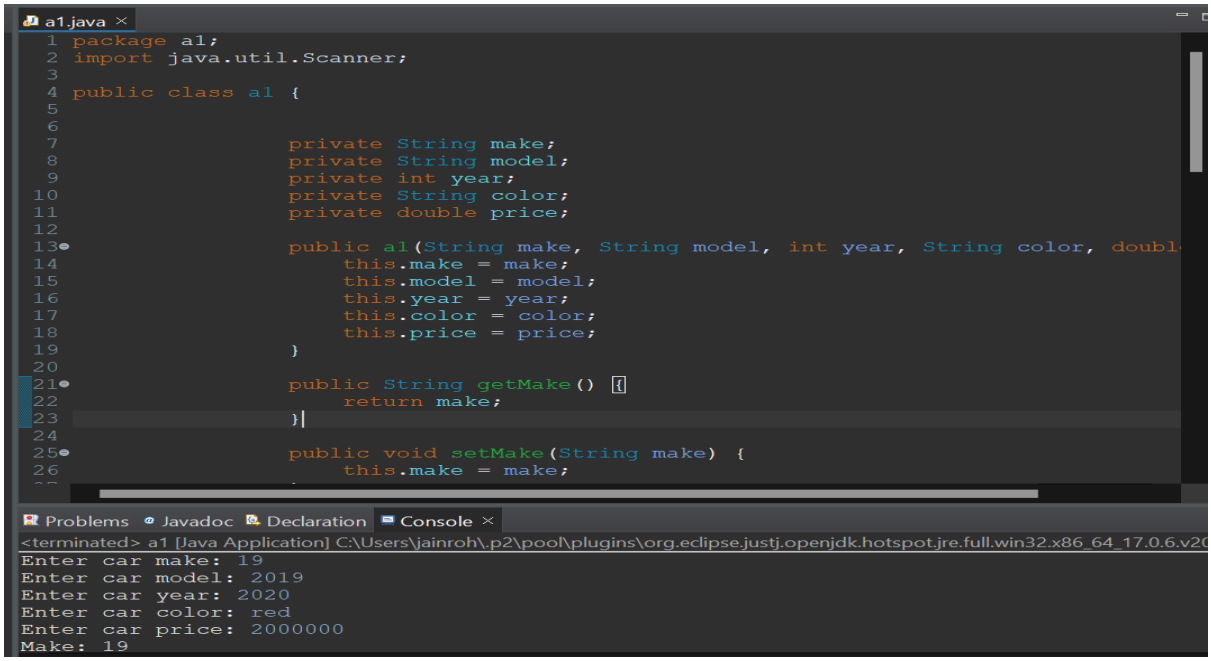
Assignment 2

Name: Rohan Jain T B

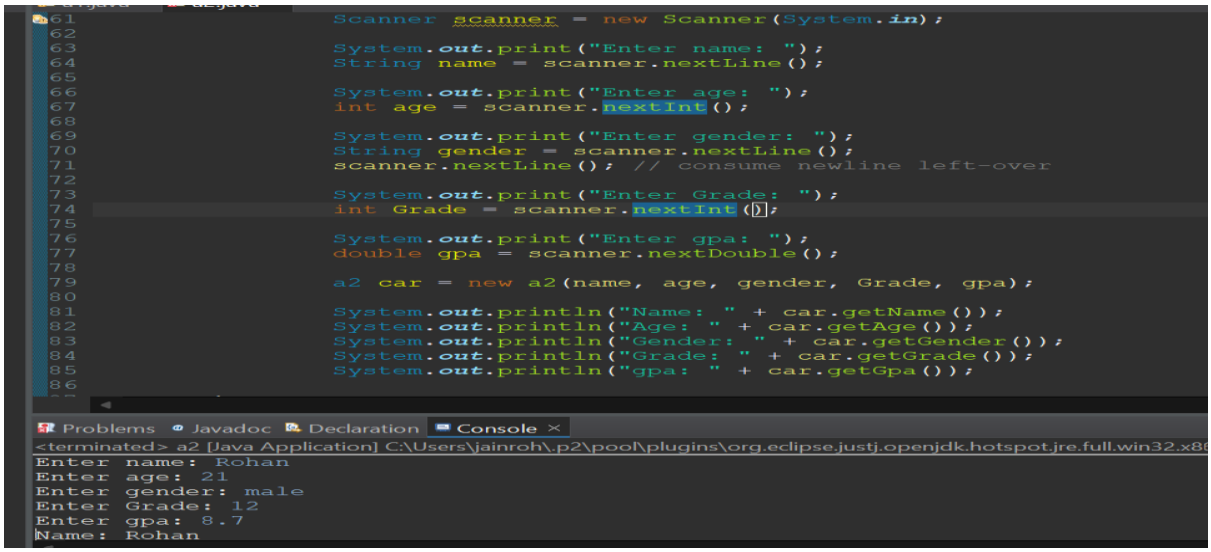
1) Create a class called "Car" that has the following properties: make, model, year, color, and price. Include a constructor and getter and setter methods for each property.

https://codeshare.io/bvOqpO



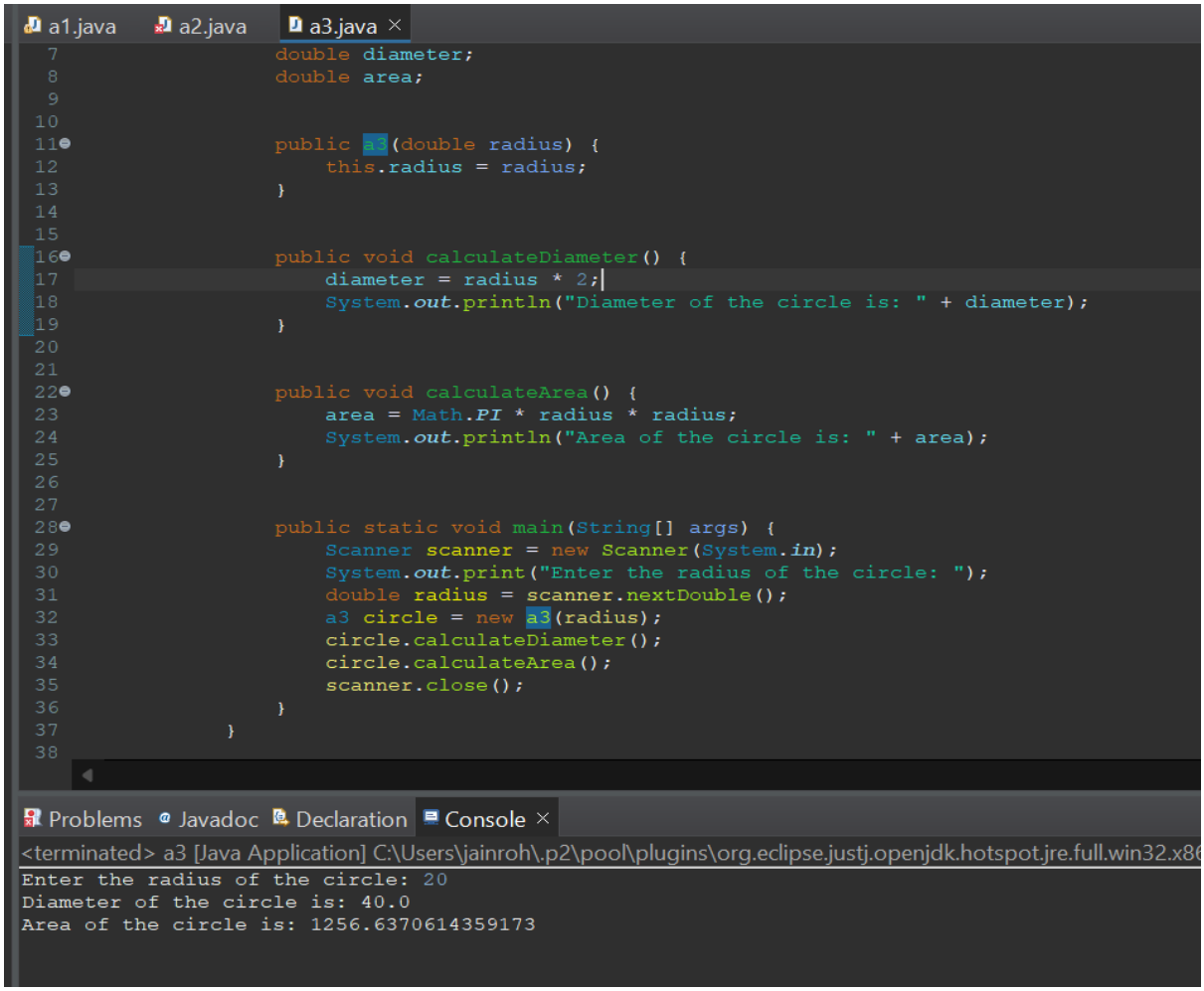
2) Create a class called "Student" that has the following properties: name, age, gender, grade, and GPA. Include a constructor and getter and setter methods for each property.

https://codeshare.io/lonJQB



3) Create a class called "Circle" that has the following properties: radius, diameter, and area. Include a constructor and methods to calculate the diameter and area of the circle.

https://codeshare.io/BA7lDn



4) Create a class called "Rectangle" that has the following properties: length, width, and area. Include a constructor and a method to calculate the area of the rectangle.

https://codeshare.io/8plkVd

```
a1.java  a2.java  a3.java  a4.java
28                    this.width = width;
29                }
30
31                public double getLength() {
32                    return this.length;
33                }
34
35                public double getWidth() {
36                    return this.width;
37                }
38
39                public double getArea() {
40                    return this.area;
41                }
42
43                public static void main(String[] args) {
44                    Scanner scanner = new Scanner(System.in);
45
46                    System.out.print("Enter length: ");
47                    double length = scanner.nextDouble();
48
49                    System.out.print("Enter width: ");
50                    double width = scanner.nextDouble();
51
52                    a4 rectangle = new a4(length, width);
53                    rectangle.calculateArea();

Problems  Javadoc  Declaration  Console
<terminated> a4 [Java Application] C:\Users\jainroh\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.wi
Enter length: 10
Enter width: 20
Area of the rectangle is: 200.0
```

5) Create a class called "BankAccount" that has the following properties: account number, account balance, account holder name, and account type. Include a constructor and methods to deposit and withdraw money from the account.

https://codeshare.io/OdE6Zx

```
a1.java  a2.java  a3.java  a4.java  a5.java
 8                private String accountHolderName;
 9                private String accountType;
10
11                public a5(int accountNumber, double accountBalance, String account
12                    this.accountNumber = accountNumber;
13                    this.accountBalance = accountBalance;
14                    this.accountHolderName = accountHolderName;
15                    this.accountType = accountType;
16                }
17
18                public void deposit(double amount) {
19                    accountBalance += amount;
20                    System.out.println(amount + " deposited successfully. Your new
21                }
22
23                public void withdraw(double amount) {
24                    if (amount > accountBalance) {
25                        System.out.println("Insufficient balance. Unable to withdr
26                    } else {
27                        accountBalance -= amount;
28                        System.out.println(amount + " withdrawn successfully. Your
29                    }
30                }
31
32                public static void main(String[] args) {
33                    Scanner scanner = new Scanner(System.in);

Problems  Javadoc  Declaration  Console
<terminated> a5 [Java Application] C:\Users\jainroh\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.6
30000
30000.0 deposited successfully. Your new account balance is 50000.0
Enter amount to withdraw:
45000
45000.0 withdrawn successfully. Your new account balance is 5000.0
```

6) Create a class called "Person" that has the following properties: name, age, address, phone number, and email address. Include a constructor and getter and setter methods for each property.

https://codeshare.io/nzoO31

```
64                  String name = input.nextLine();
65
66                  System.out.print("Enter age: ");
67                  int age = input.nextInt();
68                  input.nextLine();
69
70                  System.out.print("Enter address: ");
71                  String address = input.nextLine();
72
73                  System.out.print("Enter phone number: ");
74                  String phoneNumber = input.nextLine();
75
76                  System.out.print("Enter email address: ");
77                  String emailAddress = input.nextLine();
78
79                  a6 person = new a6(name, age, address, phoneNumber, emailAddre
80
81                  System.out.println("\nName: " + person.getName());
82                  System.out.println("Age: " + person.getAge());
83                  System.out.println("Address: " + person.getAddress());
84                  System.out.println("Phone number: " + person.getPhoneNumber())
85                  System.out.println("Email address: " + person.getEmailAddress(
86              }
87          }
88
```

Problems Javadoc Declaration Console ×

<terminated> a6 [Java Application] C:\Users\jainroh\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.6.v2

```
Name: rohan
Age: 21
Address: thandaga
Phone number: 8277424985
Email address: rohan@gmail.com
```

7) Create a class called "Animal" that has the following properties: name, species, age, and weight. Include a constructor and getter and setter methods for each property.

https://codeshare.io/yo0bwq

```
                    System.out.print("Enter name: ");
                    String name = input.nextLine();

                    System.out.print("Enter species: ");
                    String species = input.nextLine();

                    System.out.print("Enter age: ");
                    int age = input.nextInt();

                    System.out.print("Enter weight: ");
                    double weight = input.nextDouble();

                    // Create Animal object using user input
                    a7 animal = new a7(name, species, age, weight);

                    // Print out animal object properties
                    System.out.println("Name: " + animal.getName());
                    System.out.println("Species: " + animal.getSpecies());
                    System.out.println("Age: " + animal.getAge());
                    System.out.println("Weight: " + animal.getWeight());
                }
            }
```

Problems Javadoc Declaration Console

```
<terminated> a7 [Java Application] C:\Users\jainroh\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0
Name: Tiger
Species: animal
Age: 20
Weight: 40.0
```

8) Create a class called "Triangle" that has the following properties: base, height, and area. Include a constructor and a method to calculate the area of the triangle.

https://codeshare.io/oQ3zmp

a1.java a2.java a3.java a4.java a5.java a6.java a7.java a8.java

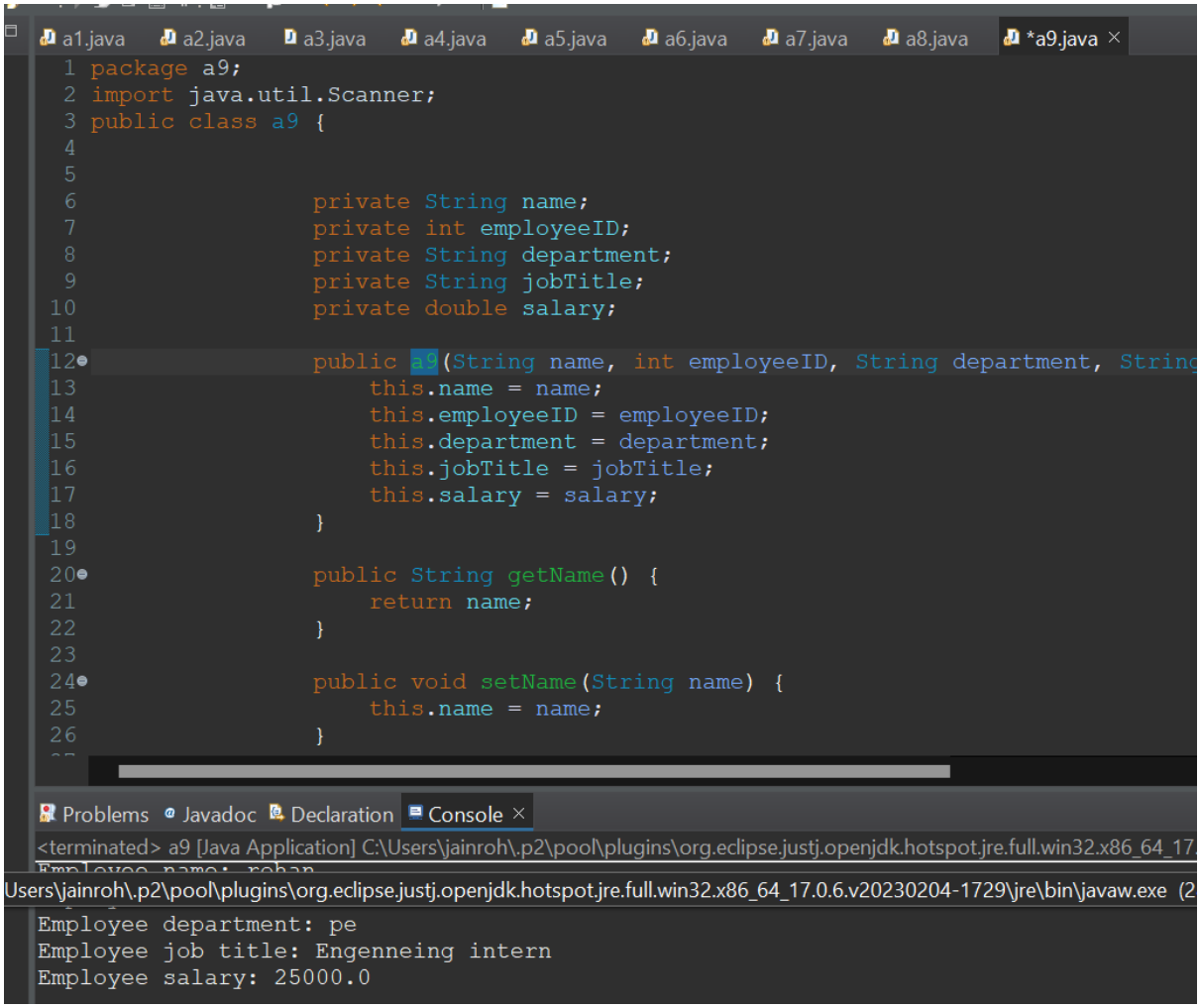
```
package a8;
import java.util.Scanner;
public class a8 {


    private double base;
    private double height;
    private double area;

    // Constructor
    public a8(double base, double height) {
        this.base = base;
        this.height = height;
        this.area = calculateArea();
    }

    // Method to calculate area
    public double calculateArea() {
        return 0.5 * base * height;
    }

    // Getters and Setters
    public double getBase() {
        return base;
    }
```

Problems Javadoc Declaration Console

```
<terminated> a8 [Java Application] C:\Users\jainroh\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win3
Enter base length: 20
Enter height length: 10
Base: 20.0
Height: 10.0
Area: 100.0
```

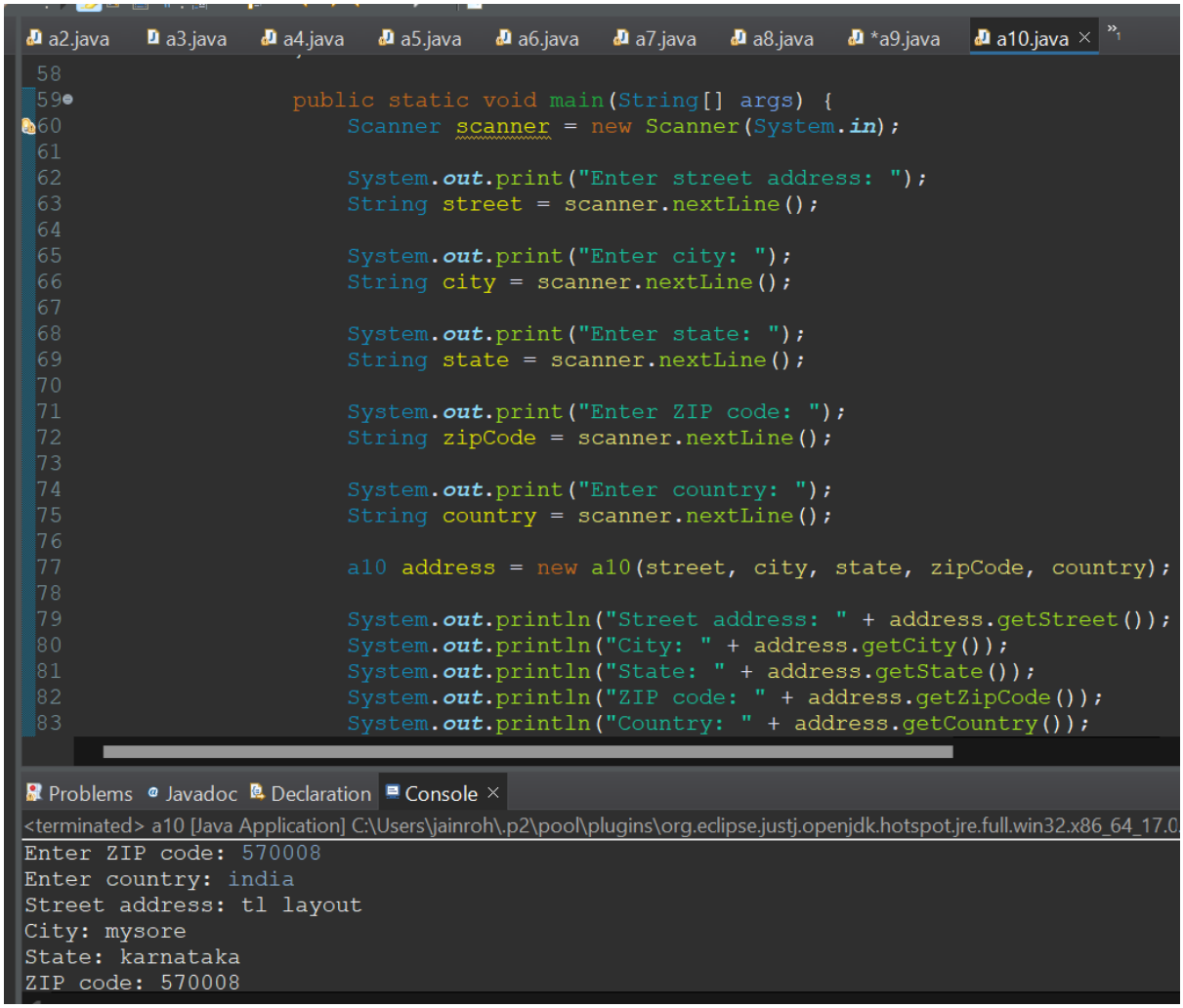
9) Create a class called "Employee" that has the following properties: name, employee ID, department, job title, and salary. Include a constructor and getter and setter methods for each property.

https://codeshare.io/LwEObb



10) Create a class called "Address" that has the following properties: street, city, state, zip code, and country. Include a constructor and getter and setter methods for each property.

https://codeshare.io/4eonQd


a2.java
a3.java
a4.java
a5.java
a6.java
a7.java
a8.java
*a9.java
a10.java
58
59 public static void main(String[] args) {
60 Scanner scanner = new Scanner(System.in);
61
62 System.out.print("Enter street address: ");
63 String street = scanner.nextLine();
64
65 System.out.print("Enter city: ");
66 String city = scanner.nextLine();
67
68 System.out.print("Enter state: ");
69 String state = scanner.nextLine();
70
71 System.out.print("Enter ZIP code: ");
72 String zipCode = scanner.nextLine();
73
74 System.out.print("Enter country: ");
75 String country = scanner.nextLine();
76
77 a10 address = new a10(street, city, state, zipCode, country);
78
79 System.out.println("Street address: " + address.getStreet());
80 System.out.println("City: " + address.getCity());
81 System.out.println("State: " + address.getState());
82 System.out.println("ZIP code: " + address.getZipCode());
83 System.out.println("Country: " + address.getCountry());
Problems
Javadoc
Declaration
Console
<terminated> a10 [Java Application] C:\Users\jainroh\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0
Enter ZIP code: 570008
Enter country: india
Street address: tl layout
City: mysore
State: karnataka
ZIP code: 570008