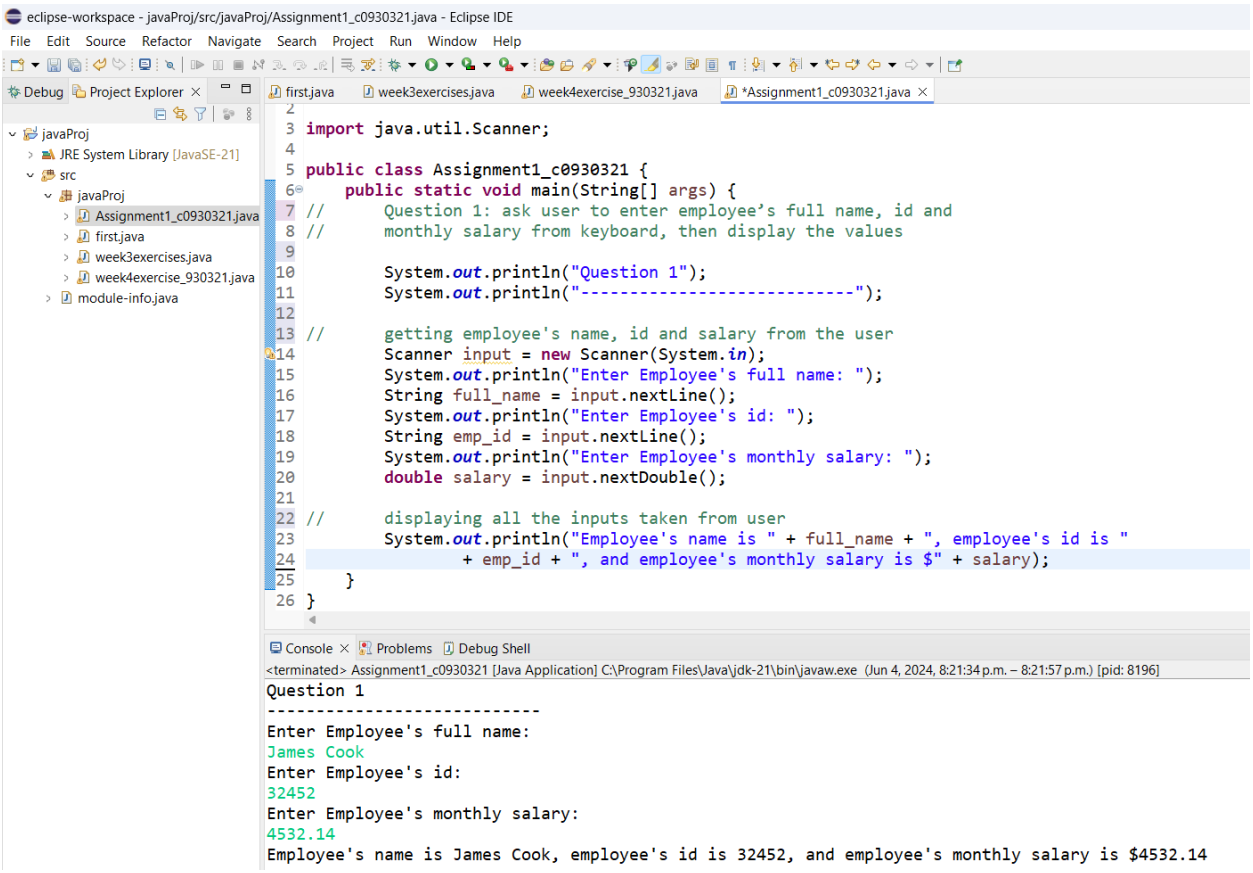
Assignment: 01

Student Name : Shreejana Shrestha

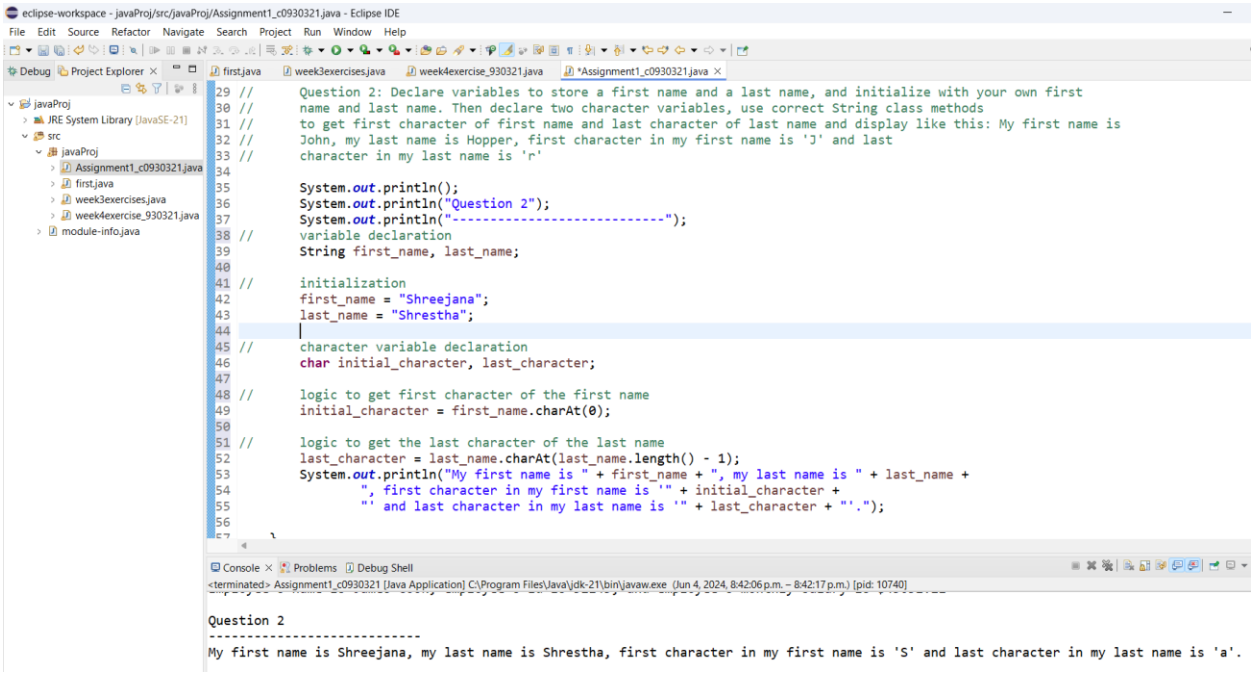
Student Id : C0930321

Screenshots of the code with output

Question 1

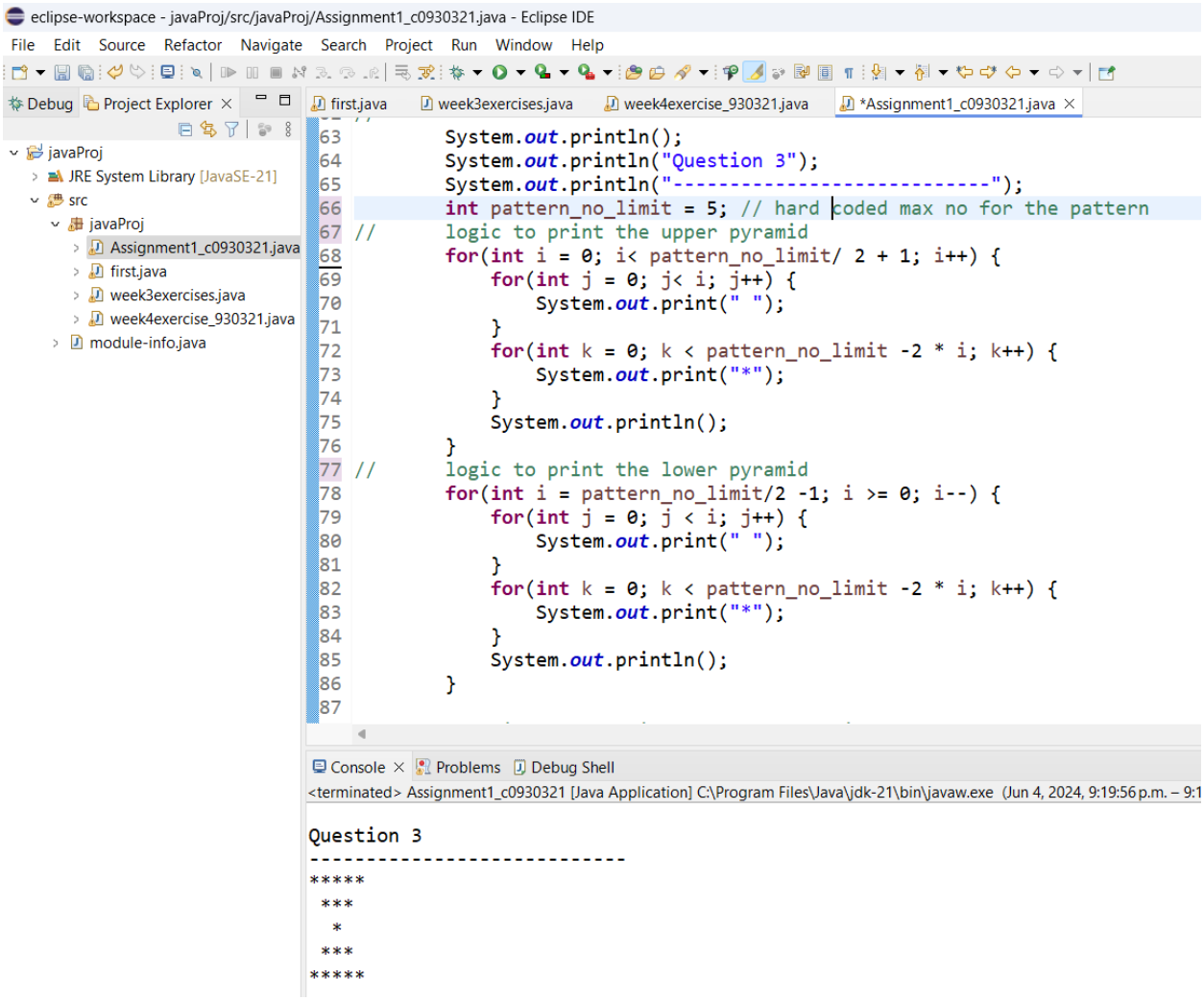


Question 2:


eclipse-workspace - javaProj/src/javaProj/Assignment1_c0930321.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Debug Project Explorer
javaProj
JRE System Library [JavaSE-21]
src
javaProj
Assignment1_c0930321.java
first.java
week3exercises.java
week4exercise_930321.java
module-info.java
first.java week3exercises.java week4exercise_930321.java *Assignment1_c0930321.java
29 // Question 2: Declare variables to store a first name and a last name, and initialize with your own first
30 // name and last name. Then declare two character variables, use correct String class methods
31 // to get first character of first name and last character of last name and display like this: My first name is
32 // John, my last name is Hopper, first character in my first name is 'J' and last
33 // character in my last name is 'r'
34
35 System.out.println();
36 System.out.println("Question 2");
37 System.out.println("----------------------------");
38 // variable declaration
39 String first_name, last_name;
40
41 // initialization
42 first_name = "Shreejana";
43 last_name = "Shrestha";
44
45 // character variable declaration
46 char initial_character, last_character;
47
48 // logic to get first character of the first name
49 initial_character = first_name.charAt(0);
50
51 // logic to get the last character of the last name
52 last_character = last_name.charAt(last_name.length() - 1);
53 System.out.println("My first name is " + first_name + ", my last name is " + last_name +
54 ", first character in my first name is '" + initial_character +
55 "' and last character in my last name is '" + last_character + "'.");
56
Console Problems Debug Shell
<terminated> Assignment1_c0930321 [Java Application] C:\Program Files\Java\jdk-21\bin\javaw.exe (Jun 4, 2024, 8:42:06 p.m. – 8:42:17 p.m.) [pid: 10740]
Question 2

My first name is Shreejana, my last name is Shrestha, first character in my first name is 'S' and last character in my last name is 'a'.

Question 3: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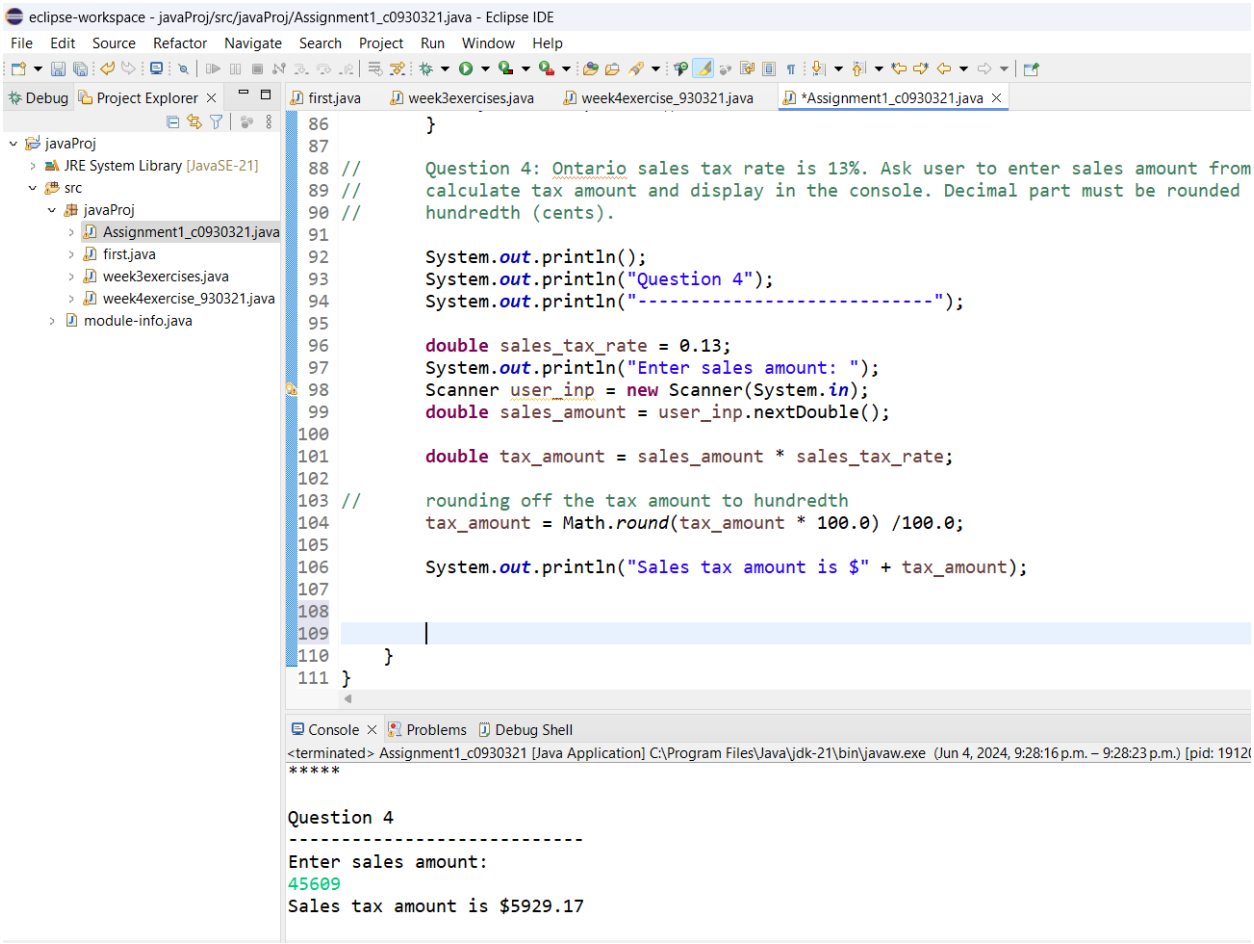
*Assignment1_c0930321.java
System.out.println();
System.out.println("Question 3");
System.out.println("----------");
int pattern_no_limit = 5; // hard coded max no for the pattern
// logic to print the upper pyramid
for(int i = 0; i< pattern_no_limit/ 2 + 1; i++) {
for(int j = 0; j< i; j++) {
System.out.print(" ");
}
for(int k = 0; k < pattern_no_limit -2 * i; k++) {
System.out.print("*");
}
System.out.println();
}
// logic to print the lower pyramid
for(int i = pattern_no_limit/2 -1; i >= 0; i--) {
for(int j = 0; j < i; j++) {
System.out.print(" ");
}
for(int k = 0; k < pattern_no_limit -2 * i; k++) {
System.out.print("*");
}
System.out.println();
}
Console
Problems
Debug Shell
<terminated> Assignment1_c0930321 [Java Application] C:\Program Files\Java\jdk-21\bin\javaw.exe (Jun 4, 2024, 9:19:56 p.m. – 9:1
Question 3
*****
***
*
***
*****

Question 4: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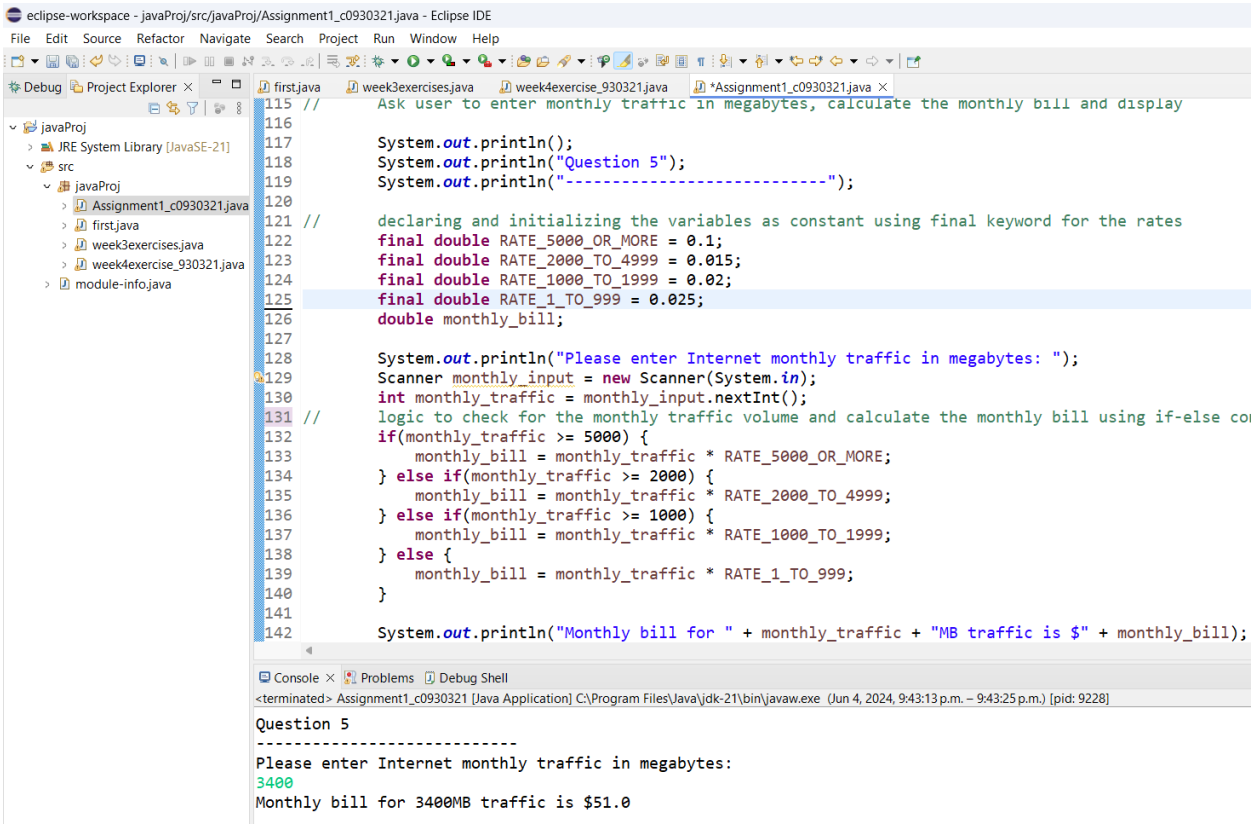
}
// Question 4: Ontario sales tax rate is 13%. Ask user to enter sales amount from
// calculate tax amount and display in the console. Decimal part must be rounded
// hundredth (cents).
System.out.println();
System.out.println("Question 4");
System.out.println("----------");
double sales_tax_rate = 0.13;
System.out.println("Enter sales amount: ");
Scanner user_inp = new Scanner(System.in);
double sales_amount = user_inp.nextDouble();
double tax_amount = sales_amount * sales_tax_rate;
// rounding off the tax amount to hundredth
tax_amount = Math.round(tax_amount * 100.0) /100.0;
System.out.println("Sales tax amount is $" + tax_amount);
}
}
Console
Problems
Debug Shell
<terminated> Assignment1_c0930321 [Java Application] C:\Program Files\Java\jdk-21\bin\javaw.exe (Jun 4, 2024, 9:28:16 p.m. – 9:28:23 p.m.)
*****
Question 4

Enter sales amount:
45609
Sales tax amount is $5929.17

#Question 5: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*Assignment1_c0930321.java
115 // Ask user to enter monthly traffic in megabytes, calculate the monthly bill and display
116
117 System.out.println();
118 System.out.println("Question 5");
119 System.out.println("----------");
120
121 // declaring and initializing the variables as constant using final keyword for the rates
122 final double RATE_5000_OR_MORE = 0.1;
123 final double RATE_2000_TO_4999 = 0.015;
124 final double RATE_1000_TO_1999 = 0.02;
125 final double RATE_1_TO_999 = 0.025;
126 double monthly_bill;
127
128 System.out.println("Please enter Internet monthly traffic in megabytes: ");
129 Scanner monthly_input = new Scanner(System.in);
130 int monthly_traffic = monthly_input.nextInt();
131 // logic to check for the monthly traffic volume and calculate the monthly bill using if-else co
132 if(monthly_traffic >= 5000) {
133 monthly_bill = monthly_traffic * RATE_5000_OR_MORE;
134 } else if(monthly_traffic >= 2000) {
135 monthly_bill = monthly_traffic * RATE_2000_TO_4999;
136 } else if(monthly_traffic >= 1000) {
137 monthly_bill = monthly_traffic * RATE_1000_TO_1999;
138 } else {
139 monthly_bill = monthly_traffic * RATE_1_TO_999;
140 }
141
142 System.out.println("Monthly bill for " + monthly_traffic + "MB traffic is $" + monthly_bill);
Console Problems Debug Shell
<terminated> Assignment1_c0930321 [Java Application] C:\Program Files\Java\jdk-21\bin\javaw.exe (Jun 4, 2024, 9:43:13 p.m. – 9:43:25 p.m.) [pid: 9228]
Question 5

Please enter Internet monthly traffic in megabytes:
3400
Monthly bill for 3400MB traffic is $51.0