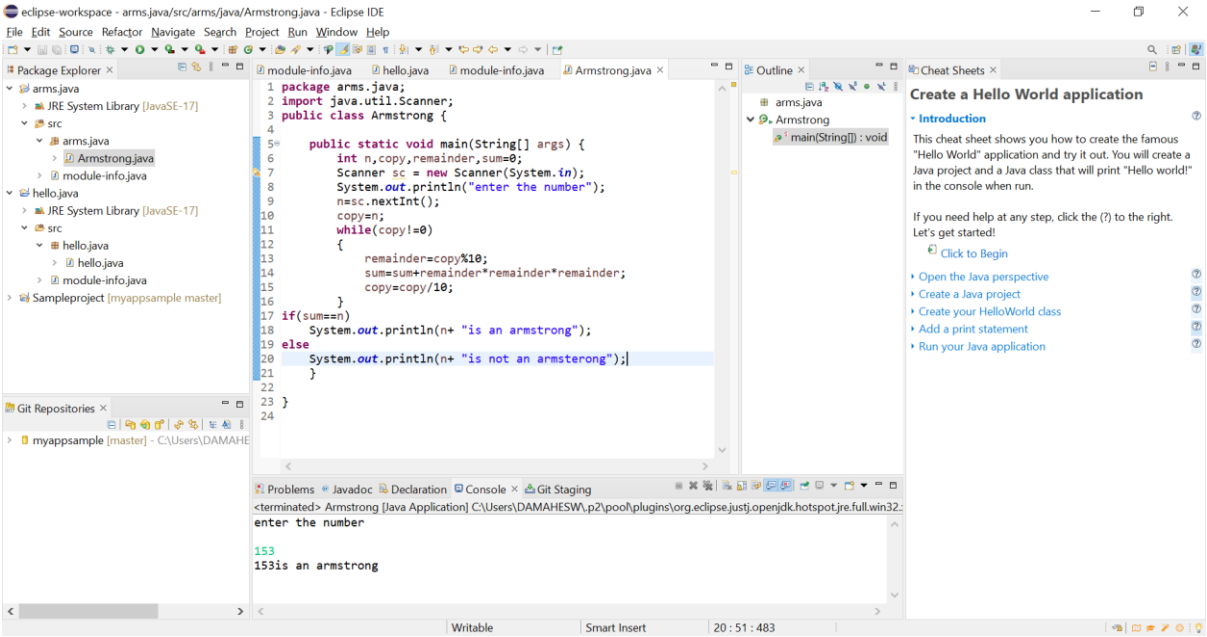
CORE JAVA

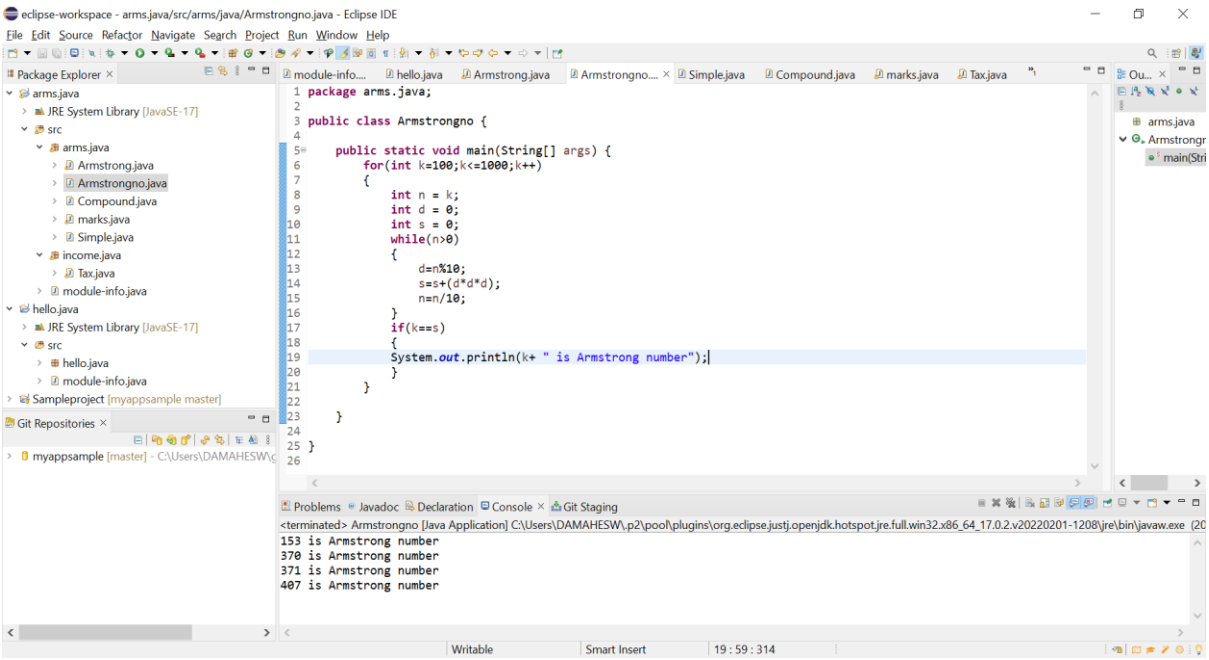
ASSIGNMENT – 1

1) Find out if the given number is an Armstrong number.

Logic: -if 153is the Supplied value, then 13 + 53+ 33 = 1+125+27 = 153 This is the same as supplied value hence it is an Armstrong number.

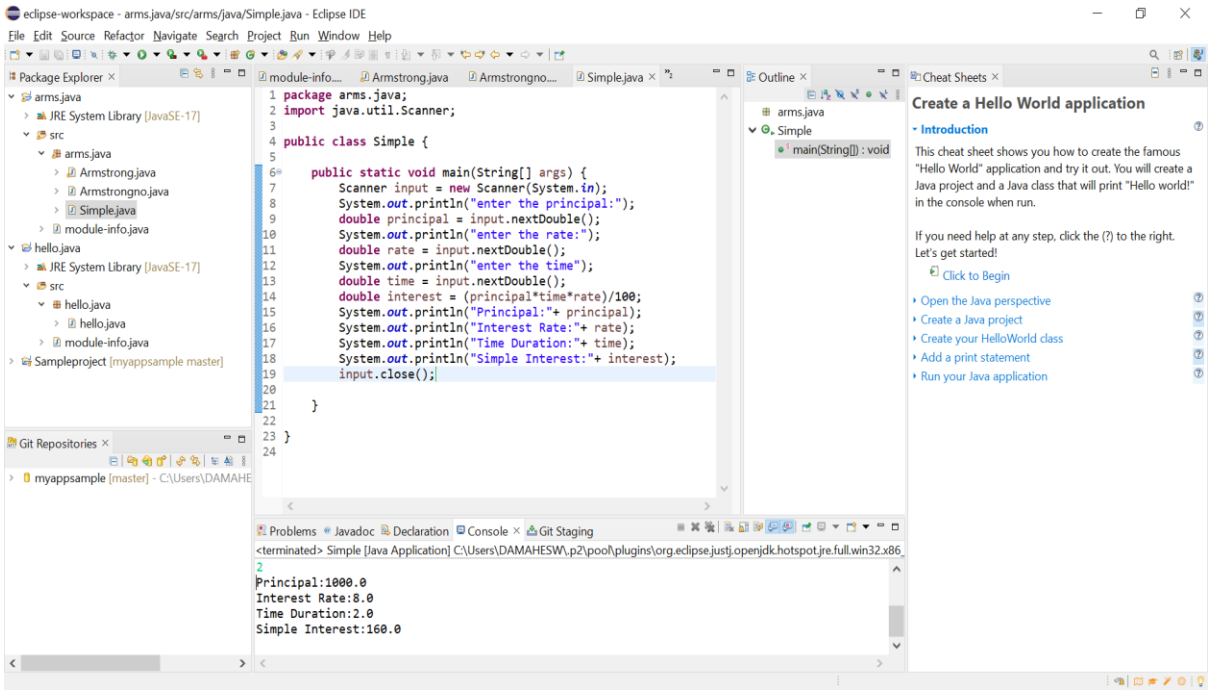


2. Find out all the Armstrong numbers falling in the range of 100-999.

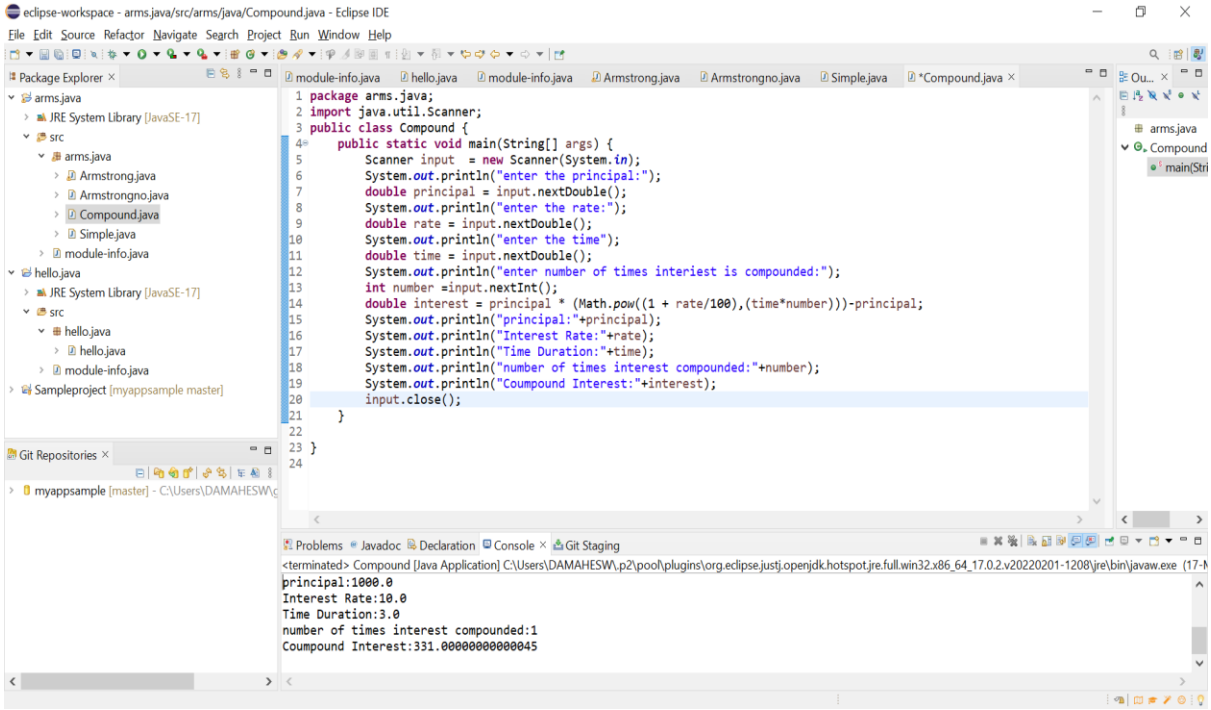


3. Find out the simple as well as the compound interest of supplied value.

Simple Interest:



Compound Interest:

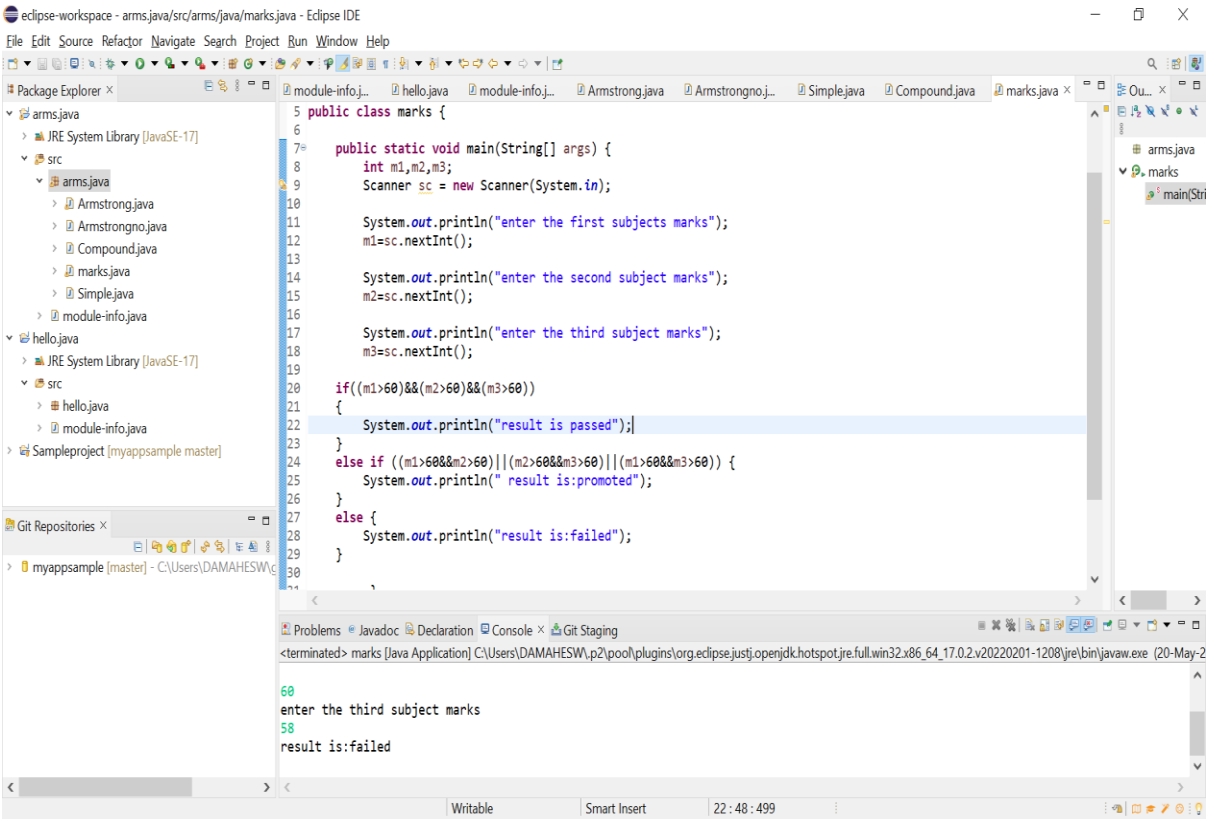


4. Supply marks of three subject and declare the result, result declaration is based on below conditions:

Condition 1: All subjects marks is greater than 60 is Passed

Condition 2: Any two subjects marks are greater than 60 is Promoted

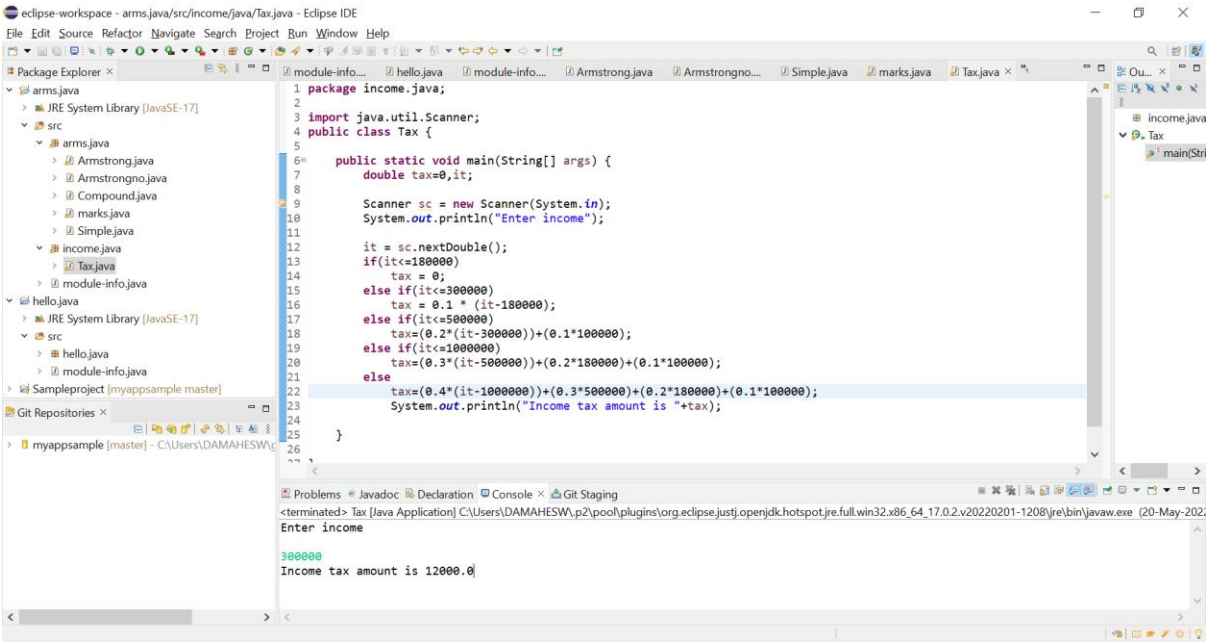
Condition 3: Any one subject mark is greater than 60 or all subjects' marks less than 60 is failed.



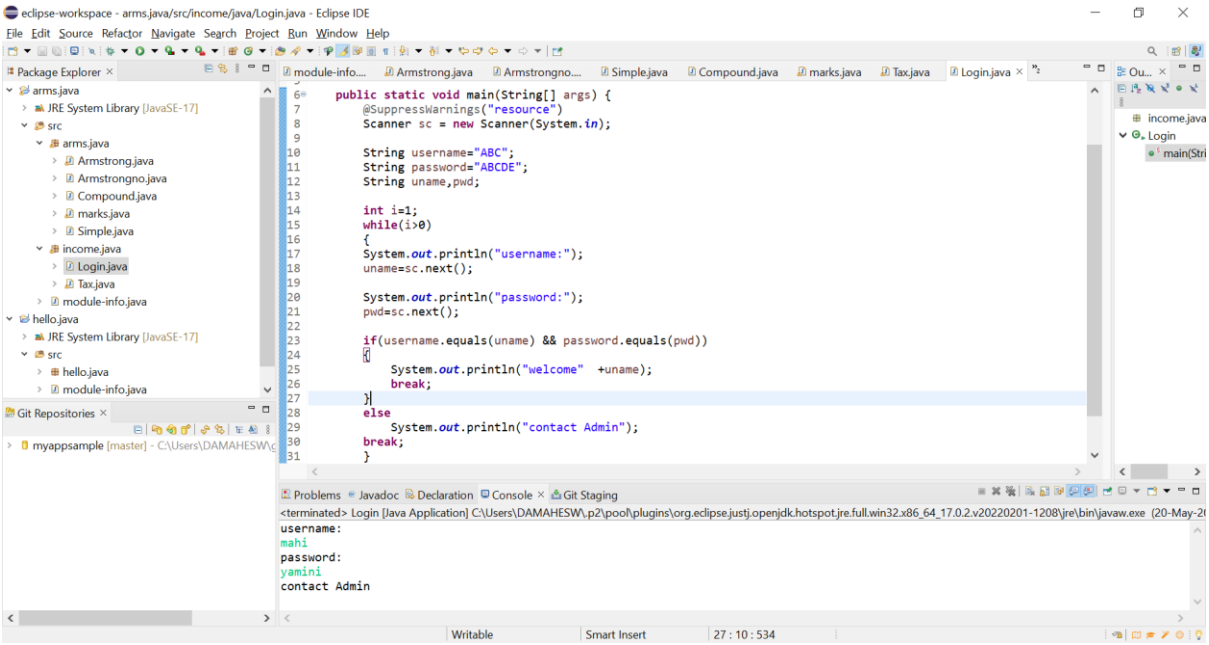
5. Calculate the income tax on the basis of following table.

Note:-Assume slab is consider for Male, Female as well as Senior citizen

Slab	Income Range	Tax payable in Percentage
Slab A	0-1,80,000	Nil
Slab B	1,81,001-3,00,000	10%
Slab C	3,00,001-5,00,000	20%
Slab D	5,00,001-10,00,000	30%



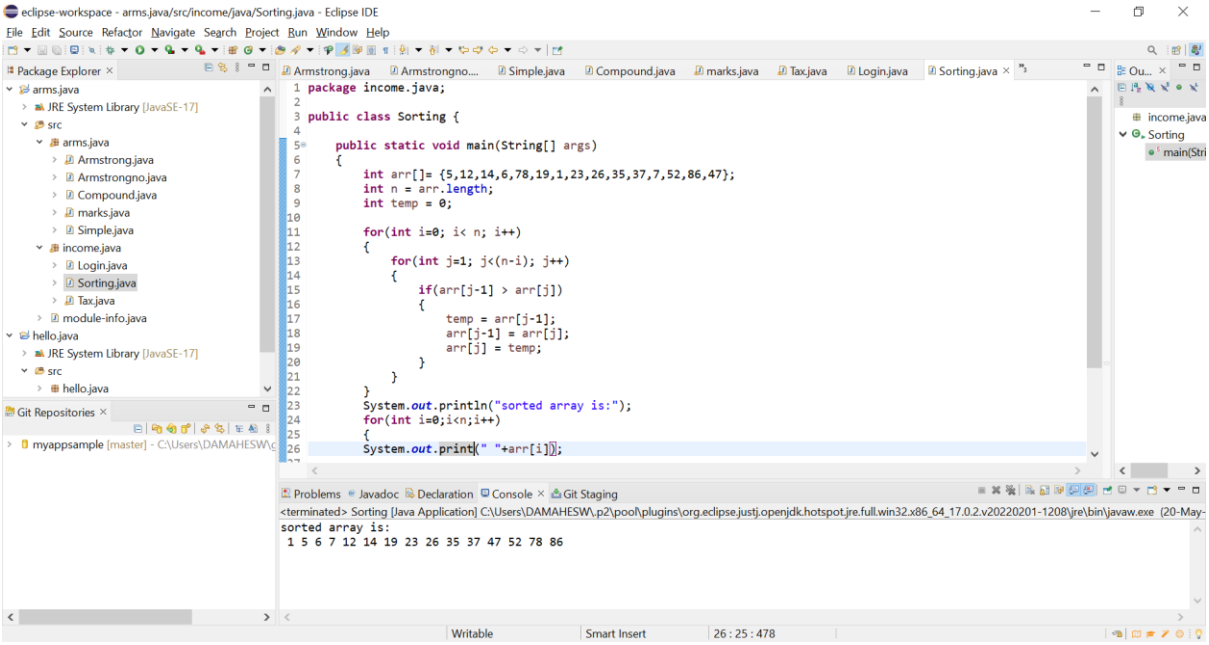
6.Consider a CUI based application, where you are asking a user to enter his Login name and password, after entering the valid user-id and password it will print the message “Welcome” along with user name. As per the validation is concerned, the program should keep a track of login attempts. After three attempts a message should be flashed saying “Contact Admin” and the program should terminate.



7. There is an Array which is of the size 15, which may or may not be sorted. You should write a program to accept a number and search if it in contained in the array.

Example: 5121467819123263537752864 7

Value to be search is 19.



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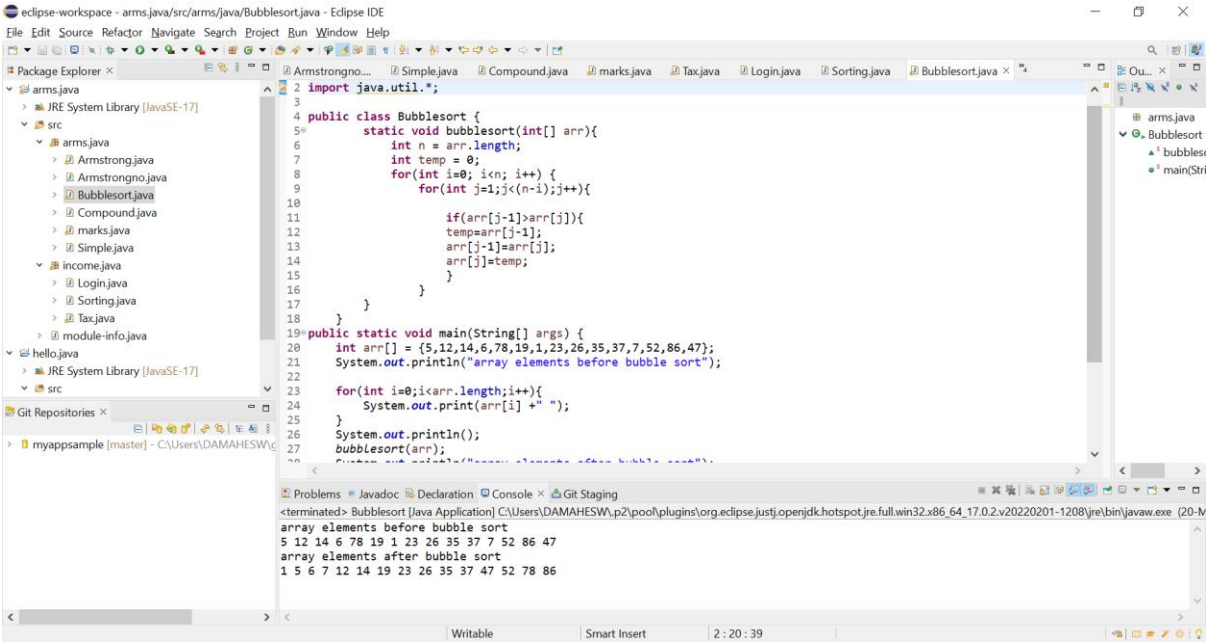
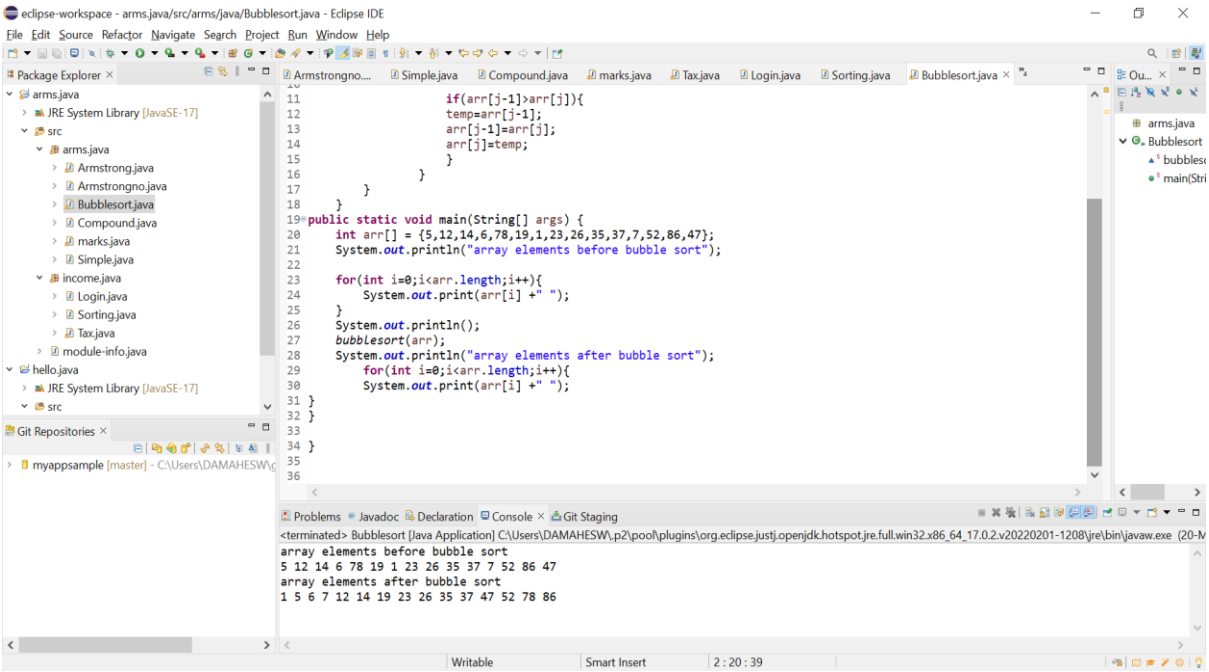
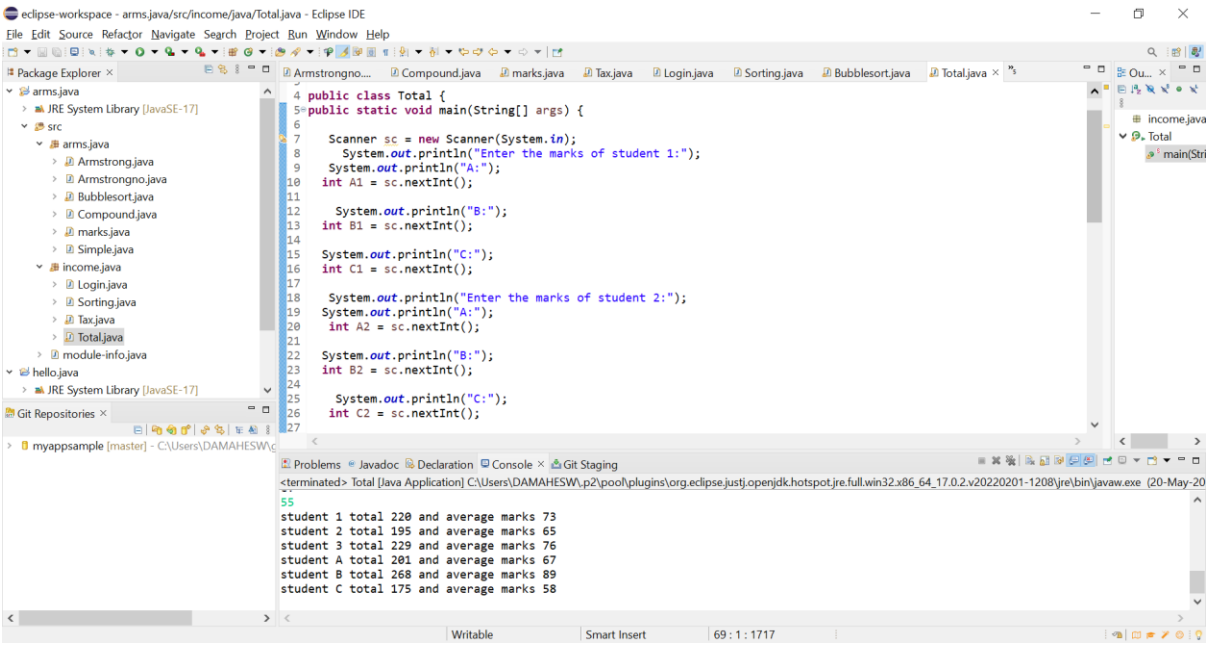
8. Using the above table write method apply sorting using Bubble Sort.





9)Accept the marks of three students for the subject say A, B, C. Find the total scored and the average in all the subject. Also find the total and average scored by students in each respective subject.



eclipse-workspace - arms.java/src/income/java/Total.java - Eclipse IDE

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Package Explorer

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  - JRE System Library [JavaSE-17]
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    - arms.java
      - Armstrong.java
      - Armstrongno.java
      - Bubblesort.java
      - Compound.java
      - marks.java
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    - income.java
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      - Sorting.java
      - Tax.java
      - Total.java
    - module-info.java
- hello.java
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- myappsample [master] - C:\Users\DAMAHESW\c

Armstrongno... | Compound.java | marks.java | Tax.java | Login.java | Sorting.java | Bubblesort.java | Total.java

```
27
28    System.out.println("Enter the marks of student 3:");
29     System.out.println("A:");
30    int A3 = sc.nextInt();
31
32     System.out.println("B:");
33    int B3 = sc.nextInt();
34
35    System.out.println("C:");
36   int C3 = sc.nextInt();
37
38    int sum1 = A1+B1+C1;
39   int sum2 = A2+B2+C2;
40   int sum3 = A3+B3+C3;
41
42   int Avg1 = sum1/3;
43     int Avg2 = sum2/3;
44    int Avg3 = sum3/3;
45
46      int A_subTotal = A1+A2+A3;
47     int B_subTotal = B1+B2+B3;
48       int C_subTotal = C1+C2+C3;
49
50    int A_Avg = A_subTotal/3;
```

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Problems | Javadoc | Declaration | Console | Git Staging

<terminated> Total [Java Application] C:\Users\DAMAHESW\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.2.v20220201-1208\jre\bin\javaw.exe (20-May-20

```
55
student 1 total 220 and average marks 73
student 2 total 195 and average marks 65
student 3 total 229 and average marks 76
student A total 201 and average marks 67
student B total 268 and average marks 89
student C total 175 and average marks 58
```

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Armstrongno... | Compound.java | marks.java | Tax.java | Login.java | Sorting.java | Bubblesort.java | Total.java

```
46      int A_subTotal = A1+A2+A3;
47     int B_subTotal = B1+B2+B3;
48       int C_subTotal = C1+C2+C3;
49
50    int A_Avg = A_subTotal/3;
51      int B_Avg = B_subTotal/3;
52   int C_Avg = C_subTotal/3;
53
54   System.out.println("student 1 total " +sum1+ " and average marks "+Avg1);
55   System.out.println("student 2 total " +sum2+ " and average marks "+Avg2);
56    System.out.println("student 3 total " +sum3+ " and average marks "+Avg3);
57
58  System.out.println("student A total " +A_subTotal+ " and average marks "+A_Avg);
59    System.out.println("student B total " +B_subTotal+ " and average marks "+B_Avg);
60           System.out.println("student C total " +C_subTotal+ " and average marks "+C_Avg);
61
62    }
63
64
65
66    }
67
68
69
```

Ou... | income.java | Total | main(Stri

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<terminated> Total [Java Application] C:\Users\DAMAHESW\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.2.v20220201-1208\jre\bin\javaw.exe (20-May-20

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