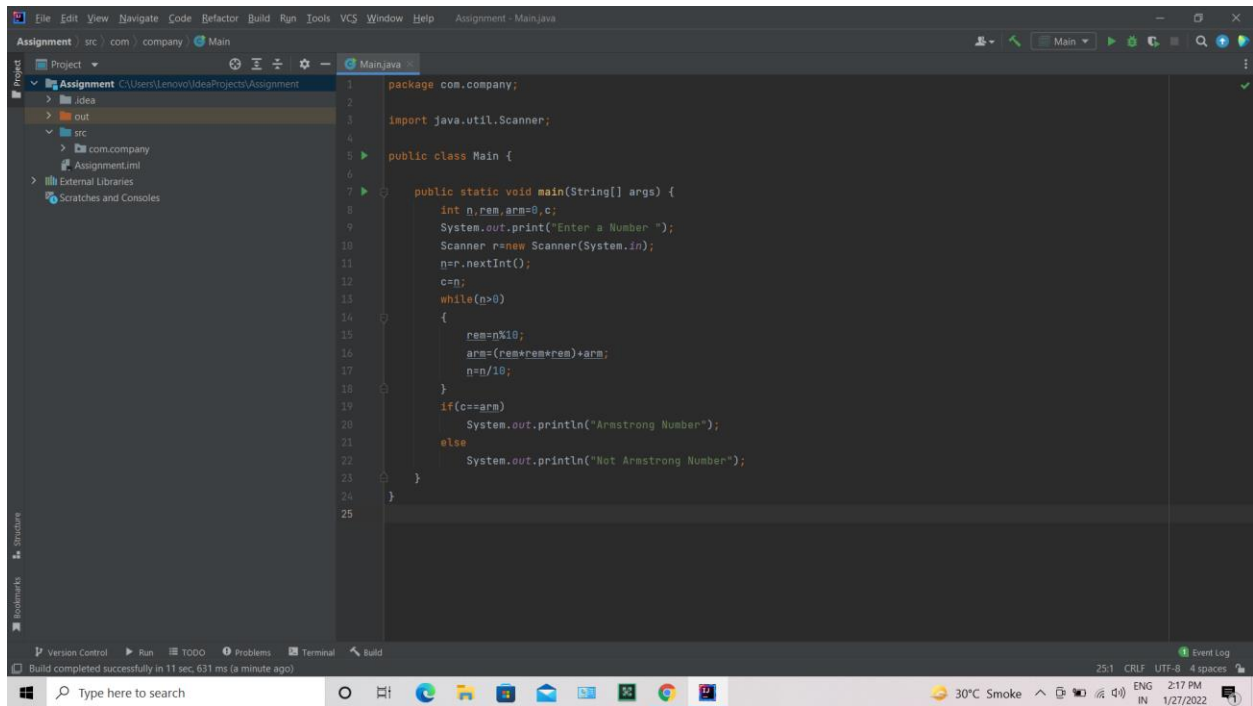


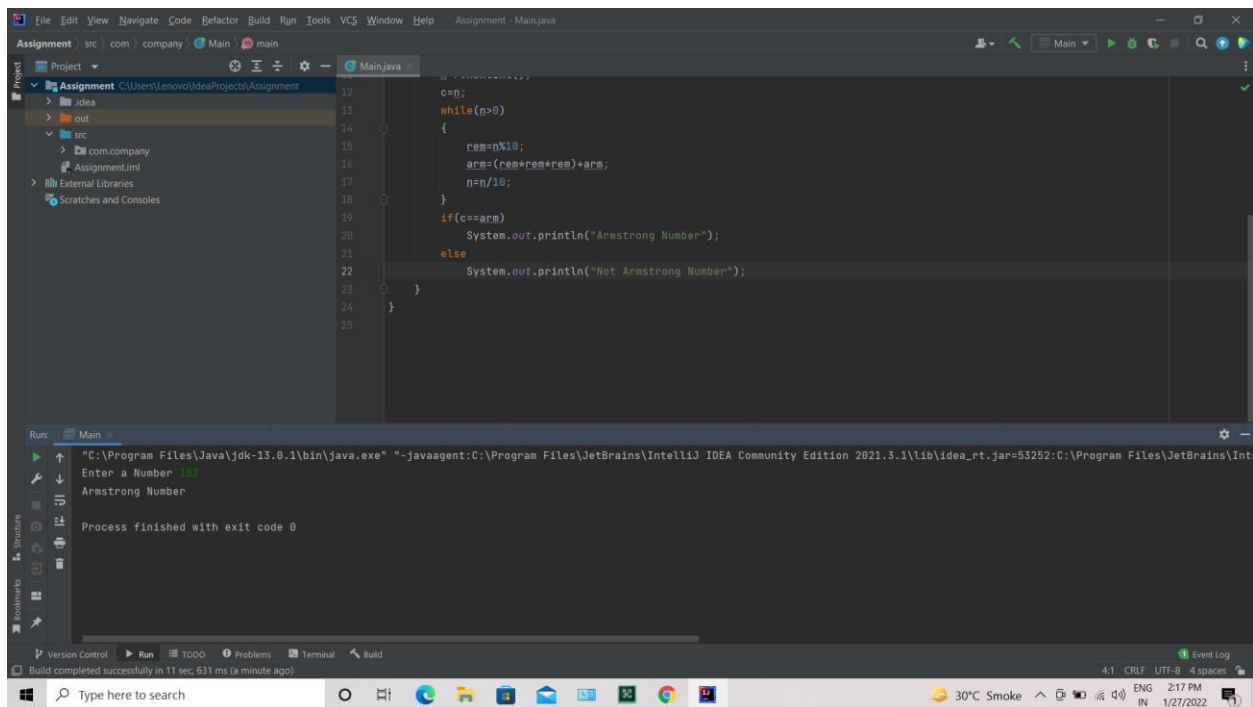
Assignment 1 core java Q1



The screenshot shows the IntelliJ IDEA IDE with a project named 'Assignment'. The source code for 'Main.java' is displayed in the editor. The code defines a package 'com.company', imports 'java.util.Scanner', and defines a public class 'Main' with a static method 'main'. The 'main' method takes an array of strings 'args' and declares variables 'n', 'rem', 'arm', and 'c'. It prompts the user to 'Enter a Number', reads the input into 'n', and enters a loop that calculates the sum of the cubes of the digits of 'n' (Armstrong number check). If the sum equals the original number, it prints 'Armstrong Number'; otherwise, it prints 'Not Armstrong Number'.

```
1 package com.company;
2
3 import java.util.Scanner;
4
5 public class Main {
6
7     public static void main(String[] args) {
8         int n, rem, arm=0, c;
9         System.out.print("Enter a Number ");
10        Scanner r=new Scanner(System.in);
11        n=r.nextInt();
12        c=n;
13        while(n>0)
14        {
15            rem=n%10;
16            arm=(rem+rem+rem)+arm;
17            n=n/10;
18        }
19        if(c==arm)
20            System.out.println("Armstrong Number");
21        else
22            System.out.println("Not Armstrong Number");
23    }
24 }
25
```

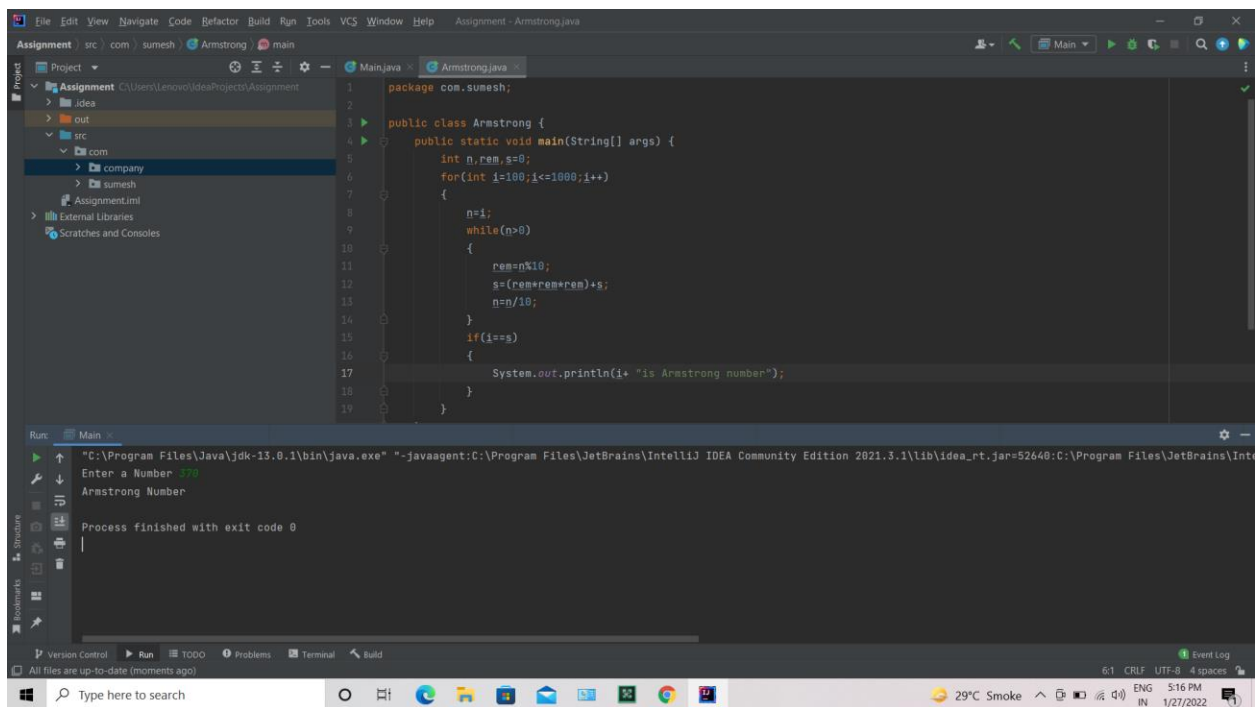
The bottom status bar indicates the build completed successfully in 11 sec, 631 ms (a minute ago). The system tray shows the date as 1/27/2022 and time as 2:17 PM.



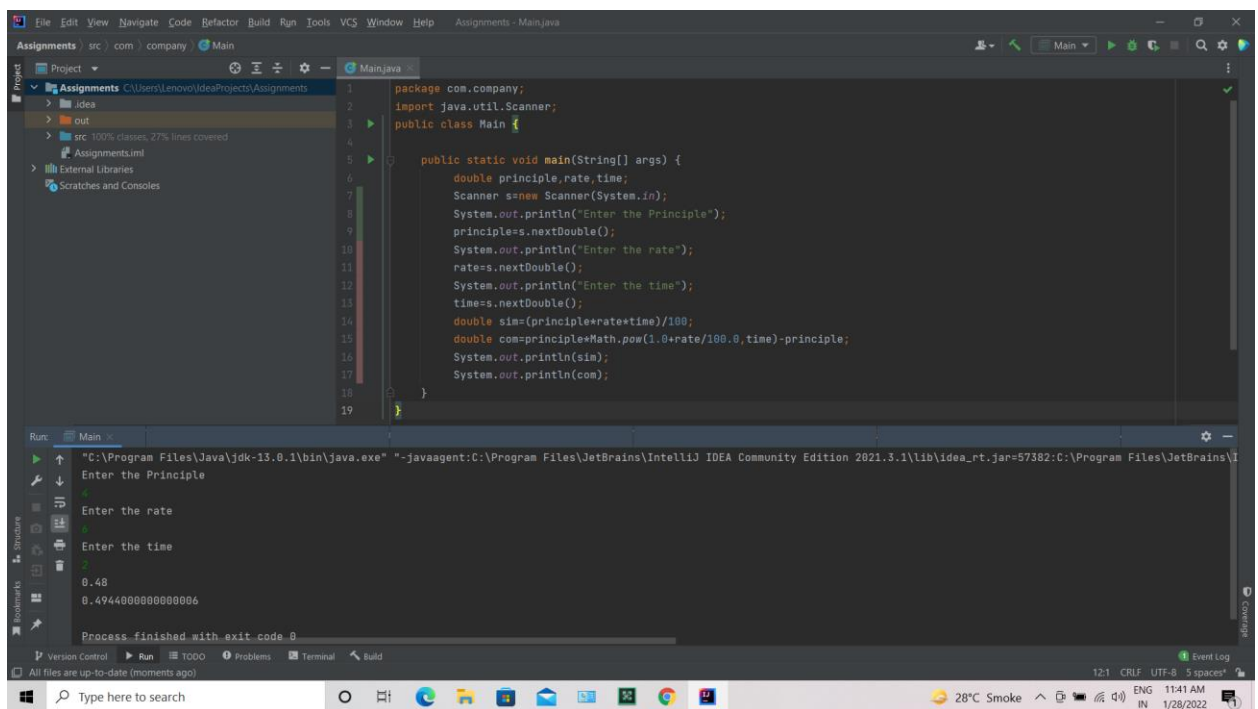
This screenshot shows the same IntelliJ IDEA IDE, but with the 'Run' console open at the bottom. The console output shows the program execution: 'Enter a Number 153' followed by 'Armstrong Number'. The status bar at the bottom indicates the process finished with exit code 0. The system tray shows the date as 1/27/2022 and time as 2:17 PM.

```
Run: Main
C:\Program Files\Java\jdk-13.0.1\bin\java.exe "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.3.1\lib\idea_rt.jar=53252:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.3.1\bin" -Dfile.encoding=UTF-8
Enter a Number 153
Armstrong Number
Process finished with exit code 0
```

Q2



Q3



Q4

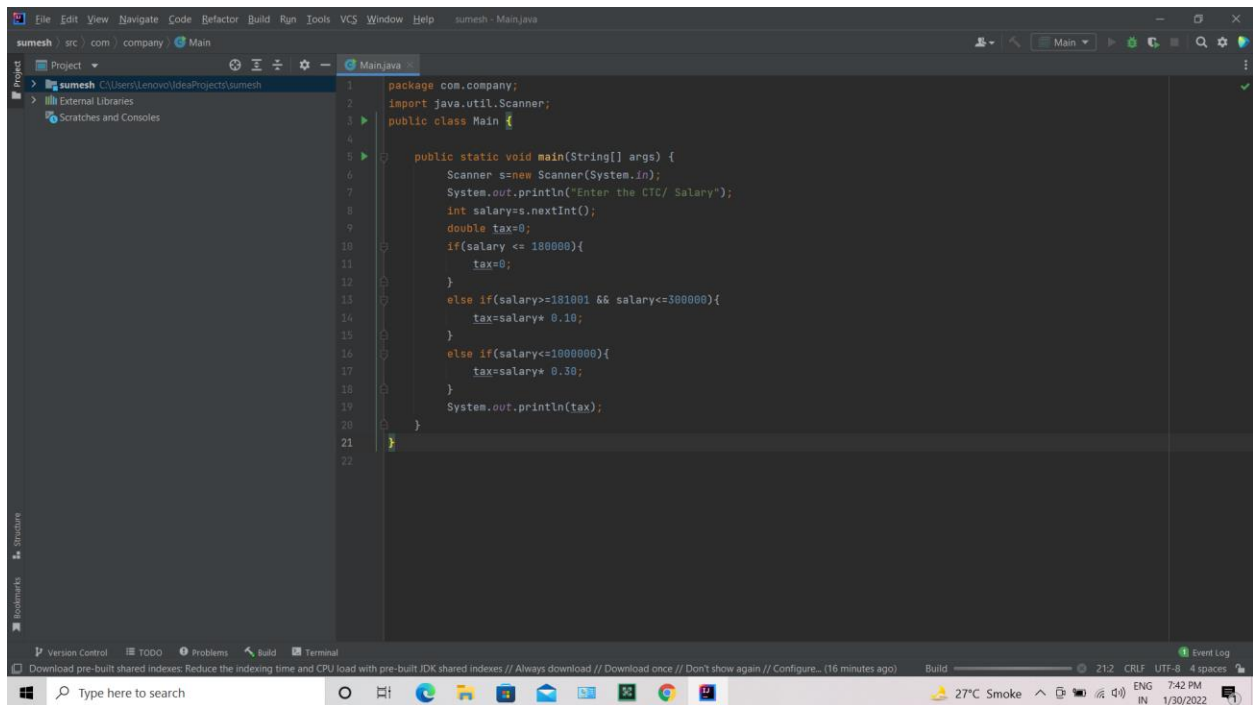
The screenshot shows an IDE window titled "Assignment1 - Main.java". The code defines a class `Main` with a `main` method. It uses `Scanner` to read three integers: `sub1`, `sub2`, and `sub3`. The program prints "Enter sub1 mark", "Enter sub2 mark", and "Enter sub3 mark" respectively. It then evaluates the marks using a series of `if` statements. The first condition is `if(sub1>60 && sub2>60 && sub3>60)`, which prints "Passed". The second condition is `else if((sub1>60 && sub2>60) || (sub1>60 && sub3>60) || (sub2>60 && sub3>60))`, which prints "Promoted". If neither condition is met, it prints "Failed".

```
1 package com.company;
2 import java.util.Scanner;
3 public class Main {
4
5     public static void main(String[] args) {
6         int sub1, sub2, sub3;
7         Scanner s = new Scanner(System.in);
8         System.out.println("Enter sub1 mark");
9         sub1 = s.nextInt();
10        System.out.println("Enter sub2 mark");
11        sub2 = s.nextInt();
12        System.out.println("Enter sub3 mark");
13        sub3 = s.nextInt();
14
15        if(sub1 > 60 && sub2 > 60 && sub3 > 60){
16            System.out.println("Passed");
17        }
18        else if((sub1 > 60 && sub2 > 60) || (sub1 > 60 && sub3 > 60) || (sub2 > 60 && sub3 > 60)){
19            System.out.println("Promoted");
20        }
21        else{
22            System.out.println("Failed");
23        }
24    }
25 }
26 }
```

The screenshot shows the same IDE window, but now the "Run" tab is active. It displays the output of the program. The user has entered the following marks: `64` for sub1, `64` for sub2, and `58` for sub3. The program has printed "Promoted" and "Process finished with exit code 0".

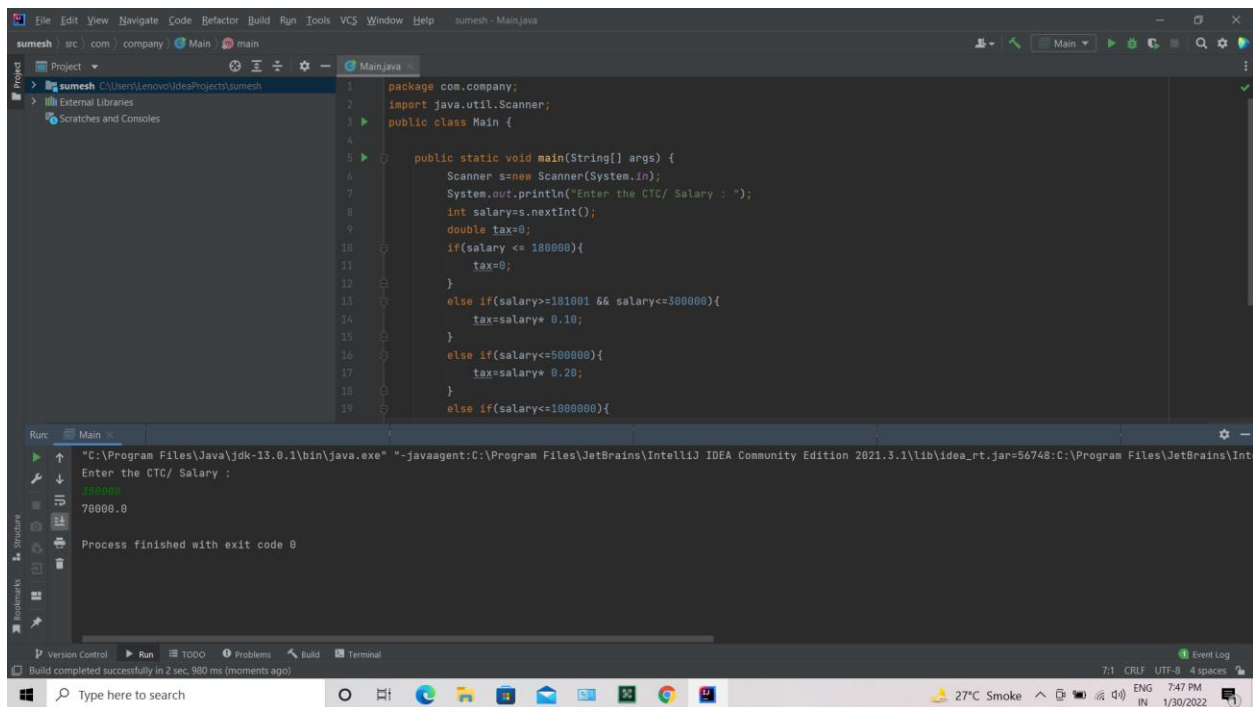
```
Run: Main
Enter sub1 mark
64
Enter sub2 mark
64
Enter sub3 mark
58
Promoted
Process finished with exit code 0
```

Q5



```
1 package com.company;
2 import java.util.Scanner;
3 public class Main {
4
5     public static void main(String[] args) {
6         Scanner s=new Scanner(System.in);
7         System.out.println("Enter the CTC/ Salary");
8         int salary=s.nextInt();
9         double tax=0;
10        if(salary <= 180000){
11            tax=0;
12        }
13        else if(salary>=181001 && salary<=300000){
14            tax=salary* 0.10;
15        }
16        else if(salary<=1000000){
17            tax=salary* 0.30;
18        }
19        System.out.println(tax);
20    }
21 }
22
```

Build 212 CRLF UTF-8 4 spaces



```
1 package com.company;
2 import java.util.Scanner;
3 public class Main {
4
5     public static void main(String[] args) {
6         Scanner s=new Scanner(System.in);
7         System.out.println("Enter the CTC/ Salary : ");
8         int salary=s.nextInt();
9         double tax=0;
10        if(salary <= 180000){
11            tax=0;
12        }
13        else if(salary>=181001 && salary<=300000){
14            tax=salary* 0.10;
15        }
16        else if(salary<=500000){
17            tax=salary* 0.20;
18        }
19        else if(salary<=1000000){
20            tax=salary* 0.30;
21        }
22    }
23 }
```

Run: Main

"C:\Program Files\Java\jdk-13.0.1\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.3.1\lib\idea_rt.jar=56748:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.3.1\bin" -Didea.config.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.3.1\conf -Didea.copyright.profiles=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.3.1\copyright -Didea.log=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.3.1\log -Didea.platform.prefix=JDK -Didea.vendor.id=idea -Didea.version=2021.3.1 -jar C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.3.1\bin\idea_rt.jar 56748

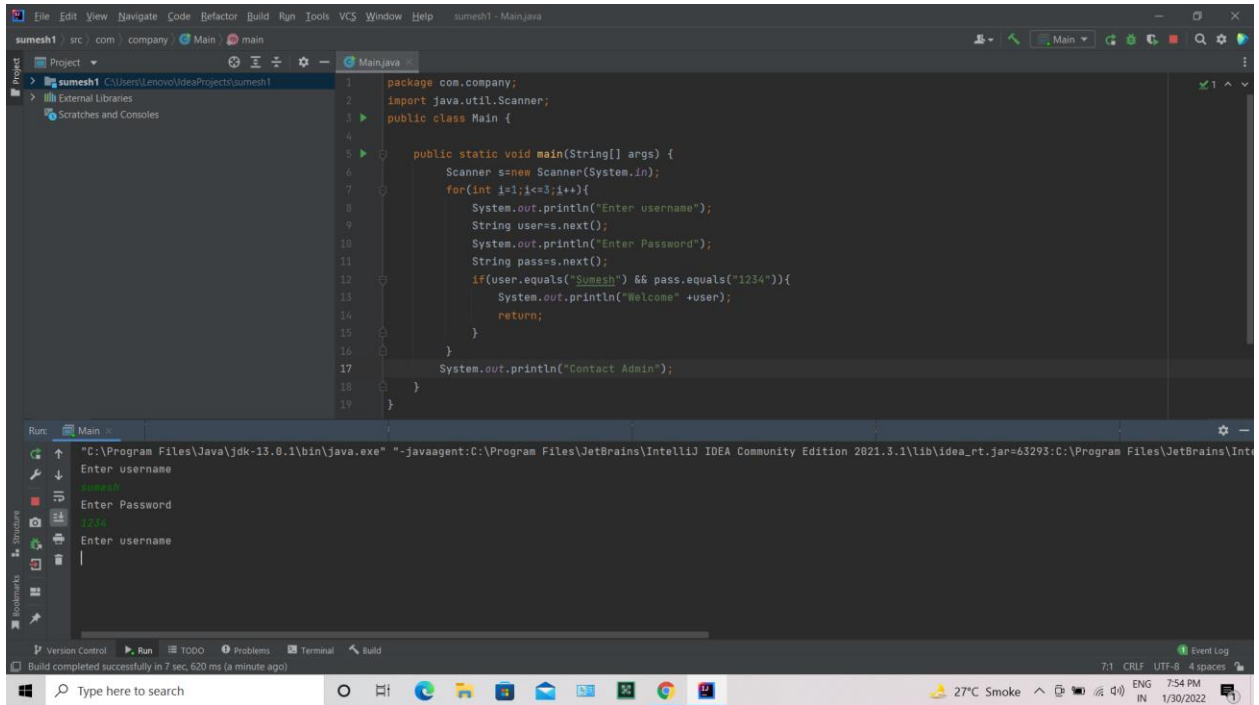
Enter the CTC/ Salary : 55000

7000.0

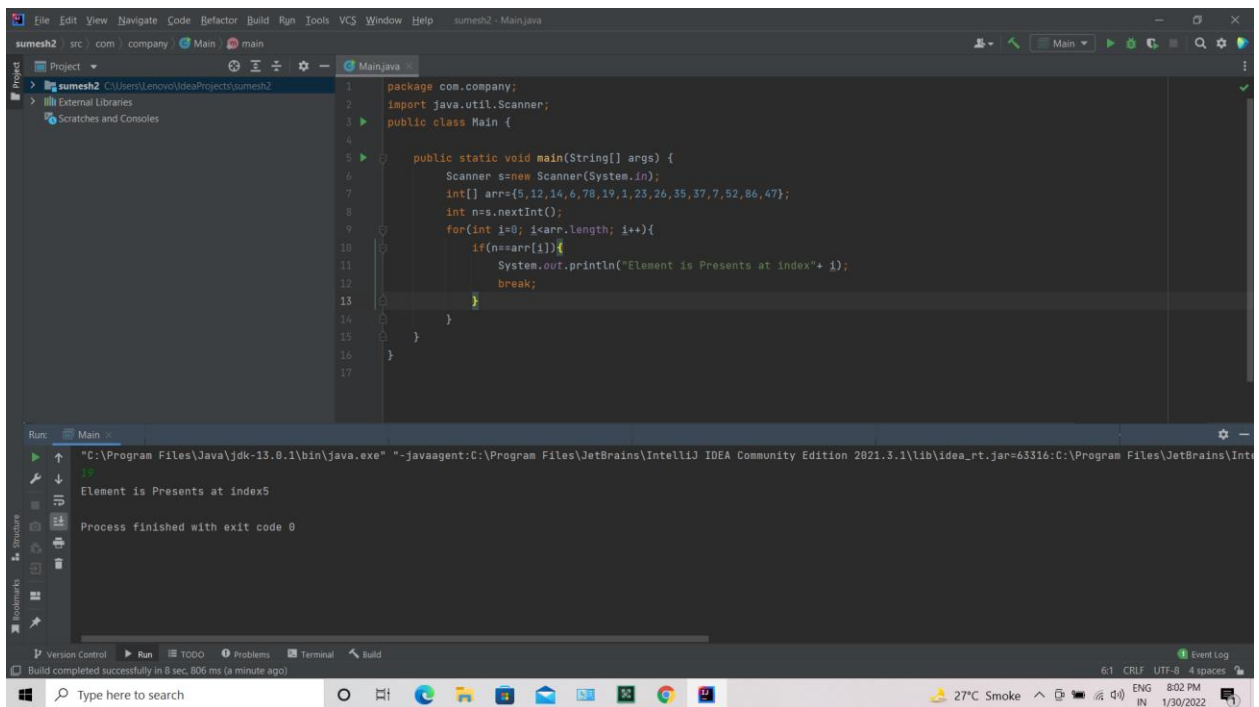
Process finished with exit code 0

Build completed successfully in 2 sec. 980 ms (moments ago)

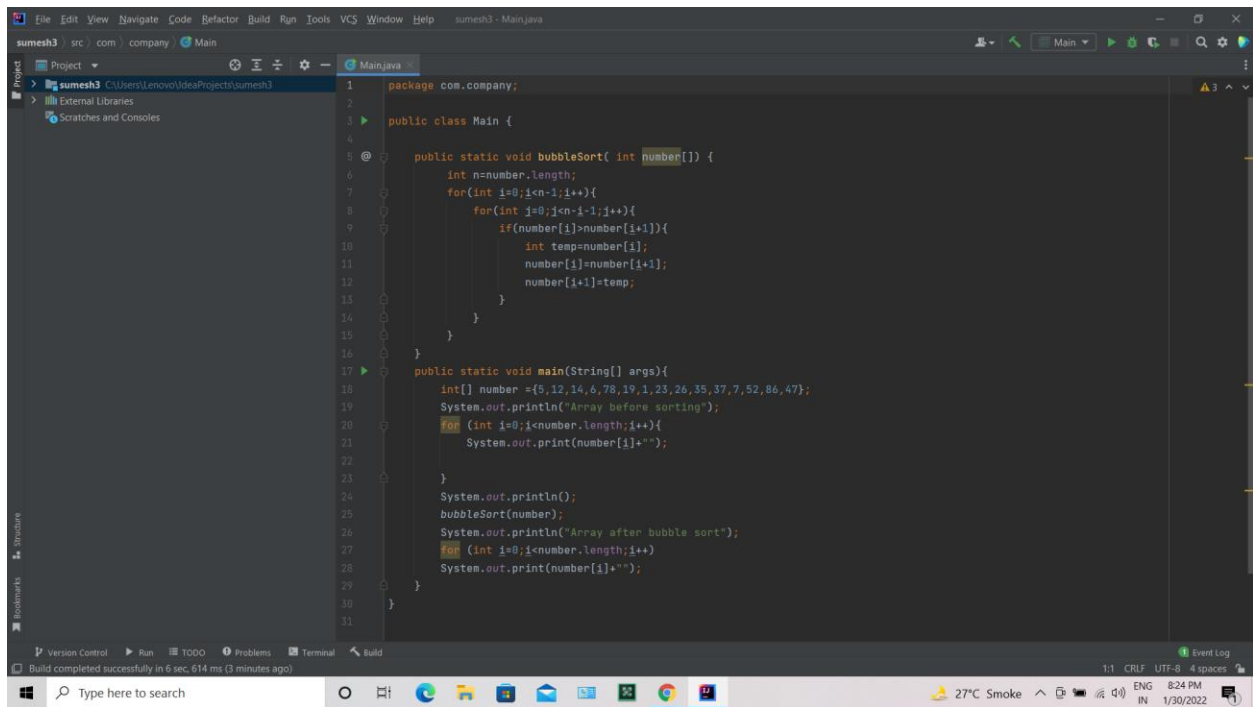
Q6



Q7

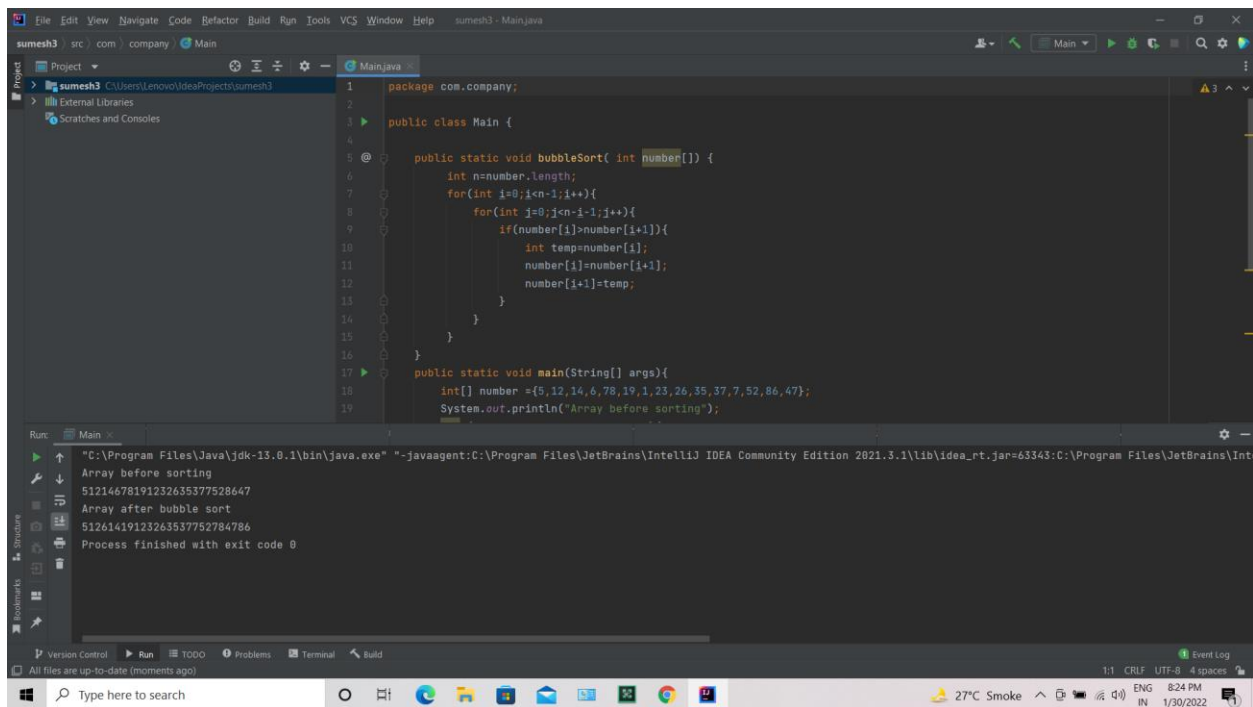


Q8



The screenshot shows an IDE window titled 'sumesh3 - Main.java'. The code defines a package 'com.company' and a class 'Main'. Inside 'Main', there is a 'bubbleSort' method that takes an integer array 'number' and sorts it using bubble sort. The 'main' method initializes an array 'number' with the values {5, 12, 14, 6, 78, 19, 1, 23, 26, 35, 37, 7, 52, 86, 47}, prints the array before sorting, calls 'bubbleSort', and prints the array after sorting. The IDE interface includes a project explorer on the left, a toolbar at the top, and a status bar at the bottom showing 'Build completed successfully in 6 sec. 614 ms (3 minutes ago)'.

```
1 package com.company;
2
3 public class Main {
4
5     public static void bubbleSort( int number[] ) {
6         int n=number.length;
7         for(int i=0;i<n-1;i++){
8             for(int j=0;j<n-i-1;j++){
9                 if(number[i]>number[i+1]){
10                     int temp=number[i];
11                     number[i]=number[i+1];
12                     number[i+1]=temp;
13                 }
14             }
15         }
16     }
17
18     public static void main(String[] args){
19         int[] number = {5,12,14,6,78,19,1,23,26,35,37,7,52,86,47};
20         System.out.println("Array before sorting");
21         for (int i=0;i<number.length;i++){
22             System.out.print(number[i]+"");
23         }
24         System.out.println();
25         bubbleSort(number);
26         System.out.println("Array after bubble sort");
27         for (int i=0;i<number.length;i++){
28             System.out.print(number[i]+"");
29         }
30     }
31 }
```



The screenshot shows the same IDE window, but with the 'Run' tab selected at the bottom. The output of the program is displayed, showing the array before and after sorting. The array before sorting is '51214678191232635377528647' and the array after sorting is '51261419123263537752784786'. The process finished with exit code 0. The IDE interface is consistent with the previous screenshot, showing the same code in the background.

```
Run: Main x
↑ "C:\Program Files\Java\jdk-13.0.1\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.3.1\lib\idea_rt.jar=63343:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.3.1\bin" -Didea.config.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.3.1\config -Didea.copyright.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.3.1\copyright -Didea.home.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.3.1\bin -Didea.platform.prefix=java -Djava.awt.headless=true -Djava.class.path=C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.3.1\bin\idea\idea_rt.jar
↓
Array before sorting
51214678191232635377528647
Array after bubble sort
51261419123263537752784786
Process finished with exit code 0
```