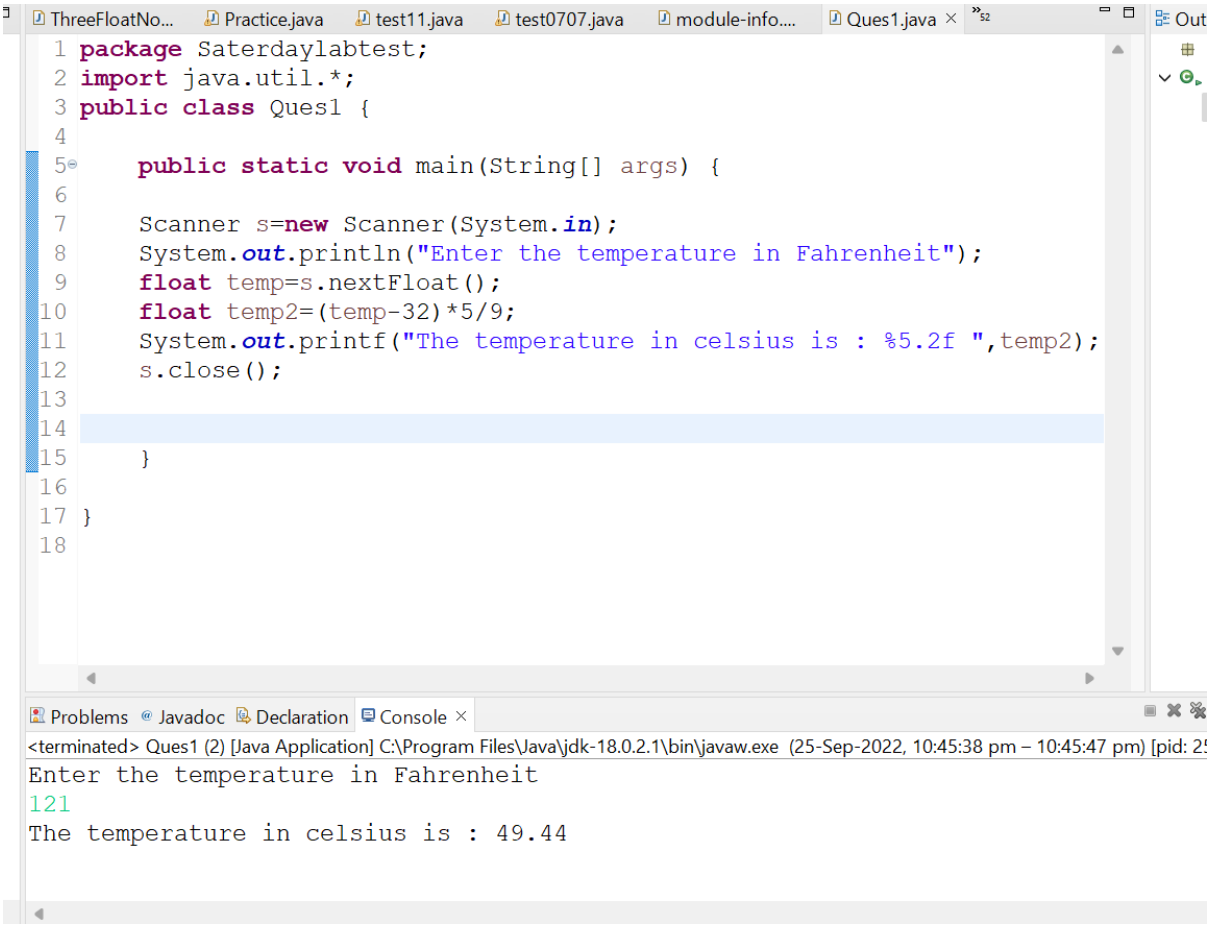
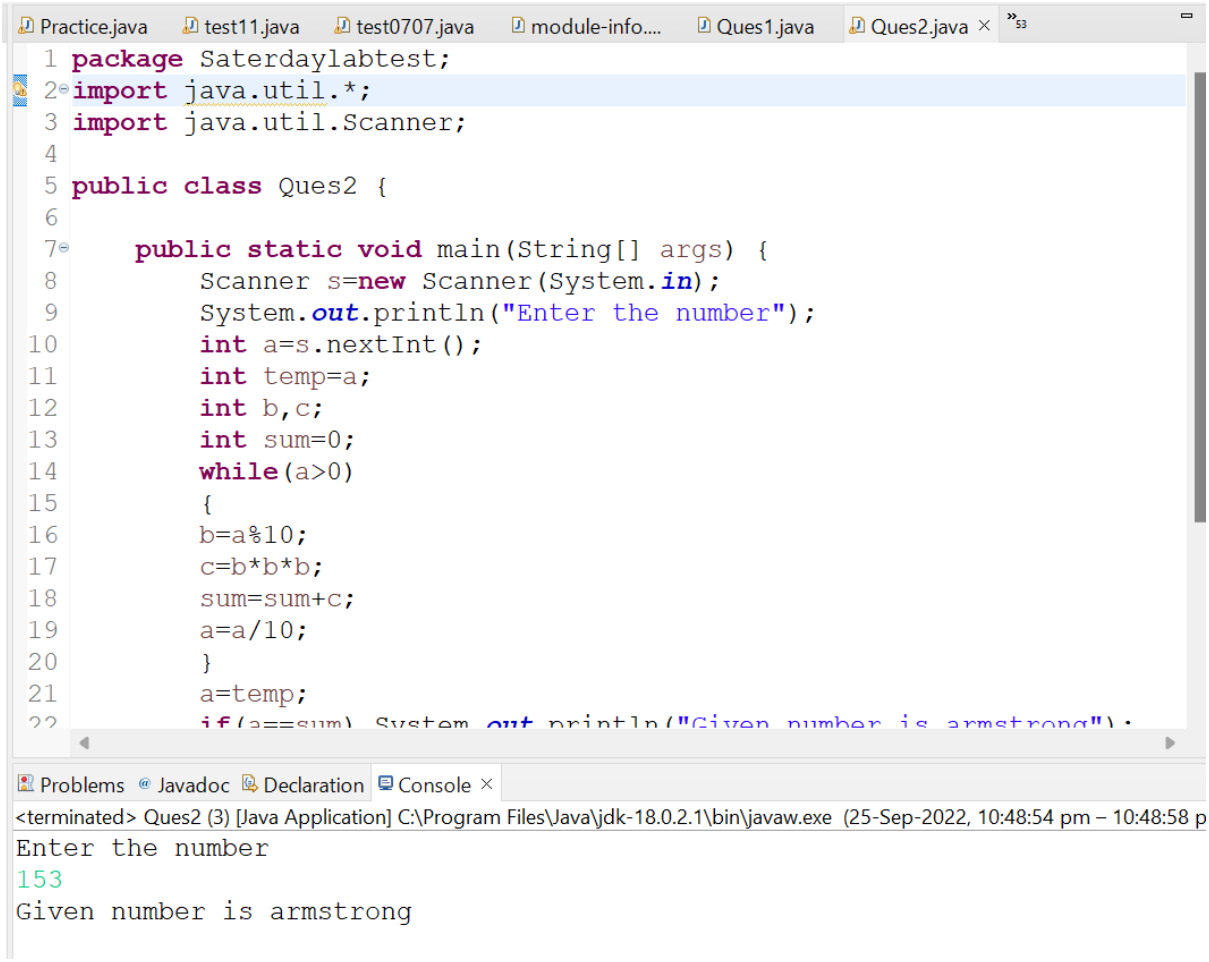
Amol Chemate (Practice Assignment)

Q1 Wap to convert Fahrenheit to Celsius in Java using formula given below

°C = (°F – 32) / (9/5).



Q 2 wap to check a given number is armstrong or not i.e. 153 = 1*1*1 + 5*5*5+3*3*3.



Q 3 Rajan went to a movie with his friends in a multiplex theatre and during break time he bought pizzas, puffs and cool drinks. Consider the following prices :

Rs.100/pizza
Rs.20/puffs
Rs.10/cooldrink
Generate a bill for What Rajan has bought.

Sample Input 1:

Enter the no of pizzas bought:10
Enter the no of puffs bought:12
Enter the no of cool drinks bought:5

Sample Output 1:

Bill Details
No of pizzas:10
No of puffs:12
No of cooldrinks:5
Total price=1290.

```
Practice.java  test0707.java  module-info....  Ques1.java  Ques2.java  Ques3.java ×
 1 Saterdaylabtest;¤¶
 2 ava.util.*;¤¶
 3 lass Ques3 {¤¶
 4
 5ic float Bill_details(int x,int y,int z)¤¶
 6
 7 em.out.println("Bill details");¤¶
 8 em.out.println("No. of pizzas: "+x);¤¶
 9 em.out.println("No. of pizzas: "+y);¤¶
10 em.out.println("No. of pizzas: "+z);¤¶
11 rn (x*100)+(y*20)+(z*10);}¤¶
12
13ic static void main(String[] args) {¤¶
14 Scanner s=new Scanner(System.in);¤¶
15 System.out.println("Enter the number of pizzas bought");¤¶
16 int a=s.nextInt();¤¶
17 System.out.println("Enter the number of puffs bought");¤¶
18 int b=s.nextInt();¤¶
19 System.out.println("Enter the number of cold drinks bought");¤¶
20 int c=s.nextInt();¤¶
21 System.out.print("Total price :"+Bill_details(a,b,c)+"\nThank you !! V
22 s.close();¤¶
23
24
25
26
```

Problems Javadoc Declaration Console ×

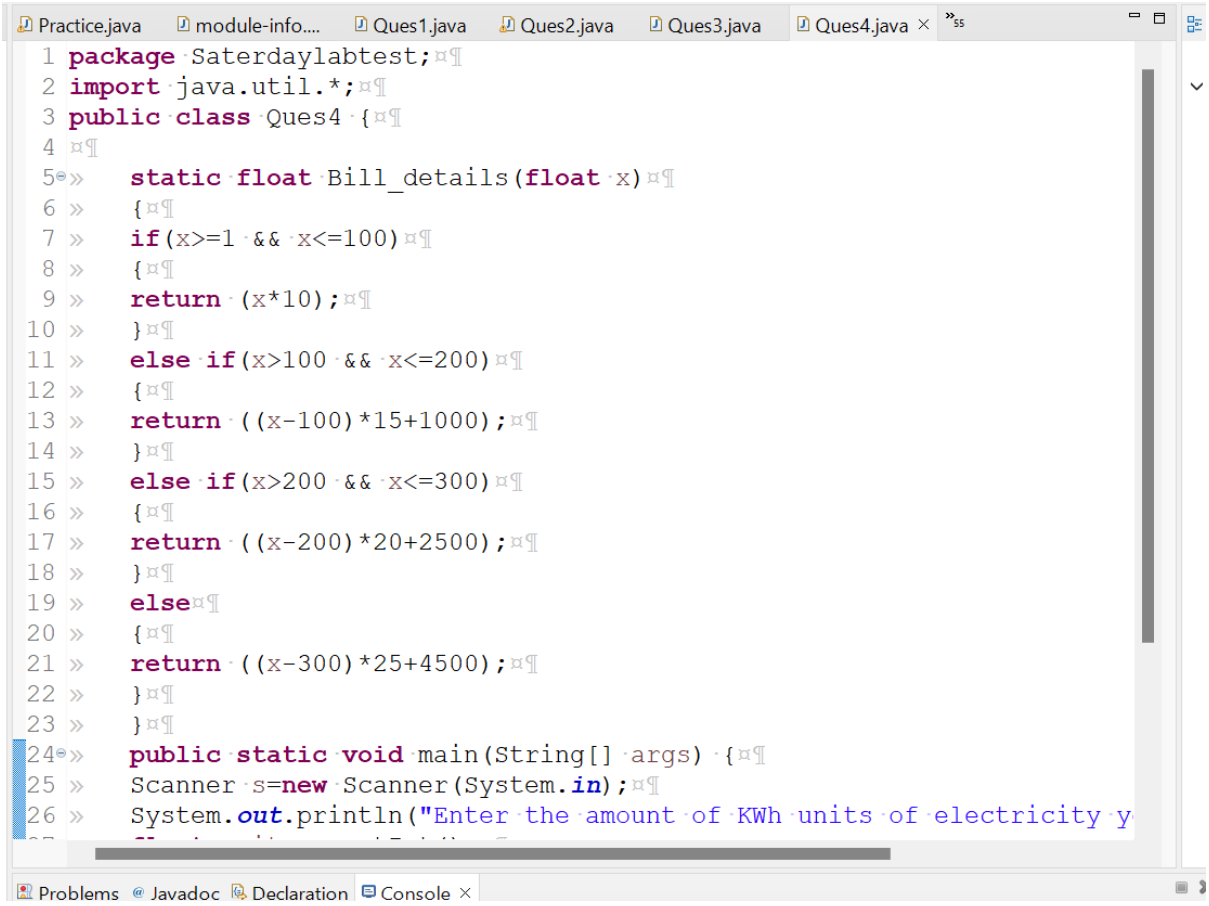
```
<terminated> Ques3 (2) [Java Application] C:\Program Files\Java\jdk-18.0.2.1\bin\javaw.exe  (25-Sep-2022, 1
Enter the number of pizzas bought
10
Enter the number of puffs bought
11
Enter the number of cold drinks bought
5
Bill details
No. of pizzas: 10
No. of pizzas: 11
No. of pizzas: 5
Total price :1270.0
Thank you !! Visit Again !!
```

Q 4 Given an integer U denoting the amount of KWh units of electricity consumed, the task is to calculate the electricity bill with the help of the below charges:

1 to 100 units – Rs. 10/unit

100 to 200 units – Rs. 15/unit
200 to 300 units – Rs. 20/unit
above 300 units – Rs. 25/unit
Examples:

Input: U = 250
Output: 3500
Explanation:
Charge for the first 100 units – 10*100 = 1000
Charge for the 100 to 200 units – 15*100 = 1500
Charge for the 200 to 250 units – 20*50 = 1000
Total Electricity Bill = 1000 + 1500 + 1000 = 3500
Input: U = 95
Output: 950
Explanation:
Charge for the first 100 units – 10*95 = 950
Total Electricity Bill = 950.



Q 5 Write a java program that define a sorted array of size N and an integer K, find the position at which K is

present in the array using binary search.

Example 1:

Input:
N = 5
arr[] = {1 2 3 4 5}
K = 4
Output: 3
Explanation: 4 appears at index 3.

```
 package Saterdaylabtest;
import java.util.Arrays;

import java.util.Scanner;

public class Ques5 {

	public static void main(String[] args) {
		Scanner s=new Scanner(System.in);
		System.out.println("Enter the 5 numbers");
		int a[]=new int[5];
		for(int i=0;i<a.length;i++)
		{
		a[i]=s.nextInt();
		}
		Arrays.sort(a);
		System.out.println("Enter the number you want to
search");
		int n=s.nextInt();
		System.out.print("Sorted array is : ");
		for(int e:a)
		{
		System.out.print(e+" ");
		}
		int count=0;
		int first=0;
		int last=a.length-1;
		int mid=(first+last)/2;
		while(first<=last)
		{
		if(a[mid]<n) first=mid+1;
		else if(a[mid]==n)
		{
		System.out.println("\nRecord found at index of :
"+mid);
		count=1;
		break;
```

```
            }
            else last=mid-1;
            mid=(first+last)/2;
            }
            if(count==0) System.out.println("\nRecord not
found");
            s.close();

      }

}
```

Output-

```
Enter the 5 numbers
10
20
4
6
8
Enter the number you want to search
20
Sorted array is : 4 6 8 10 20
Record found at index of : 4
```

Q 6 write a java program and define an array, print all the elements which are leaders. A Leader is an element that is greater than all of the elements on its right side in the array.

Examples:

Example 1:
Input:
arr = [4, 7, 1, 0]
Output:
7 1 0
Explanation:
Rightmost element is always a leader. 7 and 1 are greater than the elements in their right side.

```
package Saterdaylabtest;

import java.util.Scanner;

public class Ques6 {

      public static void main(String[] args) {
            Scanner s=new Scanner(System.in);
            int a[]=new int[6];
            System.out.println("Enter 6 numbers");
            for(int i=0;i<a.length;i++)
            {
            a[i]=s.nextInt();
            }
            int leader=a[a.length-1];
```

```
            System.out.print("Leaders : ");
            System.out.print(leader+" ");
            for(int i=a.length-2;i>=0;i--)
            {
            if(leader<a[i])
            {
            leader=a[i];
            System.out.print(leader+" ");
            }
            }
            s.close();

      }

}
```

Output-
```
Enter 6 numbers
30
20
40
23
5
45
Leaders : 45
```

Q 7 Given two strings a and b consisting of lowercase characters. The task is to check whether two given strings are an anagram of each other or not. An anagram of a string is another string that contains the same characters, only the order of characters can be different. For example, abc and bca are an anagram of each other.

Example 1:

Input:a = cdacnoida, b = ciddacnoa
Output: YES
Explanation: Both the string have same characters with same frequency. So, both are anagrams.

```
package Saterdaylabtest;
import java.util.Arrays;

import java.util.Scanner;

public class Quest7 {

      public static void main(String[] args) {
            Scanner s=new Scanner(System.in);
            System.out.println("Enter the 1st word");
            String a=s.nextLine();
            System.out.println("Enter the 2nd word");
            String b=s.nextLine();
            char c[]=a.toCharArray();
            char d[]=b.toCharArray();
            Arrays.sort(c);
```

```
            Arrays.sort(d);
            if(Arrays.equals(c, d)) System.out.println("Strings
are anagram");
            else System.out.println("Strings are not anagram");
            s.close();
      }

}
```

Output-

```
Enter the 1st word
hello
Enter the 2nd word
namaste
Strings are not anagram
```