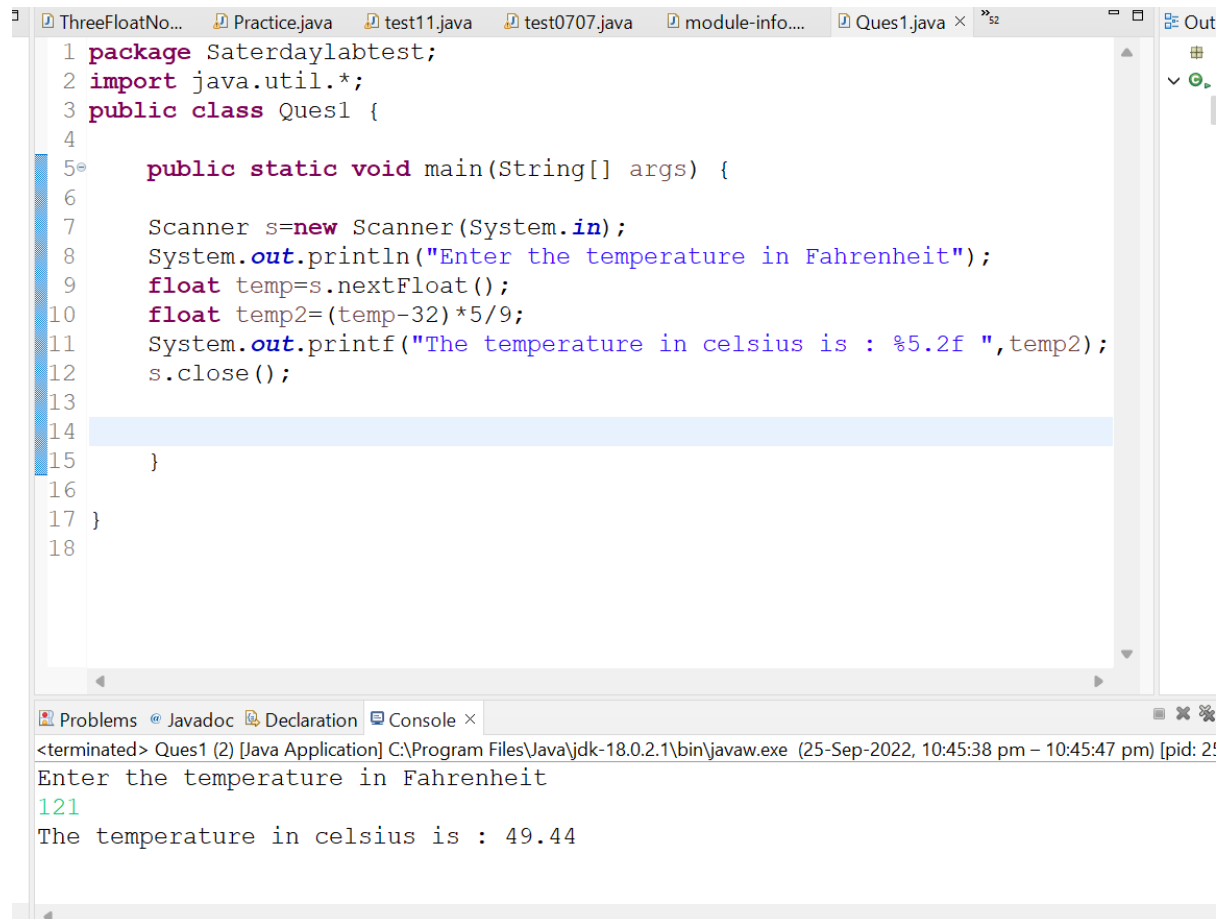


Amol Chemate (Practice Assignment)

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

$$^{\circ}\text{C} = (^{\circ}\text{F} - 32) / (9/5).$$



The screenshot shows an IDE with a Java file named 'Ques1.java'. The code implements a program to convert Fahrenheit to Celsius. It uses a Scanner to take input from the user, calculates the Celsius value using the formula $(^{\circ}\text{F} - 32) \times 5/9$, and prints the result with two decimal places. The console output shows the user entering '121' and the program outputting 'The temperature in celsius is : 49.44'.

```
1 package Saterdaglabtest;
2 import java.util.*;
3 public class Ques1 {
4
5     public static void main(String[] args) {
6
7         Scanner s=new Scanner(System.in);
8         System.out.println("Enter the temperature in Fahrenheit");
9         float temp=s.nextFloat();
10        float temp2=(temp-32)*5/9;
11        System.out.printf("The temperature in celsius is : %5.2f ",temp2);
12        s.close();
13
14
15    }
16
17 }
18
```

Console Output:

```
<terminated> Ques1 (2) [Java Application] C:\Program Files\Java\jdk-18.0.2.1\bin\javaw.exe (25-Sep-2022, 10:45:38 pm - 10:45:47 pm) [pid: 2!
Enter the temperature in Fahrenheit
121
The temperature in celsius is : 49.44
```

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

```
Practice.java test11.java test0707.java module-info.... Ques1.java Ques2.java × »53
1 package Saterdaglabtest;
2 import java.util.*;
3 import java.util.Scanner;
4
5 public class Ques2 {
6
7     public static void main(String[] args) {
8         Scanner s=new Scanner(System.in);
9         System.out.println("Enter the number");
10        int a=s.nextInt();
11        int temp=a;
12        int b,c;
13        int sum=0;
14        while(a>0)
15        {
16            b=a%10;
17            c=b*b*b;
18            sum=sum+c;
19            a=a/10;
20        }
21        a=temp;
22        if(a==sum) System.out.println("Given number is armstrong");
    }
}
```

Problems @ Javadoc Declaration Console ×

<terminated> Ques2 (3) [Java Application] C:\Program Files\Java\jdk-18.0.2.1\bin\javaw.exe (25-Sep-2022, 10:48:54 pm – 10:48:58 p

Enter the number

153

Given number is armstrong

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/cool drink

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 x s4
1 Saterdaylabtest;
2 ava.util.*;
3 lass Ques3 {
4
5 ic 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
13 ic 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 x

<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 – $10 \times 100 = 1000$

Charge for the 100 to 200 units – $15 \times 100 = 1500$

Charge for the 200 to 250 units – $20 \times 50 = 1000$

Total Electricity Bill = $1000 + 1500 + 1000 = 3500$

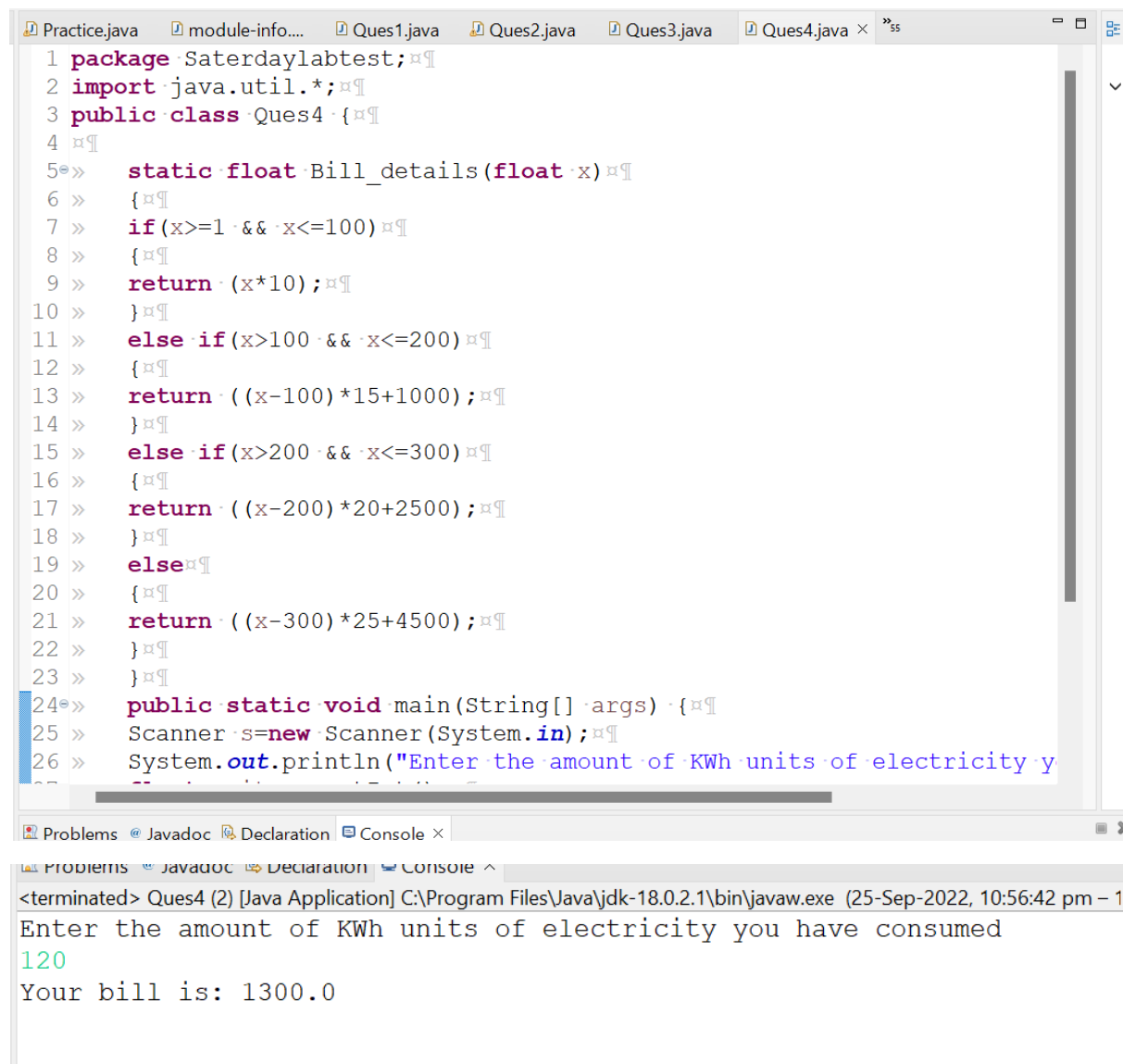
Input: U = 95

Output: 950

Explanation:

Charge for the first 100 units – $10 \times 95 = 950$

Total Electricity Bill = 950.



```
1 package Saterdaylabtest;
2 import java.util.*;
3 public class Ques4 {
4
5     static float Bill_details(float x)
6     {
7         if(x>=1 && x<=100)
8         {
9             return (x*10);
10        }
11        else if(x>100 && x<=200)
12        {
13            return ((x-100)*15+1000);
14        }
15        else if(x>200 && x<=300)
16        {
17            return ((x-200)*20+2500);
18        }
19        else
20        {
21            return ((x-300)*25+4500);
22        }
23    }
24    public static void main(String[] args) {
25        Scanner s=new Scanner(System.in);
26        System.out.println("Enter the amount of KWh units of electricity y
27
28
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100
```

```
<terminated> Ques4 (2) [Java Application] C:\Program Files\Java\jdk-18.0.2.1\bin\javaw.exe (25-Sep-2022, 10:56:42 pm - 1
Enter the amount of KWh units of electricity you have consumed
120
Your bill is: 1300.0
```

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 Saterdaglabtest;
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 Saterdaglabtest;

```

```

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 Saterdaglabtest;
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