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//Q 1 Wap to convert Fahrenheit to Celsius in Java using formula given below

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

```
import java.util.Scanner;
```

```
public class Question01 {
```

```
    public static void main(String[] args) {
```

```
        Scanner s=new Scanner(System.in);
```

```
        System.out.println("Enter the temperature in Fahrenheit");
```

```
        float temp=s.nextFloat();
```

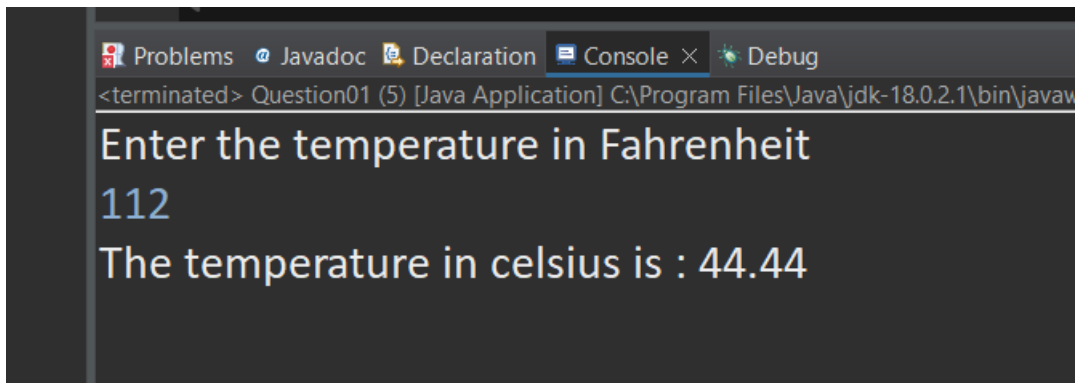
```
        float temp2=(temp-32)*5/9;
```

```
        System.out.printf("The temperature in celsius is : %5.2f ",temp2);
```

```
        s.close();
```

```
    }
```

```
}
```



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

```
import java.util.Scanner;
```

```
public class Question02 {
```

```
    public static void main(String[] args) {
```

```
        Scanner s=new Scanner(System.in);
```

```
        System.out.println("Enter the number");
```

```
        int a=s.nextInt();
```

```
        int temp=a;
```

```
        int b,c;
```

```
        int sum=0;
```

```
        while(a>0)
```

```
        {
```

```
            b=a%10;
```

```
            c=b*b*b;
```

```
            sum=sum+c;
```

```
            a=a/10;
```

```
        }
```

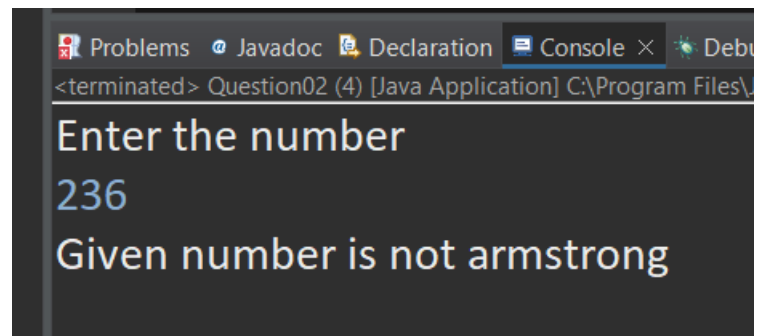
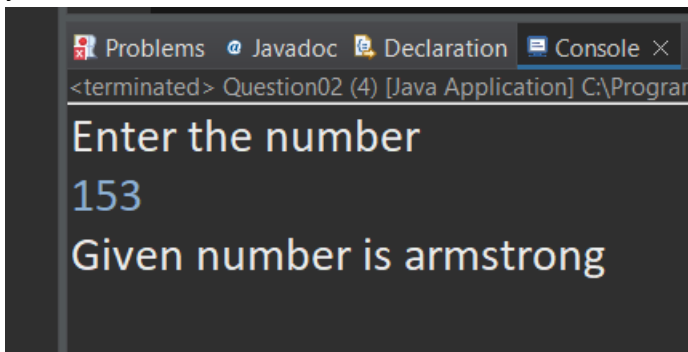
```
        a=temp;
```

```
        if(a==sum) System.out.println("Given number is armstrong");
```

```

else System.out.println("Given number is not armstrong");
s.close();
}
}

```



//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

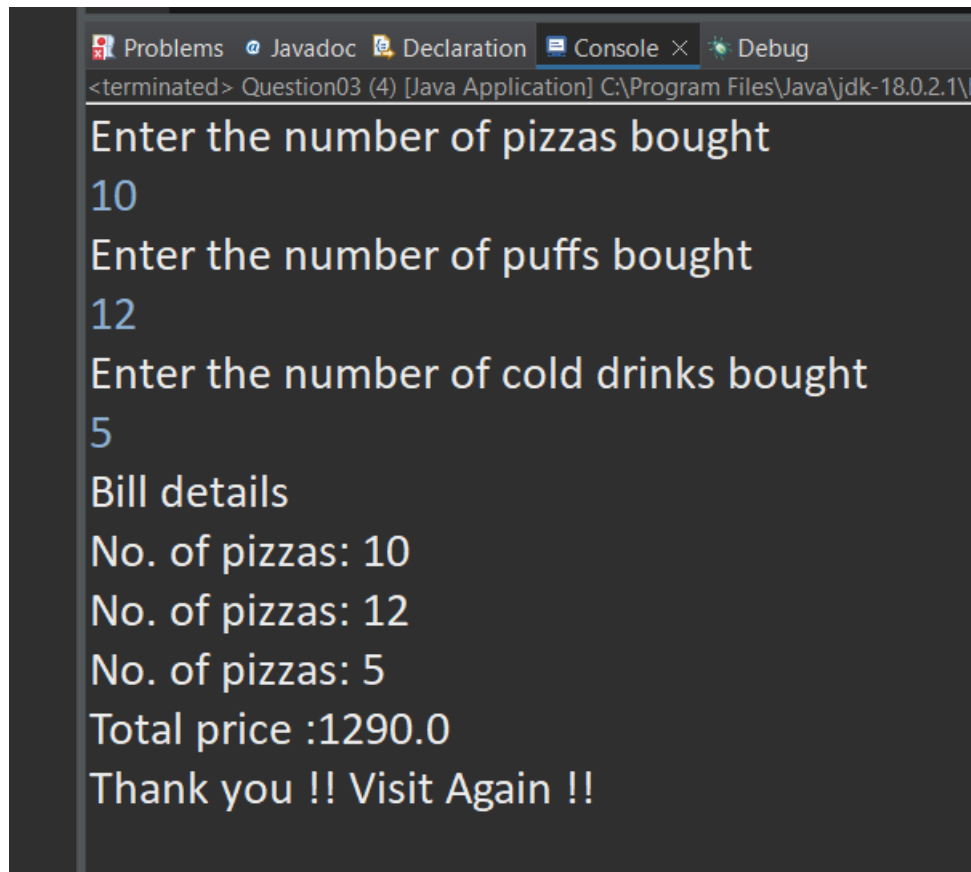
//Rs.10/cooldrink

//Generate a bill for What Rajan has bought.

```

import java.util.Scanner;
public class Question03 {
    static float Bill_details(int x,int y,int z)
    {
        System.out.println("Bill details");
        System.out.println("No. of pizzas: "+x);
        System.out.println("No. of pizzas: "+y);
        System.out.println("No. of pizzas: "+z);
        return (x*100)+(y*20)+(z*10);
    }
    public static void main(String[] args) {
        Scanner s=new Scanner(System.in);
        System.out.println("Enter the number of pizzas bought");
        int a=s.nextInt();
        System.out.println("Enter the number of puffs bought");
        int b=s.nextInt();
        System.out.println("Enter the number of cold drinks bought");
        int c=s.nextInt();
        System.out.print("Total price :"+Bill_details(a,b,c)+"\nThank you !! Visit Again !!");
        s.close();
    }
}

```



```
<terminated> Question03 (4) [Java Application] C:\Program Files\Java\jdk-18.0.2.1\bin
Enter the number of pizzas bought
10
Enter the number of puffs bought
12
Enter the number of cold drinks bought
5
Bill details
No. of pizzas: 10
No. of pizzas: 12
No. of pizzas: 5
Total price :1290.0
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

```
import java.util.Scanner;
```

```
public class Question04 {
```

```
    static float Bill_details(float x)
```

```
    {
```

```
        if(x>=1 && x<=100)
```

```
        {
```

```
            return (x*10);
```

```
        }
```

```
        else if(x>100 && x<=200)
```

```
        {
```

```
            return ((x-100)*15+1000);
```

```
        }
```

```
        else if(x>200 && x<=300)
```

```
        {
```

```
            return ((x-200)*20+2500);
```

```
        }
```

```
        else
```

```
        {
```

```
            return ((x-300)*25+4500);
```

```
        }
```

```
    }
```

```

public static void main(String[] args) {
    Scanner s=new Scanner(System.in);
    System.out.println("Enter the amount of KWh units of electricity you have consumed");
    float unit=s.nextInt();
    System.out.println("Your bill is: "+Bill_details(unit));
    s.close();
}
}

```

```

Problems Javadoc Declaration Console × Debug
<terminated> Question04 (4) [Java Application] C:\Program Files\Java\jdk-18.0.2.1\bin\javaw.exe (25-Sep-2022, 3:12:06 pm - 3:12:06 pm)
Enter the amount of KWh units of electricity you have consumed
115
Your bill is: 1225.0

```

```

Problems Javadoc Declaration Console × Debug
<terminated> Question04 (4) [Java Application] C:\Program Files\Java\jdk-18.0.2.1\bin\javaw.exe (25-Sep-2022, 3:12:30 pm - 3:12:30 pm)
Enter the amount of KWh units of electricity you have consumed
250
Your bill is: 3500.0

```

//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.

```

import java.util.Arrays;
import java.util.Scanner;
public class Question05 {

    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();
}
}

```

The screenshot shows a Java IDE with a console window. The console output is as follows:

```

Enter the 5 numbers
5
9
1
12
4
Enter the number you want to search
4
Sorted array is : 1 4 5 9 12
Record found at index of : 1

```

//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.

```

import java.util.Scanner;
public class Question06 {

```

```

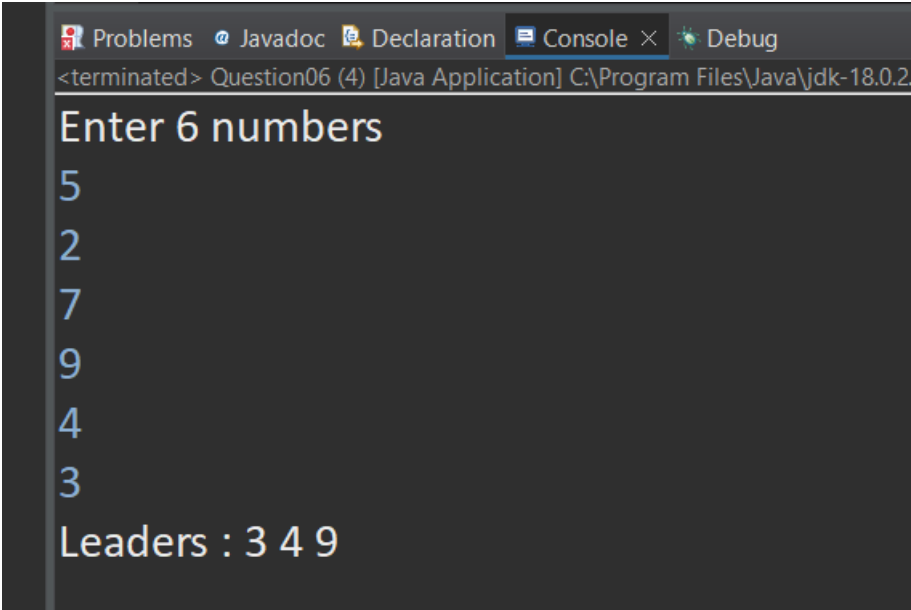
    public static void main(String[] args) {
        Scanner s=new Scanner(System.in);
        int a[]=new int[6];

```

```

        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();
    }
}

```



```

<terminated> Question06 (4) [Java Application] C:\Program Files\Java\jdk-18.0.2
Enter 6 numbers
5
2
7
9
4
3
Leaders : 3 4 9

```

//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.

```

import java.util.Arrays;
import java.util.Scanner;
public class Question07 {

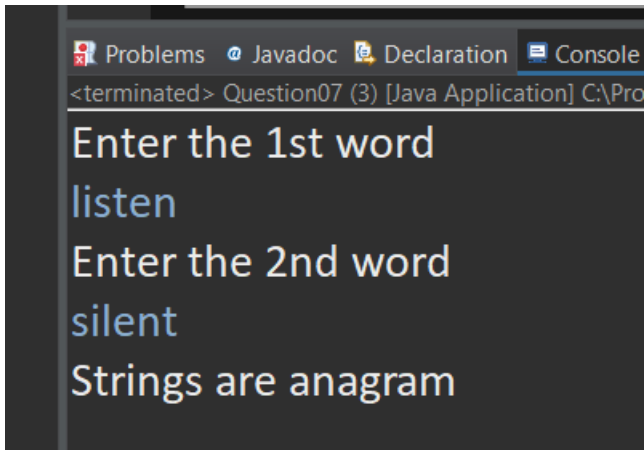
    public static void main(String[] args) {
        Scanner s=new Scanner(System.in);
        System.out.println("Enter the 1st word");
        String a=s.nextLine();
        System.out.println("Enter the 2nd word");
    }
}

```

```

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();
}
}

```



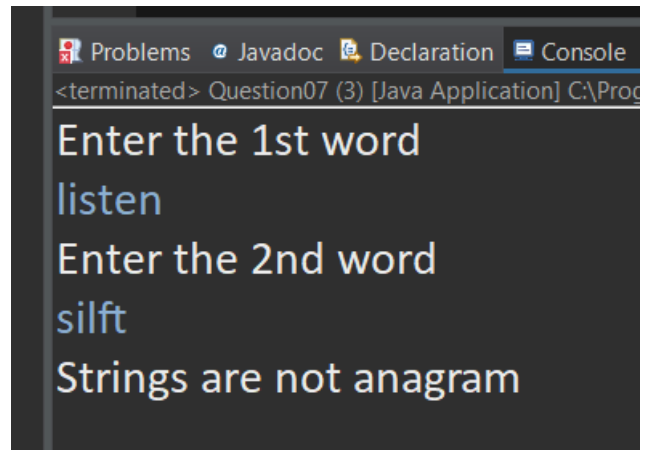
The screenshot shows a Java IDE window with the 'Console' tab active. The text in the console is as follows:

```

Enter the 1st word
listen
Enter the 2nd word
silent
Strings are anagram

```

The IDE title bar shows 'Problems', 'Javadoc', 'Declaration', and 'Console' tabs. The status bar at the bottom indicates '<terminated> Question07 (3) [Java Application] C:\Pro'.



The screenshot shows a Java IDE window with the 'Console' tab active. The text in the console is as follows:

```

Enter the 1st word
listen
Enter the 2nd word
silft
Strings are not anagram

```

The IDE title bar shows 'Problems', 'Javadoc', 'Declaration', and 'Console' tabs. The status bar at the bottom indicates '<terminated> Question07 (3) [Java Application] C:\Pro'.