Q- 1) Write a Java program to check if a given number is positive, negative, or zero.

Program:-

```java
package Packgetype;
import java.util.Scanner;

public class Quiz2Q1 {

    public static void main(String[] args) {
    //Q.1) Write a Java program to check if a given number is positive,
negative, or zero.
        Scanner sc=new Scanner(System.in);

        System.out.print("Enter a Number: ");//Enter a number to check if a
given number is positive, negative, or zero.
        int x=sc.nextInt();

        if(x>0)  //condition if given number is greater than zero so number is
positive
            {
                System.out.println(" Given Number is positive");
            }
        else if(x<0)//condition if given number is smaller than zero so number
is negative
            {
                System.out.println("Given Number is negative");
            }
        else// condition if number is nor a positive or negative than given
number is zero
            {
                System.out.println("Given Number is zero");
            }

    }


}
```
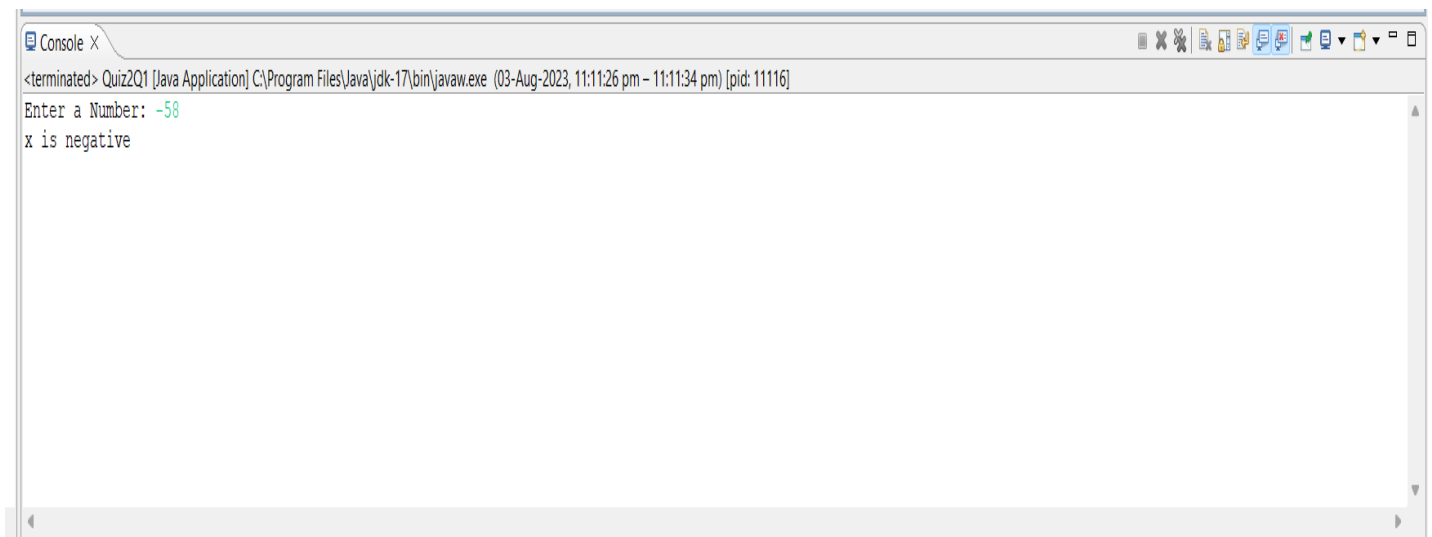
Output:-

Enter a Number: -58
x is negative

Q- 2) Develop a Java program to calculate the grade of a student based on their percentage of marks. Use the following grading scale:

90-100 = A+

75-90 = A

60-74 = B

40 - 60 = C

below 40 = Fail

Program:-

```java
package JavaPrograms;
import java.util.Scanner;
public class Elseifstatement {

//Q.2) Develop a Java program to calculate the grade of a student based on their
percentage of marks. Use the following grading scale:
//
//90-100 = A+
//
//75-90 = A
//
//60-74 = B
//
//40 - 60 = C
//
//below 40 = Fail
    public static void main(String[] args) {

        Scanner sc=new Scanner(System.in);
        System.out.println("\n************* Student Grade card *************");

        System.out.println(" ");

        System.out.print("Enter Your marks out of 100 In Hindi: ");//get marks in
    hindi out of 100 from User
        float hindi=sc.nextFloat();

        System.out.print("Enter Your marks out of 100  In Mathematics: ");//get
    marks in Mathematics out of 100 from User
        float math=sc.nextFloat();

        System.out.print("Enter Your marks out of 100  In English: ");//get marks
    in English out of 100 from User
        float eng=sc.nextFloat();

        System.out.print("Enter Your marks out of 100  In Social Science: "); //get
    marks in Social Science out of 100 from User
        float social=sc.nextFloat();

        System.out.print("Enter Your marks out of 100  In Science: ");//get marks
    in Science out of 100 from User
        float sci=sc.nextFloat();

        float total=hindi+math+eng+social+sci;  //  get Total Marks in all subjects

        float marks=(total/500)*100;  // marks in percentage
```

```java
        System.out.println("Total Marks out of 500 is : "+total); // Printing Total
marks out of 500

        System.out.println("Percentage you got is: "+marks +"%"); //Printing marks
in percentage

        if(marks>=90) {   //condition for grade A+ if percentage is 90-100
               System.out.println("your Grade is A+ ");
        }
        else if(marks>=75) {   //condition for grade A if percentage is 75-90
               System.out.println("your Grade is A ");
        }
        else if(marks>=61) {   //condition for grade B if percentage is 60-74
               System.out.println("your Grade is B ");
        }
        else if(marks>=40) { //condition for grade C if percentage is 40-60
               System.out.println(" your Grade is c ");
        }
        else{     //condition for  Fail if percentage is below 40
               System.out.println(" Fail..Need hardwork");
        }
        System.out.println(" ");
        System.out.println("All the Best!!!!!!!!");
    }

}
```

OUTPUT:-

Console ×

<terminated> Elseifstatement [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (03-Aug-2023, 9:31:20 pm – 9:31:39 pm) [pid: 5048]

```
************* Student Grade card *************

Enter Your marks out of 100 In Hindi: 75
Enter Your marks out of 100  In Mathematics: 70
Enter Your marks out of 100  In English: 48
Enter Your marks out of 100  In Social Science: 56
Enter Your marks out of 100  In Science: 75
Total Marks out of 500 is : 324.0
Percentage you got is: 64.8%
your Grade is B

All the Best!!!!!!!!
```

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Q.3) Create a Java program to check if a given character is a vowel or a consonant.

Program:-

```java
package Packgetype;
import java.util.Scanner;

public class Quiz2Q3 {

    public static void main(String[] args) {
        // Q.3) Create a Java program to check if a given character is a
vowel or a consonant.

        Scanner sc=new Scanner(System.in); //scanner package for user input

         System.out.print("Enter a Character : ");// Get user input as
character

        char vowels=sc.next().charAt(0);

        switch(vowels) {            //Switch case conditional statement to check
whwther the given character is vowel or consonant.

        case 'a','e','i','o','u':     //In case given character is from these
character then character is vowels.

            System.out.println(" Given Character is Vowel.");

        break;

        default:   //If given character is not from 'a','e','i','o','u' these
character then character is consonant.
            System.out.println("Given Character is Consonant." );


        }

    }
}
```
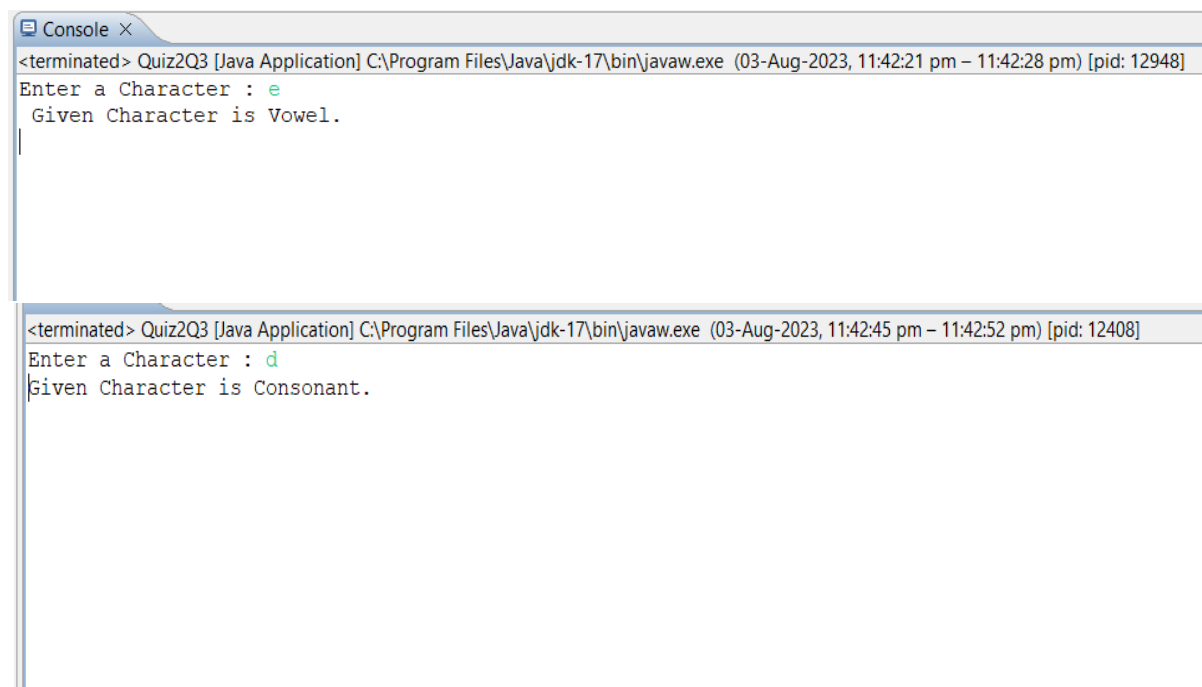
Output:-

Console ✕

\<terminated\> Quiz2Q3 [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (03-Aug-2023, 11:42:21 pm – 11:42:28 pm) [pid: 12948]
```
Enter a Character : e
 Given Character is Vowel.
```

\<terminated\> Quiz2Q3 [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (03-Aug-2023, 11:42:45 pm – 11:42:52 pm) [pid: 12408]
```
Enter a Character : d
Given Character is Consonant.
```