
FACE

Question 1

Write a program to get two integers n1 and n2 from the user and write a program to relate 2 integers as equal to, less than or greater than..

Sample Input:

6

8

Sample Output:

6 is less than 8

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```
1  import java.util.Scanner;
2  class Main
3  {
4      public static void main(String args[])
5      {
6        Scanner obj = new Scanner(System.in);
7        int n1 = obj.nextInt();  //n1-number 1
8        int n2 = obj.nextInt();  //n2-number 2
9        if(n1 == n2)
10         System.out.println(n1+" and "+n2+" are equal");
11       else
12       {
13         if(n1>n2)
14           System.out.println(n1+" greater than "+n2);
15         else
16           System.out.println(n1+" less than "+n2);
17       }
18     }
19 }
20
21
22
```

Question 2

Write a program to check whether the given character is vowel or consonant or Not an alphabet.

Sample Input :

e

b

$

Sample Output :

Vowel

Consonant

Not an alphabet

FACE

```
1  import java.util.Scanner;
2  class Main
3  {
4      public static void main(String args[])
5      {
6        Scanner obj = new Scanner(System.in);
7        char input = obj.next().charAt(0);
8        if(input >='a' && input <= 'z' || input >='A' && input <= 'Z')
9        {
10         if(input =='a'|| input =='e'||input=='i'||input=='o'||input=='u'||
11            input =='A'|| input =='E'||input=='I'||input=='O'||input=='U')
12           System.out.println("Vowel");
13         else
14           System.out.println("Consonant");
15       }
16       else
17         System.out.println("Not an alphabet");
18     }
19 }
20
21
22
```

Question 3

The newly appointed Vice-Chancellor of Anna University wanted to create an automated grading system for the students to check their grade. When a student enters a mark, the grading system displays the corresponding grade. Write a program to solve the given problem. The grades for marks 100 - S, 90-99 is A, 80-89 is B, 70-79 is C, 60-69 is D, 50-59 is E and less than 50 is F.

Sample Input:

78

Sample Output:

C

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```
1   import java.util.Scanner;
2   class Main
3   {
4       public static void main(String args[])
5       {
6         Scanner obj = new Scanner(System.in);
7         int mark = obj.nextInt();
8         if(mark == 100)
9           System.out.println("S");
10        else if(mark>=90 && mark <=99)
11          System.out.println("A");
12        else if(mark>=80 && mark <=89)
13          System.out.println("B");
14        else if(mark>=70 && mark <=79)
15          System.out.println("C");
16        else if(mark>=60 && mark <=69)
17          System.out.println("D");
18        else if(mark>=50 && mark <=59)
19          System.out.println("E");
20        else
21          System.out.println("F");
22      }
```

Question 4

A fruit seller buys a dozen of banana at Rs.X. He sells 1 banana at Rs.Y. Write a program to determine the profit or loss in Rs. for the fruitseller.

Sample Input:

60
4

Sample Output:

Loss : Rs.12.00

FACE

```
1  import java.util.Scanner;
2  class Main
3  {
4      public static void main(String args[])
5      {
6        Scanner obj = new Scanner(System.in);
7        float total_cost = obj.nextFloat();//dozen of Banana total cost
8        float sold_cost = obj.nextFloat();//1 banana selling cost
9        float selling_price = 12*sold_cost;
10
11       if(total_cost > selling_price)
12         System.out.printf("Loss : Rs.%.2f",(total_cost-selling_price));
13
14       else if(total_cost < selling_price)
15          System.out.printf("profit : Rs.%.2f",(selling_price-total_cost));
16
17       else
18         System.out.println("No profit nor loss");
19     }
20 }
21
22
```

Question 5

Ask a user for their birth year encoded as two digits (like "62") and for the current year, also encoded as two digits (like "99"). Write a program to find the users current age in years.

Sample Input:

```
62
00
```

Sample Output:

```
38
```

FACE

```
1  import java.util.Scanner;
2  class Main
3  {
4      public static void main(String args[])
5      {
6        Scanner obj  =  new Scanner(System.in);
7        int by = obj.nextInt();//by-Birth Year
8        int cy = obj.nextInt();//cy- Current Year
9        if(cy>by)
10         System.out.println(cy-by);
11       else
12         System.out.println(100-(by-cy));
13     }
14 }
15
16
17
18
19
20
21
22
```

Question 6

There are 3 labs in the CSE department are L1, L2, and L3 with a seating capacity of x, y, and z. A single lab needs to be allocated to a class of 'n' students. How many of the 3 labs can accommodate 'n' students?

Sample Input:

30
40
20
25

Sample Output:

2

FACE

```
1  import java.util.Scanner;
2  class Main
3  {
4      public static void main(String args[])
5      {
6          Scanner obj = new Scanner(System.in);
7        int x = obj.nextInt();
8        int y = obj.nextInt();
9        int z = obj.nextInt();
10       int n = obj.nextInt();
11       int count = 0;
12       if(x>=n)
13         count++;
14       if(y>=n)
15         count++;
16       if(z>=n)
17         count++;
18       System.out.println(count);
19     }
20 }
21
22
```

Question 7

Dora is interested so much in gardening and she plants more trees in her garden. She plants trees in a rectangular fashion with the order of rows and columns and numbered the trees in row-wise order. She planted the mango tree only in a 1st row, 1st column and last column. So given the tree number, your task is to find whether the given tree is a mango tree or not? Write a program to check whether the given number is a mango tree or not.

Sample Input:

```
5
5
11
```

Sample Output:

```
Yes
```

FACE

```
1  import java.util.Scanner;
2  class Main
3  {
4
5       public static void main(String args[])
6       {
7            Scanner s = new Scanner(System.in);
8        int rows = s.nextInt();
9
10       int columns = s.nextInt();
11       int tree_no = s.nextInt();
12       if((tree_no<=columns)||(tree_no%columns == 0)||
13          ((tree_no - 1)%columns==0))
14         System.out.println("Yes");
15       else
16
17          System.out.println("No");
18      }
19 }
20
21
22
```

Question 8

Write a program to calculate the hotel tariff. The room rent is 20% high during peak seasons [April-June, November-December]. Note: Use the switch construct.

Sample Input:

```
3
1500
2
```

Sample Output:

```
3600.00
```

FACE

```
import java.util.Scanner;
class Main
{
public static void main(String args[])
{
 Scanner s = new Scanner(System.in);
 int month = s.nextInt();
 float rent = s.nextInt();
 int day = s.nextInt();
 switch(month)
 {
    case 1:
    case 2:
    case 3:
    case 7:
    case 8:
    case 9:
    case 10:
    System.out.printf("%.2f",rent*day);
         break;


case 4:
case 5:
case 6:
case 11:
case 12:

System.out.printf("%.2f",(rent+(0.2*rent))*
day);
   break;
default:
     System.out.println("Invalid Input");
      break;
     }
  }
}
```

Question 9

A microwave oven manufacturer recommends that when heating two items, add 50% to the heating time, and when heating three items double the heating time. Heating more than three items at once is not recommended. Write a program to find out the recommended heating time.

Sample Input:

2
5.0

Sample Output:

7.50

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```
1   import java.util.Scanner;
2   class Main
3   {
4         public static void main(String args[])
5         {
6                Scanner s = new Scanner(System.in);
7        int item = s.nextInt();
8        float ht = s.nextFloat();//ht - heating time
9        switch(item){
10         case 1:
11           System.out.println(ht);
12           break;
13         case 2:
14           System.out.println((ht/2)+ht);
15           break;
16         case 3:
17           System.out.println(2*ht);
18           break;
19         default:
20           System.out.println("Number of items is more");
21           break;
22       }
         }
}
```

Question 10

Ask the customer's age and for the time on a 24-hour clock (where noon is 12.00 and 4:30 PM is 16.30). The show timings are 10.15, 13.30, 18.00 and 22.00. The normal adult ticket price is $8.00, however, the adult matinee price is $5.00. Adults are those over 13 years. The normal children's ticket price is $4.00, however, the children's matinee price is $2.00. Write a program that determines the price of a movie ticket

Sample Input:

16
10.15

Sample Output:

$8.00

FACE

```
1  import java.util.Scanner;
2  class Main
3  {
4     public static void main(String args[]){
5        Scanner s = new Scanner(System.in);
6        int age = s.nextInt();
7        float st = s.nextFloat();//st - Show timing
8        if(age > 13){
9          if(st >= 13.30 && st <= 17.59)//matinee show timing 13.30 to 17.59
10             System.out.println("$5.00");//evening show starts at 18.00
11         else
12           System.out.println("$8.00");
13       }
14       else
15          {
16         if(st >= 13.30 && st <= 17.59)//matinee show timing 13.30 to 17.59
17            System.out.println("$2.00");//evening show starts at 18.00
18         else
19           System.out.println("$4.00");
20       }
21    }
22 }
```

THANK YOU

FACE