1. Write a program to calculate the fuel consumption of your vehicle.

The program should ask the user to enter the quantity of petrol to fill up the tank and the distance covered till the tank goes dry.

Calculate the fuel consumption and display it in the format (liters per 100 kilometers).

Convert the same result to the U.S. style of miles per gallon and display the result. If the quantity or distance is zero or negative display "<respective\_input> is an Invalid Input".

[Note: The US approach of fuel consumption calculation (distance / fuel) is the inverse of the European approach (fuel / distance ). Also note that 1 kilometer is 0.6214 miles, and 1 liter is 0.2642 gallons.]

The result should be with two decimal place.

To get two decimal place refer the below-mentioned print statement :

float cost=670.23;

**Sample Input 1:**

Enter the no of liters to fill the tank

20

Enter the distance covered

150

**Sample Output 1:**

Liters/100KM

13.33

Miles/gallons

17.64

**Explanation:**

For 150 KM fuel consumption is 20 liters,

Then for 100 KM fuel consumption would be (20/150)\*100=13.33,

Distance is given in KM, we have to convert it to miles (150\*0.6214)=93.21,

Fuel consumption is given in liters, we have to convert it to gallons (20\*0.2642)=5.284,

Then find (miles/gallons)=(93.21/5.284)=17.64

**Sample Input 2:**

Enter the no of liters to fill the tank

-5

**Sample Output 2:**

-5 is an Invalid Input  
  
**Sample Input 3:**

Enter the no of liters to fill the tank

25

Enter the distance covered

-21

**Sample Output 3:**

-21 is an Invalid Input

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2. Help Mr.Ben who is a programmer, in developing a registration form on console. Customers will not just input data, but also view the details once he/she finishes the registration.

**Sample Input 1:**

Enter your name:Jany

Enter age:25

Enter gender:Female

Hailing from:Mexico

**Sample Output 1:**

Welcome, Jany!

Age:25

Gender:Female

City:Mexico

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3. Rohan wants a magic board, which displays a character for a corresponding number for his science exhibition. Help him to develop such application.

For example when the digits 65,66,67,68 are entered, the alphabet ABCD are to be displayed.

[Assume the number of inputs should be always 4 ]

**Sample Input 1:**  
Enter the digits:  
65  
66  
67  
68

**Sample Output 1:**  
65-A  
66-B  
67-C  
68-D

**Sample Input 2:**Enter the digits:  
115  
116  
101  
112

**Sample Output 2:**

115-s  
116-t  
101-e  
112-p

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4. Reaya's teacher has asked her to prepare well for the lesson on seasons. When her teacher tells a month, she needs to say the season corresponding to that month. Write a program to solve the above task.

* Spring - March to May,
* Summer - June to August,
* Autumn - September to November and,
* Winter - December to February.

Month should be in the range 1 to 12.  If not the output should be "Invalid month".

**Sample Input 1:**  
Enter the month:11

**Sample Output 1:**Season:Autumn

**Sample Input 2:**  
Enter the month:13

**Sample Output 2:**Invalid month

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5 William planned to choose a four digit lucky number for his car. His lucky numbers are 3,5 and 7. Help him find the number, whose sum is divisible by  3 or 5 or 7.  
Provide a valid car number, Fails to provide a valid input then display that number is not a valid car number.

Note : The input other than 4 digit positive number[includes negative and 0] is considered as invalid.

**Refer the samples, to read and display the data.**

**Sample Input 1:**  
Enter the car no:1234

**Sample Output 1:**  
Lucky Number

**Sample Input 2:**

Enter the car no:1214

**Sample Output 2:**

Sorry its not my lucky number

**Sample Input 3:**

Enter the car no:14

**Sample Output 3:**

14 is not a valid car number

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6. . To speed up his composition of generating unpredictable rhythms, A.R.Rahman wants the list of prime numbers available in a range of numbers.Can you help him out?

Write a java program to print all prime numbers in the interval [a,b] (a and b, both inclusive).

**Note**

* Input 1 should be lesser than Input 2. Both the inputs should be positive.
* Range must always be greater than zero.
* If any of the condition mentioned above fails, then display "Provide valid input"
* Use a minimum of one for loop and one while loop

**Sample Input 1:**

2

15

**Sample Output 1:**

2 3 5 7 11 13

**Sample Input 2:**

8

5

**Sample Output 2:**

Provide valid input

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7. George and  Tintin plays  by  telling numbers.  George says a number to Tintin.  Tintin should first reverse the number and check if it is same as the original.  If yes,  Tintin should say “Palindrome”.  If not, he should say “Not a Palindrome”.  If the number is negative, print “Invalid Input”.  Help Tintin by writing a program.

Sample Input 1 :

21212

Sample Output 1 :

Palindrome

Sample Input 2 :

6186

Sample Output 2 :

Not a Palindrome