

Assignment -1

Problem-1:

If your friend wants to go to a pub, and that pub allows only if the person is above 20, check whether he is allowed or not.

Example:

Input: age

Output: “your age is {age}, you are allowed” or “your age is {age}, you are not allowed”

Problem-2:

Your friend recently came to the USA from India and is confused about temperature measurement as his device shows temperature in Fahrenheit. Now help your friend by writing a code that converts temperature from Fahrenheit to Celsius and also tell him not to go out if the temperature is more than 40, to wear warm clothes if the temperature is less than 7, and also ask him to plan a trip if the temperature is between 15 to 20.

Hint: $\text{Fahrenheit} = (9/5) * \text{Celsius} + 32$

Problem-3:

Take 3 numbers as input, find which one is the smallest number, and print the number.

Problem-4:

Write a code that takes input as a day in a week, and outputs the day number. The week starts on Sunday and ends on Saturday and You can consider Sunday as 1

Example: Input: Wednesday Output: Wednesday is 4 day of the week

Problem-5:

Using while loop print, the square of 1 to n numbers, write a function such that it takes n as the input.

Example:

Input: 5

Output: 1,4,9,16,25

Problem-6:

Print the below given pattern.

```
*  
  
**  
  
***  
  
****  
  
*****
```

Problem-7:

Take any list containing int or float of your own, as input and find,

- (i) Sum of all the elements in the list.
- (ii) Average of the list.
- (iii) Cube of all the elements in the list
- (iv) Product of all the elements in the list.

Problem-8:

Write a program that takes an integer LIST as input and prints the number of odd numbers and even numbers:

Example: Input: [1,2,44,7,9,3,20]

Output: Even- 3, Odd- 4

Problem -9:

Build a code to check whether the entered password is valid or not.

Validity:

Password should contain min of 20 characters.

Min of one upper case

Min of one lower case

At least one numeric value

Min of one special character from these “@”, “#”, “\$”, “_”, “&”

Problem-10:

Take any date in “DDMMYYYY” format and build an age calculator.

Example:

Input: 24071997

Output: Age is 15 days, 9 months, 26 years