DAY 2 C PROGRAMMING PRACTICE

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1.

Questions
CEQ22.

Find the year of the given date is leap year or not

Sample Input:
Enter Date: 04/11/1947

Sample Output:
Given year is Non Leap Year

C Run Save

```c
#include<stdio.h>
int main()
{
 int year;
 printf("enter a year to check if it is leap year\n");
 scanf("%d",&year);
 if(year%400==0)
 printf("%d is a leap year.\n",year);
 else if(year%100==0)
 printf("%d is not a leap year.\n",year);
 else if(year%4==0)
 printf("%d is a leap year.\n",year);
 else
 printf("%d is a not leap year.\n",year);
 return 0;
}
```

1947

```
enter a year to check if it is leap year
1947 is a not leap year.
```

2.

Questions
CEQ20.

Find the factorial of n?

Sample Input:
N = 4

Sample Output:
4 Factorial = 24

C Run Save

```c
#include<stdio.h>
int main(){
    int n, factorial = 1;
    printf("enter a positive integer:");
    scanf("%d", &n);
    for (int i =1; i <= n; ++i) {
        factorial*=i;
    }
    printf("factorial of %d = %d\n",n,factorial);
    return 0;
}
```

4

enter a positive integer:factorial of 525 = 0

3.

Questions
CEQ23.

Find the number of factors for the given number

Sample Input:
Given number: 100

Sample Output:
Number of factors = 9

C | Run | Save

```c
#include<stdio.h>
int main()
{
int num;
printf("\nEnter the number:");
scanf("%d",&num);
int i,count = 0;
printf("\nThe factors of %d are: ", num);
for(i = 1;i <= num; i++)
{
if(num % i ==0)
{
++count;
printf("%d ",i);
}
}
printf("\n\nTotal factors of %d : %d\n",num,count);
}
```

```
100
```

```
Enter the number:
The factors of 100 are: 1 2 4 5 10 20 25 50
100

Total factors of 100 : 9
```

4.

Questions
CEQ2.

Write a program to check the entered user name is valid or not. Get both the inputs from the u

Sample Input:
Enter the user name: Saveetha@789
Reenter the user name: Saveetha@123

Sample Output:
User name is Invalid

C | Run | Save

```c
#include<stdio.h>
#include<string.h>
int main()
{
char str1[10],str2[10];
printf("Enter the username:\n");
scanf("%s",&str2);
printf("Reenter the username:\n");
scanf("%s",&str2);
if(strcmp(str1,str2)==0){
printf("The username is valid");
}else{
printf("The username is invalid");
}
return 0;
}
```

Saveetha@789
Saveetha@123

Enter the username:
Reenter the username:
The username is valid

5.

Questions
CEQ25.

Write a program to print the number of vowels in the given statement?

Sample Input:
Saveetha School of Engineering

Sample Output:
Number o vowels = 12

C | Run | Save

```c
#include<stdio.h>
int main()
{
  int c = 0, count = 0;
  char s[1000];
  printf("Input a string\n");
  gets(s);
  while (s[c] != '\0'){
    if (s[c] == 'a' || s[c] == 'A' || s[c] == 'e' || s[c] =='E' || s[c] == 'i' || s[c] == 'I' ||
    s[c] == 'o' || s[c] == 'O' || s[c] == 'u' || s[c] == 'U')
      count++;
     c++;
 }
printf("numbers of vowels in the string: %d",count);
return 0;
}
```

Saveetha School of Engineering

```
Input a string
numbers of vowels in the string: 12
```

6.

Questions
CEQ27.

Write a program to print consonants and vowels separately in the given word.

Sample Input:
Given Word: Engineering

Sample Output:
Consonants: n g n r n g
Vowels: e i e ei

Run Save

```c
#include<stdio.h>
#include<string.h>
#include<ctype.h>
int main() {
char word[100];
int len, i;
printf("enter a word:");
scanf("%s",word);
len=strlen(word);
printf("consonants: ");

for(i=0;i<len;i++) {
if(isalpha(word[i]) && !strchr("AEIOUaeiou",word[i])) {
printf("%c",word[i]);
}
}
printf("\nvowels: ");
for(i=0;i<len;i++) {
if (isalpha(word[i]) && strchr("AEIOUaeiou",word[i])) {
printf("%c",word[i]);
}
}
return 0;
}
```

knowledge

```
enter a word:consonants: knwldg
vowels: oee
```

7.

Questions
CEQ26.

Write a program to print hollow square symbol pattern?
Get the symbol from user.

Sample Input: #

Output:
```
# # # # #
#       #
#       #
# # # # #
```

```c
#include <stdio.h>
int main()
{
int side,i,j;
printf("enter side of square\n");
scanf("%d",&side);
for (i=0;i<side;i++)
{
for (j=0;j<side;j++)
{
if (i==0||i==side-1||j==0||j==side-1)
printf(" # ");
else
printf("    ");
}
printf("\n");
}
return 0;
}
```

4

```
enter side of square
# # # #
#     #
#     #
# # # #
```

8.

Questions
CEQ24.

Write a program to print the given number is Perfect number or not?

Sample Input:
Given Number: 6

Sample Output:
It's a Perfect Number

C Run Save

```c
#include<stdio.h>
int main()
{
int num,sum=0.i;
printf("enter a number:");
scanf("%d",&num);
for(int i=1;i<num;i++)
{
if(num%i==0)
{
sum+=i;
}
}
if(sum==num)
{
printf("%d" "is a perfect number.",num);
}
else{
printf("%d" "is not a perfect number.",num);
}
return 0;
}
```

87

enter a number:87is not a perfect number.

9.

Questions
CEQ19.

Find the Mean, Median, Mode of the array of numbers?

Sample Input;:
Array of elements = {16, 18, 27, 16, 23, 21, 19}

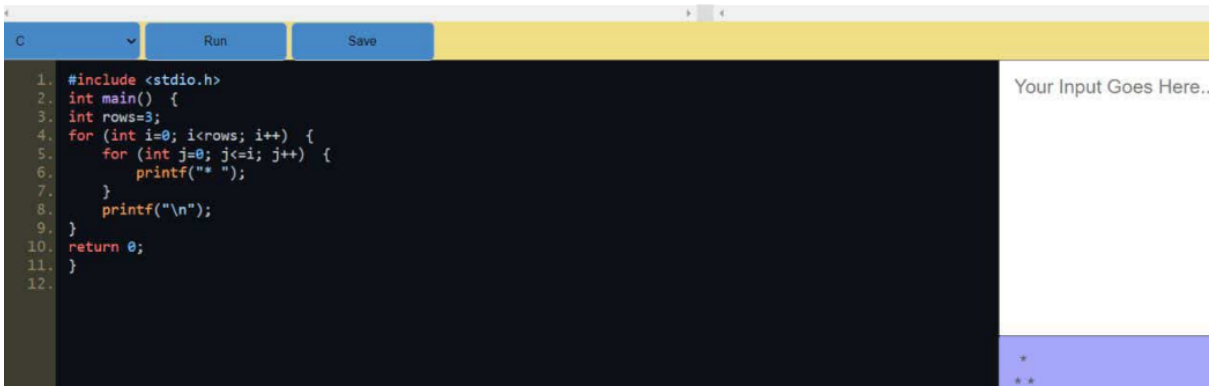
Sample Output:
Mean = 20
Median = 19
Mode = 16

```
16
18
```

```
Enter the size of array:
Enter the array elements:
Mean =64857720.00
```

10.

Questions
CEQ21.

Write a program to print the following pattern

Sample Input:
Enter the Character to be printed: %
Max Number of time printed: 3
%
% %
% % %