

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

```
1. #include<stdio.h>
2. int main()
3. {
4.     int c = 0, count = 0;
5.     char s[1000];
6.     printf("Input a string\n");
7.     gets(s);
8.     while (s[c] != '\0'){
9.         if (s[c] == 'a' || s[c] == 'A' || s[c] == 'e' || s[c] == 'E' || s[c] == 'i' || s[c] == 'I' ||
10.            s[c] == 'o' || s[c] == 'O' || s[c] == 'u' || s[c] == 'U')
11.             count++;
12.         c++;
13.     }
14.     printf("numbers of vowels in the string: %d",count);
15.     return 0;
16. }
```

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

```
1. #include<stdio.h>
2. #include<string.h>
3. #include<ctype.h>
4. int main() {
5.     char word[100];
6.     int len, i;
7.     printf("enter a word:");
8.     scanf("%s",word);
9.     len=strlen(word);
10.    printf("consonants: ");
11.
12.    for(i=0;i<len;i++) {
13.        if(isalpha(word[i]) && !strchr("AEIOUaeiou",word[i])) {
14.            printf("%c",word[i]);
15.        }
16.    }
17.    printf("\nvowels: ");
18.    for(i=0;i<len;i++) {
19.        if (isalpha(word[i]) && strchr("AEIOUaeiou",word[i])) {
20.            printf("%c",word[i]);
21.        }
22.    }
23.    return 0;
24. }
```

knowledge

enter a word:consonants: knrwdg  
vowels: oee

## 7.

### Questions

CEQ28.

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

Sample Input: #

Output:

```
# # # # #
#       #
#       #
#       #
# # # # #
```

```
1.  #include <stdio.h>
2.  int main()
3.  {
4.  int side,i,j;
5.  printf("enter side of square\n");
6.  scanf("%d",&side);
7.  for (i=0;i<side;i++)
8.  {
9.  for (j=0;j<side;j++)
10. {
11. if (i==0||i==side-1||j==0||j==side-1)
12. printf(" # ");
13. else
14. printf("   ");
15. }
16. printf("\n");
17. }
18. return 0;
19. }
```

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

1.

## Questions

GEQ22.

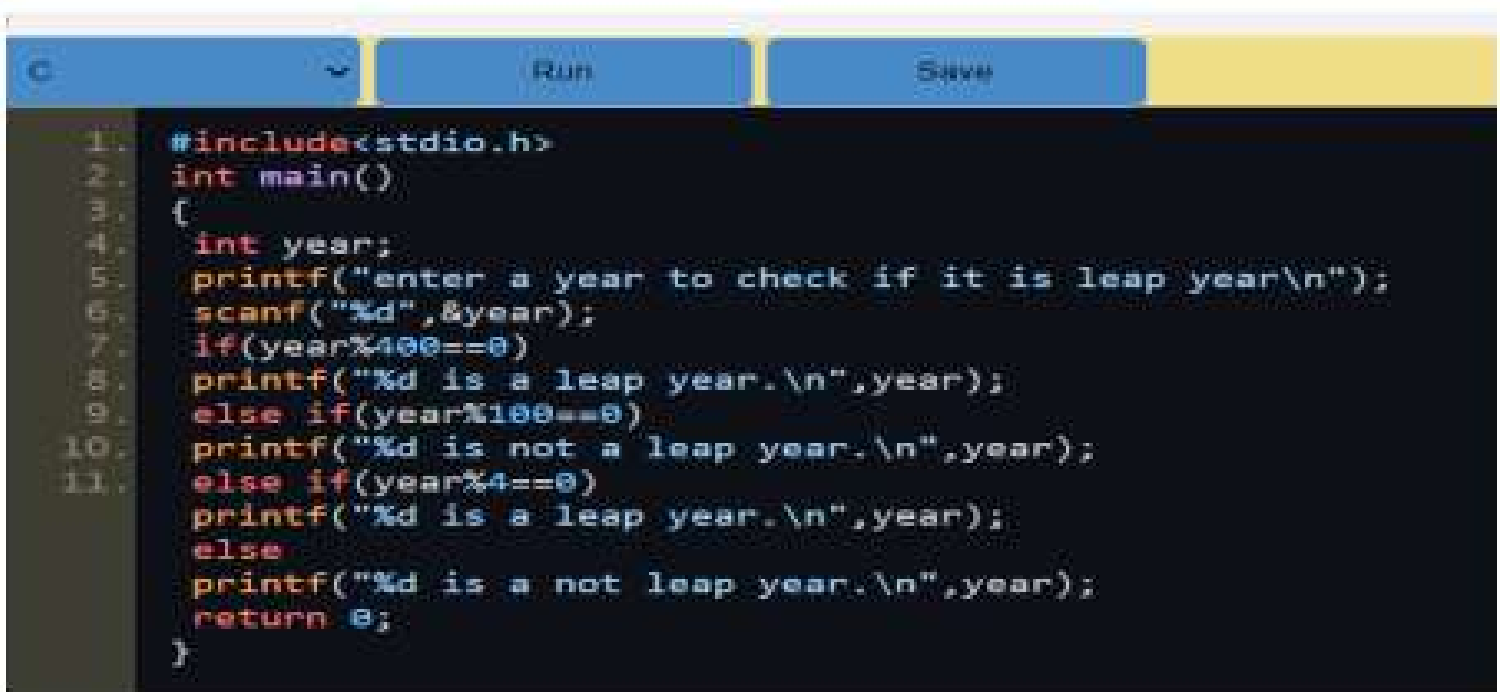
Find the year of the given date is leap year or not

Sample Input:

Enter Date: 04/11/1947

Sample Output:

Given year is Non Leap Year



```
1. #include<stdio.h>
2. int main()
3. {
4.     int year;
5.     printf("enter a year to check if it is leap year\n");
6.     scanf("%d",&year);
7.     if(year%400==0)
8.         printf("%d is a leap year.\n",year);
9.     else if(year%100==0)
10.        printf("%d is not a leap year.\n",year);
11.     else if(year%4==0)
12.        printf("%d is a leap year.\n",year);
13.     else
14.        printf("%d is a not leap year.\n",year);
15.     return 0;
16. }
```

1947

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

2.

### Questions

CEQ20.

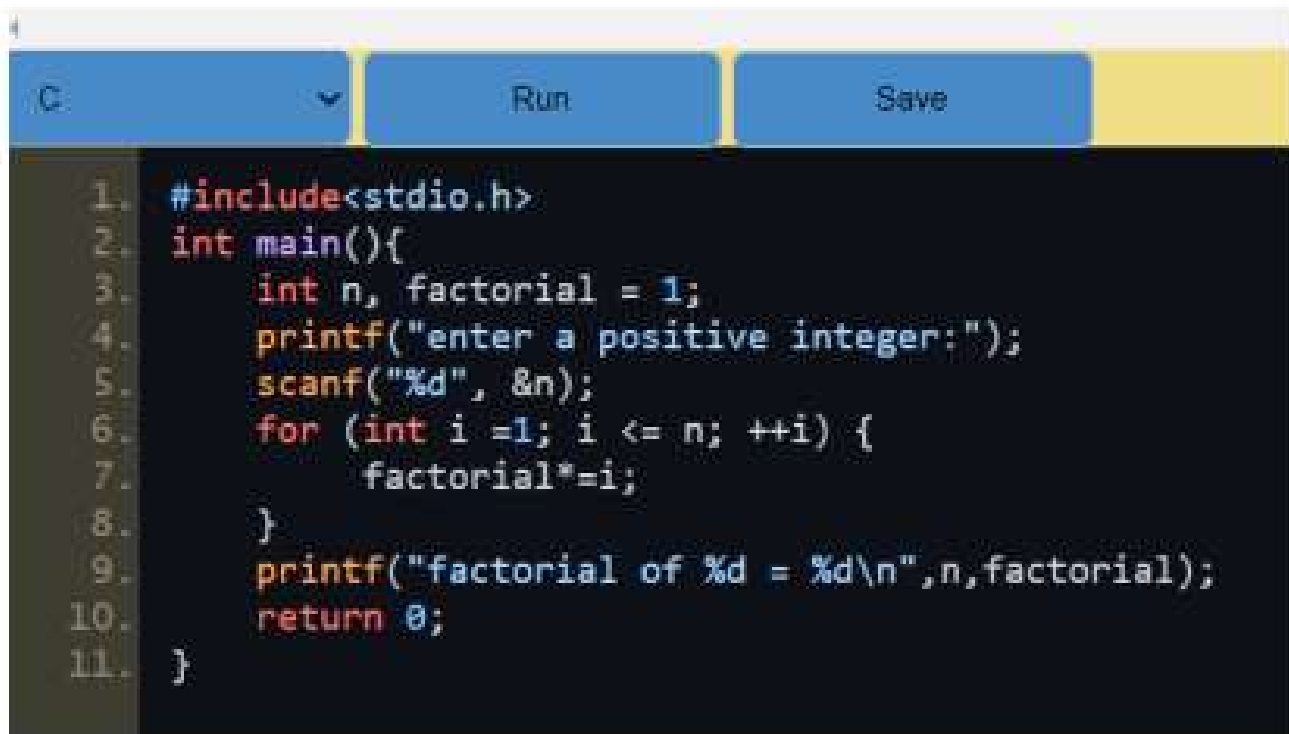
Find the factorial of n?

Sample Input:

N = 4

Sample Output:

4 Factorial = 24



```
1. #include<stdio.h>
2. int main(){
3.     int n, factorial = 1;
4.     printf("enter a positive integer:");
5.     scanf("%d", &n);
6.     for (int i =1; i <= n; ++i) {
7.         factorial*=i;
8.     }
9.     printf("factorial of %d = %d\n",n,factorial);
10.    return 0;
11. }
```

4

enter a positive integer:factorial of 525 = 0

### 3.

#### Questions

CEQ23.

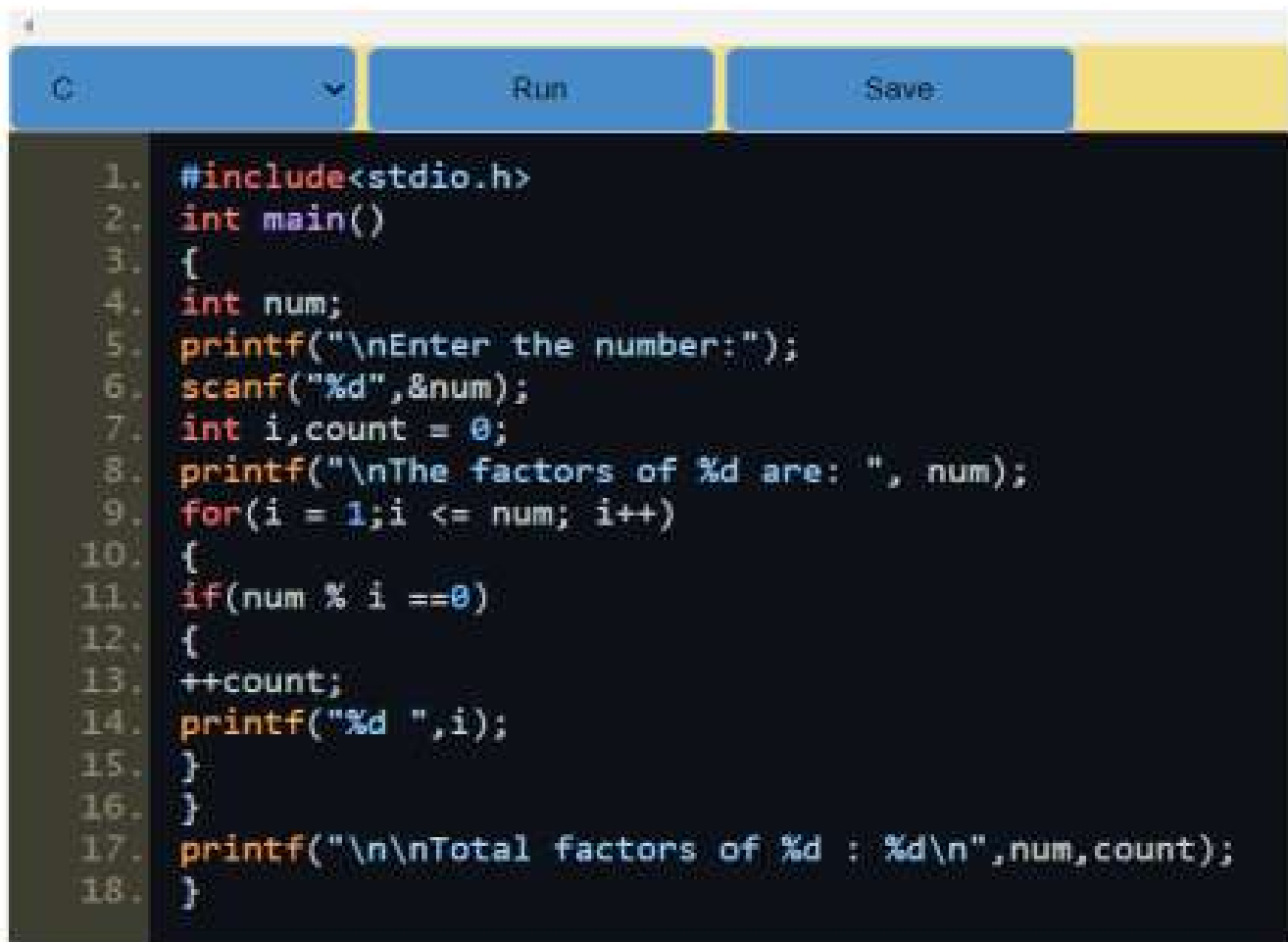
Find the number of factors for the given number.

Sample Input:

Given number: 100

Sample Output:

Number of factors = 9



```
1. #include<stdio.h>
2. int main()
3. {
4.     int num;
5.     printf("\nEnter the number:");
6.     scanf("%d",&num);
7.     int i,count = 0;
8.     printf("\nThe factors of %d are: ", num);
9.     for(i = 1;i <= num; i++)
10.    {
11.        if(num % i ==0)
12.        {
13.            ++count;
14.            printf("%d ",i);
15.        }
16.    }
17.    printf("\n\nTotal factors of %d : %d\n",num,count);
18. }
```

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

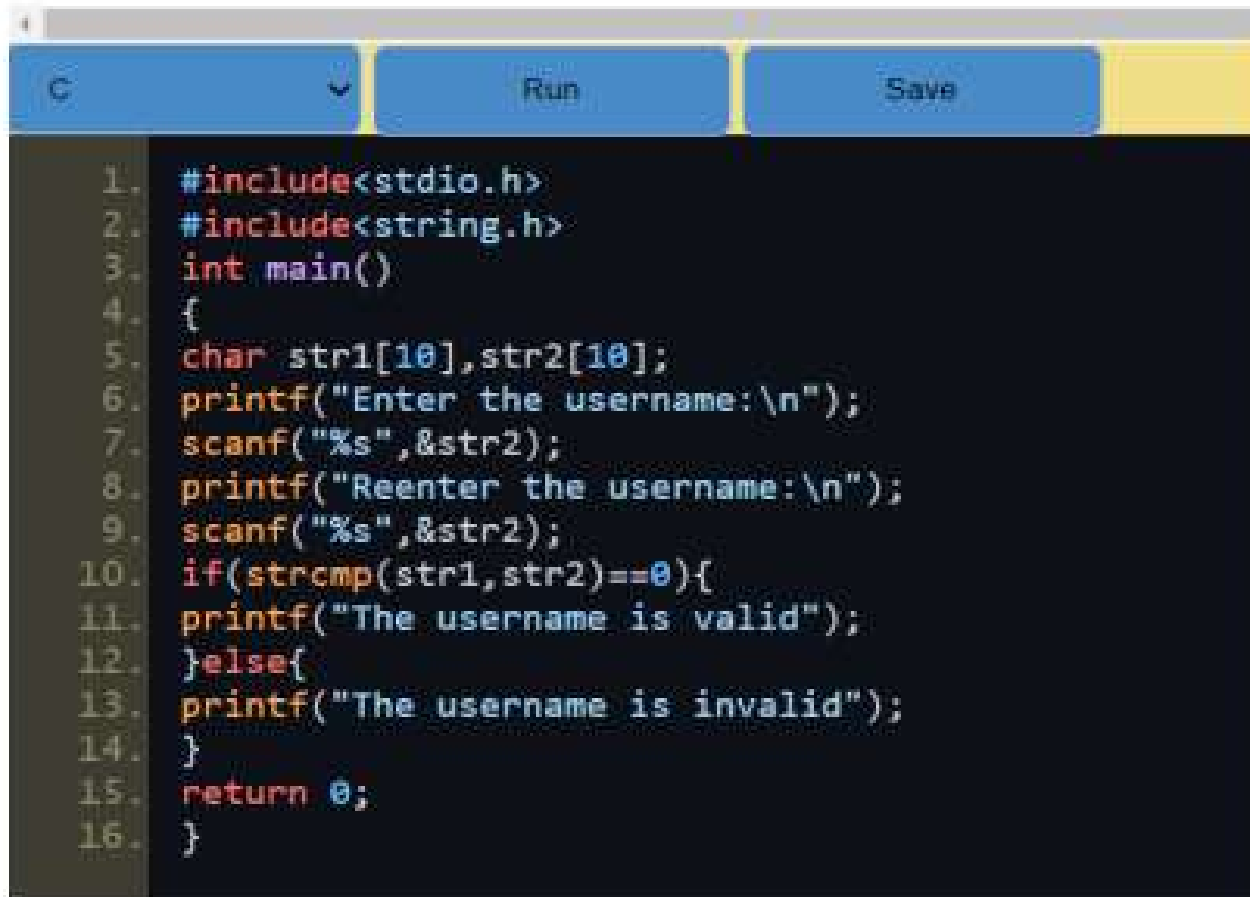
Sample Input:

Enter the user name: Saveetha@789

Reenter the user name: Saveetha@123

Sample Output:

User name is Invalid



```
1. #include<stdio.h>
2. #include<string.h>
3. int main()
4. {
5.     char str1[10],str2[10];
6.     printf("Enter the username:\n");
7.     scanf("%s",&str2);
8.     printf("Reenter the username:\n");
9.     scanf("%s",&str2);
10.    if(strcmp(str1,str2)==0){
11.        printf("The username is valid");
12.    }else{
13.        printf("The username is invalid");
14.    }
15.    return 0;
16. }
```

Saveetha@789

Saveetha@123

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

10.

### Questions

CEQ21.

Write a program to print the following pattern

Sample Input:

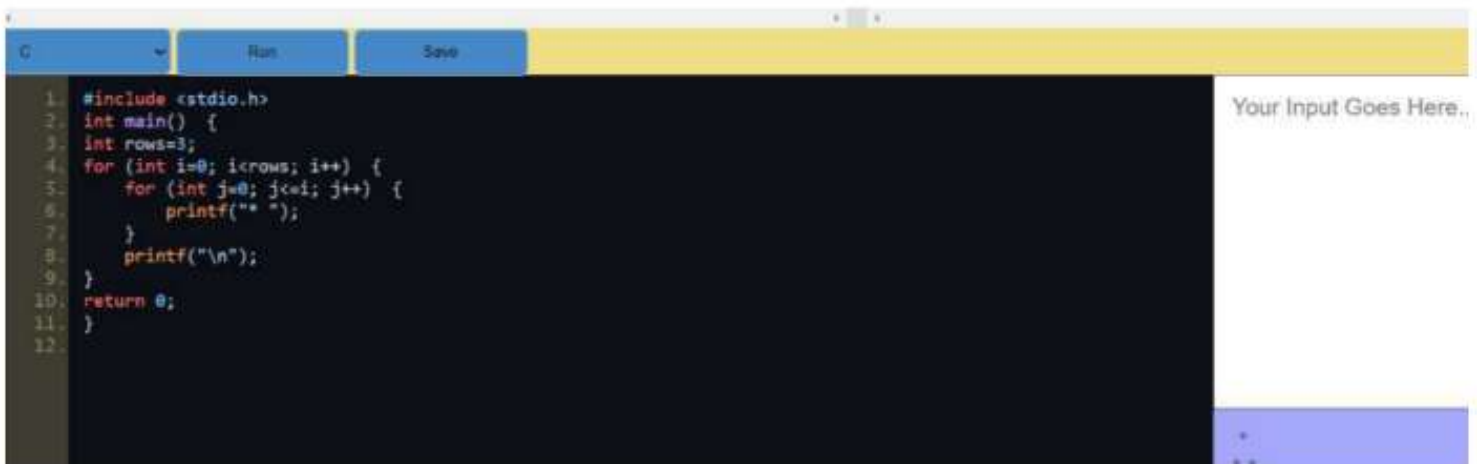
Enter the Character to be printed: %

Max Number of time printed: 3

%

% %

% % %



The screenshot shows a C programming IDE with a dark theme. The code editor on the left contains the following C program:

```
1. #include <stdio.h>
2. int main() {
3.     int rows=3;
4.     for (int i=0; i<rows; i++) {
5.         for (int j=0; j<=i; j++) {
6.             printf("* ");
7.         }
8.         printf("\n");
9.     }
10.    return 0;
11. }
12.
```

On the right side of the IDE, there is a light blue area labeled "Your Input Goes Here..". At the bottom right, there is a small blue box containing the text "C" and "Run".



**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
1. #include<stdio.h>
2. int main()
3. {
4.     int num,sum=0,i;
5.     printf("enter a number:");
6.     scanf("%d",&num);
7.     for(int i=1;i<num;i++)
8.     {
9.         if(num%i==0)
10.        {
11.            sum+=i;
12.        }
13.    }
14.    if(sum==num)
15.    {
16.        printf("%d" "is a perfect number.",num);
17.    }
18.    else{
19.        printf("%d" "is not a perfect number.",num);
20.    }
21.    return 0;
22. }
```

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

```
1. #include<stdio.h>
2. #include<stdlib.h>
3. int main(){
4.     int n,i,j,temp,sum=0,mode=0,count=0;
5.
6.     float mean, median;
7.     printf("Enter the size of array:\n");
8.     scanf("%d",&n);
9.     int *arr=(int*) malloc(n*sizeof(int));
10.    printf("Enter the array elements:\n");
11.    for(i=0;i<n;i++)
12.    {
13.        scanf("%d",&arr[i]);
14.        sum+=arr[i];
15.    }
16.    // mean
17.    mean=(float)sum/n;
```