

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. TRY
2. MEDIAN
3. ONE
4. KNOWLEDGE
5. EDUCATION

CE021  
CE021  
CE022  
CE023  
CE024  
CE025  
CE026  
CE027

C

Run

Save

Logout

```
1. #include<stdio.h>
2. int main()
3. {
4.     char line[150];
5.     int vowels,consonants;
6.     vowels=consonants=0;
7.     printf("enter given word:");
8.     fgets(line,sizeof(line),stdin);
9.     for(int i=0;line[i]!='\0';++i)
10.    {
11.        if(line[i]=='a' || line[i]=='e' || line[i]=='i' || line[i]=='o' || line[i]=='u' ||
12.           line[i]=='A' || line[i]=='E' || line[i]=='I' || line[i]=='O' || line[i]=='U')
13.        {
14.            ++vowels;
15.        }
16.        else if((line[i]>='a' && line[i]<='z'))
17.        {
18.            ++consonants;
19.        }
20.    }
21.    printf("vowels:%d",vowels);
22.    printf("\nconsonants:%d",consonants);
```

Engineering

enter given word:vowels:5  
consonants:6

## Questions

CEQ20.

Find the factorial of n?

Sample Input:

N = 4

Sample Output:

4 Factorial = 24

## Test Cases

1. N = 0
2. N = -5
3. N = 1
4. N = 0
5. N = 3A

C

Run

Save

Logout

```
1. #include<stdio.h>
2. int main()
3. {
4.     int i,fact=1,number;
5.     printf("enter a number:");
6.     scanf("%d",&number);
7.     for(i=1;i<=number;i++)
8.     {
9.         fact=fact*i;
10.    }
11.    printf("factorial of %d is: %d",number,fact);
12.    return 0;
13. }
14.
15.
16.
17.
18.
19.
20.
```

4

enter a number:factorial of 4 is: 24



Get the symbol from user.

Sample Input: #

Output:

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

&  
\*  
(  
@

CEQ21

CEQ22

CEQ23

CEQ24

CEQ25

CEQ26

CEQ27

C

Run

Save

Logout

```
1. #include<stdio.h>  
2. int main()  
3. {  
4.     int i,j,n;  
5.     printf("enter the number of rows to print hollow square");  
6.     scanf("%d",&n);  
7.     for(i=0;i<=n;i++)  
8.     {  
9.         for(j=0;j<=n;j++)  
10.        {  
11.            if(i==0||i==n||j==0||j==n)  
12.            {  
13.                printf(" # ");  
14.            }  
15.            else  
16.            {  
17.                printf("  ");  
18.            }  
19.        }  
20.        printf("\n");  
21.    }  
22.    return 0;  
23. }
```

5

enter the number of rows to print hollow  
square # # # # #

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

## 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

## Test Cases

1. India is my country
2. All are my brothers and sisters
3. Why dry sky
4. Shy Try Cry
5. EDUCATION

CEQ20

CEQ21

CEQ22

CEQ23

CEQ24

CEQ25

CEQ26

CEQ27

C

Run

Save

Logout

```
1. #include<stdio.h>
2. int main()
3. {
4.     char str[100];
5.     int i,vowels=0;
6.     printf("enter the string:");
7.     scanf("%[^\n]s",&str);
8.     for(i=0;str[i];i++)
9.     {
10.        if(str[i]=='a' || str[i]=='e' || str[i]=='i' || str[i]=='o' || str[i]=='u' ||
11.           str[i]=='A' || str[i]=='E' || str[i]=='I' || str[i]=='O' || str[i]=='U')
12.        {
13.            vowels++;
14.        }
15.    }
16.    printf("number of vowels:= %d\n",vowels);
17.    return 0;
18. }
```

Saveetha School of Engineering

enter the string:number of vowels:= 12



## Questions

CEQ23.

Find the number of factors for the given number

Sample Input:

Given number: 100

Sample Output:

Number of factors = 9

## Test Cases

1. 343
2. 1080
3. -243
4. 101010
5. 0

CEQ19

CEQ20

CEQ21

CEQ22

CEQ23

CEQ24

CEQ25

CEQ26

CEQ27

C

Run

Save

Logout

```
1. #include<stdio.h>
2. int main()
3. {
4.     int num,i;
5.     printf("enter a positive integer:");
6.     scanf("%d",&num);
7.     printf("factors of %d are:",num);
8.     for (i=1;i<=num;++i)
9.     {
10.        if(num % i == 0)
11.        {
12.            printf(" %d ",i);
13.        }
14.    }
15.    return 0;
16. }
```

100

enter a positive integer:factors of 100  
are: 1 2 4 5 10 20 25 50 100

## Questions

CEQ2.

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

Sample Input:

Enter the user name: Saveetha@789

Reenter the user name: Saveetha@123

Sample Output:

User name is Invalid

## Test Cases

1. Student@123; Student@123

2. 123456; 12345

3. @#\$\$%^&; @#\$\$%^\*

4. abcdef\_12; abcdef\_12

CEQ2

CEQ20

CEQ21

CEQ22

CEQ23

CEQ24

CEQ25

CEQ26

CEQ27

Logout

```
1. #include<stdio.h>
2. #include<string.h>
3. int main()
4. {
5.     char a[10]="saveetha";
6.     char b[10]="ssesavee";
7.     if(strcmp(a,b)==0)
8.     {
9.         printf("it is valid");
10.    }
11.    else
12.    printf("it is not valid");
13. }
```

Saveetha@789

Saveetha@123

it is not valid



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

1. 17
2. 26!
3. 143
4. 84.1
5. -963

CEQ20

CEQ21

CEQ22

CEQ23

CEQ24

CEQ25

CEQ26

CEQ27

C

Run

Save

Logout

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

6

enter the number:6 is perfect number

## Questions

CEQ21.

## Test Cases

Write a program to print the following pattern

Sample Input:

Enter the Character to be printed: %

Max Number of time printed: 3

%

% %

% % %

CEQ2

CEQ20

CEQ21

CEQ22

CEQ23

CEQ24

CEQ25

CEQ26

CEQ27

C

Run

Save

Logout

```
1. #include<stdio.h>
2. void main()
3. {
4.     int i,j,rows;
5.     printf("enter num of rows:\n");
6.     scanf("%d",&rows);
7.     for(i=1;i<=rows;i++)
8.     {
9.         for(j=1;j<=i;j++)
10.        {
11.            printf("%c");
12.        }
13.        printf("\n");
14.    }
15. }
```

3

enter num of rows:

%

% %

% % %



## 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

## Test Cases

1. 04/11/1947
2. 11/15/1936
3. 31/45/1996
4. 64/09/1947
5. 00/00/2000

- CEQ20
- CEQ21
- CEQ22
- CEQ23
- CEQ24
- CEQ25
- CEQ26
- CEQ27

C

Run

Save

Logout

```
1. #include<stdio.h>
2. void main()
3. {
4.     int year,month,date;
5.     scanf("%d",&date);
6.     scanf("%d",&month);
7.     scanf("%d",&year);
8.     if((date<=31 && date>0) && (month<=12 && month>0) && (year>0))
9.     {
10.        if(year%400==0)
11.        {
12.            printf("leap year");
13.        }
14.        else if(year%100==0)
15.        {
16.            printf("not leap year");
17.        }
18.        else if(year%4==0)
19.        {
20.            printf("leap year");
```

1947

invalid,enter the correct  
month,year,date

SIMATS C IDE

x +

← → ↻ ⚠ Not secure | 172.18.50.116/php\_c/home.php

Get the symbol from user.

Sample Input: #

Output:

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

&  
\*  
(  
@

CE021  
CE022  
CE023  
CE024  
CE025  
CE026  
CE027

C

Run

Save

Logout

```
1. #include<stdio.h>
2. int main()
3. {
4.     int i,j,n;
5.     printf("enter the number of rows to print hollow square");
6.     scanf("%d",&n);
7.     for(i=0;i<=n;i++)
8.     {
9.         for(j=0;j<=n;j++)
10.        {
11.            if(i==0||i==n||j==0||j==n)
12.            {
13.                printf(" # ");
14.            }
15.            else
16.            {
17.                printf("  ");
18.            }
19.        }
20.        printf("\n");
21.    }
22.    return 0;
23. }
```

5

enter the number of rows to print hollow square # # # # #  
# #  
# #  
# #  
# #  
# # # # #

LG

MENU/L READER/ FUNC/ AUTO/ INPUT/ EXIT



## Questions

CEQ23.

Find the number of factors for the given number

Sample Input:

Given number: 100

Sample Output:

Number of factors = 9

## Test Cases

1. 343
2. 1080
3. -243
4. 101010
5. 0

- CEQ20
- CEQ21
- CEQ22
- CEQ23
- CEQ24
- CEQ25
- CEQ26
- CEQ27

C

Run

Save

Logout

```
1. #include<stdio.h>
2. int main()
3. {
4.     int num,i;
5.     printf("enter a positive integer:");
6.     scanf("%d",&num);
7.     printf("factors of %d are:",num);
8.     for (i=1;i<=num;++i)
9.     {
10.        if(num % i == 0)
11.        {
12.            printf(" %d ",i);
13.        }
14.    }
15.    return 0;
16. }
```

100

enter a positive integer:factors of 100  
are: 1 2 4 5 10 20 25 50 100

Array of elements = {16, 18, 27, 16, 23, 21, 19}

Sample Output:

Mean = 20

Median = 19

Mode = 16

4. Array of elements = {200, 180, 180, 270, 160, 270, 270, 190, 20  
5. Array of elements = {100, 100, 100, 100, 100, 100, 100, 10, 10

C

Run

Save

Logout

```
1. #include<stdio.h>
2. int main()
3. {
4.     int i,j,a[20]={0},sum=0,n,t,b[20]={0},k=0,c=1,max=0,mode;
5.     float x=0.0,y=0.0;
6.     printf("\nEnter the limit\n");
7.     scanf("%d",&n);
8.     printf("Enter the set of numbers\n");
9.     for(i=0;i<n;i++)
10.    {
11.        scanf("%d",&a[i]);
12.        sum=sum+a[i];
13.    }
14.    x=(float)sum/(float)n;
15.    printf("Mean\t= %f",x);
16.
17.    for(i=0;i<n;i++)
18.    {
19.        for(j=i+1;j<n;j++)
20.        {
21.            if(a[i]>a[j])
22.            {
23.                t=a[i];
24.                a[i]=a[j];
25.                a[j]=t;
```

7  
16  
18  
27  
16  
23  
21  
19

Enter the limit  
Enter the set of numbers  
Mean = 20.000000  
Median = 19.000000  
Mode = 16