

Questions

CEQ2: Write a program to check the entered user name is valid or not. Get both the inputs from the user.

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. @e\$%&; @e\$%*
4. abcdef_12; abcdef_12

```

1. #include <stdio.h>
2. #include <ctype.h>
3. #include <string.h>
4. int main()
5. {
6.     char username[21];
7.     int i,valid;
8.     printf("enter a username");
9.     scanf("%s",&username);
10.    if(strlen(username)<1||strlen(username)>20)
11.    {
12.        valid=0;
13.    }
14.    else
15.    {
16.        valid=1;
17.        for(i=0;username[i]!='\0';i++)
18.        {
19.            if(!isalnum(username[i])&& username[i]!='_')
20.            {
21.                valid=0;
22.                break;
23.            }
24.        }
25.    }
26.    if(valid)
27.    {
28.        printf("\nthe username is valid");
29.    }
30.    else
31.    {
32.        printf("\nthe username is invalid",username);
33.    }
34.    return 0;
35. }

```

saveetha@789
saveetha@123

enter a username
the username is invalid

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 = Q
5. N = 3A

C

Run

Save

```

1. #include <stdio.h>
2. int main()
3. {
4.     int i,fact=1,num;
5.     printf("enter the number");
6.     scanf("%d",&num);
7.     for(i=1;i<=num;i++)
8.         fact=fact*i;
9.     {
10.        printf("\nthe factorial of %d is %d",num,fact);
11.    }
12.    return 0;
13. }
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44.
45.
46.

```

5

enter the number
the factorial of 5 is 120

Questions
CEQ19

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

Sample Input:
Array of elements = {16, 18, 27, 16, 23, 11, 19}

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

Test Cases

1. Array of elements = {26, 28, 37, 26, 33, 31, 29}
2. Array of elements = {1.6, 1.8, 2.7, 1.6, 2.3, 2.1, .19}
3. Array of elements = {0, 160, 180, 270, 160, 230, 210, 190, 0}
4. Array of elements = {200, 180, 180, 270, 160, 270, 270, 190, 200}
5. Array of elements = {100, 100, 100, 100, 100, 100, 100, 100, 100}

```
1. #include <stdio.h>
2. #include <stdlib.h>
3. //function to find the mean of the array//
4. float find_mean(int arr[],int n)
5. {
6.     float sum=0;
7.     for(int i=0;i<n;i++)
8.     {
9.         sum+=arr[i];
10.    }
11.    return sum/n;
12. }
13. //func to find the median of an array//
14. float find_median(int arr[],int n)
15. {
16.     for(int i=0;i<n;i++)
17.     {
18.         for(int j=i+1;j<n;j++)
19.         {
20.             if(arr[i]>arr[j])
21.             {
22.                 int temp=arr[i];
23.                 arr[i]=arr[j];
24.                 arr[j]=temp;
25.             }
26.         }
27.     }
28.     //find the middle elements//
29.     if(n%2==0)
30.     {
31.         return (float)(arr[(n/2)-1]+arr[n/2])/2;
32.     }
33.     else
34.     {
35.         return arr[n/2];
36.     }
37. }
38. //finding the mode//
39. int find_mode(int arr[],int n)
40. {
41.     int max_count=0;
42.     int mode=0;
43.     for(int i=0;i<n;i++)
44.     {
45.         int count=0;
46.         for(int j=0;j<n;j++)
47.         {
48.             if(arr[j]==arr[i])
49.             {
50.                 count++;
```

Your Input Goes Here....!!!

mean=20.00
median=19.00
mode=16

Questions
CEQ21

Write a program to print the following pattern

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

Test Cases

C Run Save

```
1. #include <stdio.h>
2. int main()
3. {
4.     int i,j,a;
5.     scanf("%d",&a);
6.     for(i=0;i<=a;++i)
7.     {
8.         for(j=1;j<=i;++j)
9.         {
10.            printf("%c ",a);
11.        }
12.        printf("\n");
13.    }
14.    return 0;
15. }
```

3

6 is a perfect number

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

- 04/11/1947
- 11/15/1936
- 11/15/1996
- 04/09/1947
- 00/00/2000

C

Run

Save

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

2007

2004 is a leap year

Questions
CEQ24.

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

Sample Input:
Given Number: 6Sample Output:
It's a Perfect Number

Test Cases

1. 17
2. 261
3. 143
4. 94.1
5. -963

```
1. #include <stdio.h>
2. int main()
3. {
4.     int i,number,sum=0;
5.     scanf("%d",&number);
6.     for(i=1;i<number;i++)
7.     {
8.         if(number%i==0)
9.             sum+=i;
10.    }
11.    if(sum==number)
12.    {
13.        printf("%d is a perfect number",number);
14.    }
15.    else
16.    {
17.        printf("%d is not a perfect number",number);
18.    }
19.    return 0;
20. }
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47.
```

28

28 is a perfect number

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. 1000
3. -243
4. 101010
5. 0

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

100

the number of factors of 100 is 9

gram to print the number of vowels in the given statement?

It:
hool of Engineering

ut:
eels = 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

- TEST
- TEST
- TEST
- TEST
- TEST
- TEST
- TEST
- TEST

Run

Save

Logs

```
1. #include <stdio.h>
2. #include <string.h>
3. int main()
4. {
5.     char str[100];
6.     int count=0,i;
7.     fgets(str,sizeof(str),stdin);
8.     for(i=0;i<strlen(str);i++)
9.     {
10.         if((str[i]=='a' || str[i]=='e' || str[i]=='i' || str[i]=='o' || str[i]=='u' || str[i]=='A' || str[i]=='E' || str[i]=='I' || str[i]=='O' || str[i]=='U'))
11.         {
12.             count++;
13.         }
14.     }
15.     printf("\n no of vowels in a string is %d",count);
16. }
```

saveetha school of engineering

no of vowels in a string is 12

Search

Questions
EQ20

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

Sample Input: #

Output:

#####

Test Cases

#####

C

Run

Save

```
1. #include <stdio.h>
2. int main()
3. {
4.     int size,i,j;
5.     scanf("%d",&size);
6.     for(i=1;i<=size;i++)
7.     {
8.         printf("#");
9.     }
10.    printf(" ");
11.    for(i=2;i<size;i++)
12.    {
13.        printf("#");
14.        for(j=2;j<size;j++)
15.        {
16.            printf(" ");
17.        }
18.        printf("#\n");
19.    }
20.    for(i=1;i<=size;i++)
21.    {
22.        printf("#");
23.    }
24.    return 0;
25. }
```

4

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

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

Test Cases

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

C

Run

Save

```

1. #include <stdio.h>
2. #include <string.h>
3. int main()
4. {
5.     char str[100],vowels[100],consonants[100];
6.     int i,j=0,k=0;
7.     fgets(str,100,stdin);
8.     for(i=0;str[i]!='\0';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[j++]=str[i];
14.        }
15.        else if(((str[i]>='a' && str[i]<='z') || (str[i]>='A' && str[i]<='Z'))
16.        {
17.            consonants[k++]=str[i];
18.        }
19.        }
20.        vowels[j]='\0';
21.        consonants[k]='\0';
22.        printf("\nvowels:%s",vowels);
23.        printf("\nconsonants:%s",consonants);
24.        return 0;
25.    }
26.
27.
28.
29.
30.
31.
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33.
34.
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36.
37.
38.
39.
40.
41.
42.
43.
44.
45.

```

engineering

enter the string

vowels:eiei

consonants:ngnrmg