

A Micro Project Report

on

Problem Solving using C Language

Submitted by
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

NARASARAOPETA ENGINEERING COLLEGE: NARASARAOPET
(AUTONOMOUS)

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NARASARAOPETA ENGINEERING COLLEGE: NARASARAOPET
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CERTIFICATE

This is to certify that **Syed Mastani**, Roll No: **23471A05EX**, a Second Year Student of the Department of Computer Science and Engineering, has completed the Micro Project Satisfactorily in “Problem Solving using C Language” for the Academic Year 2024-2025..

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6.	C Program to read a number and displaying its digits in words.

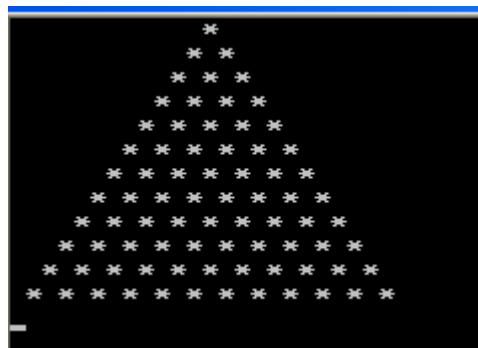
Equilateral Triangle shape Pattern

AIM:

Write a program a program to generate Equilateral triangle shape pattern

```
#include<stdio.h>
void main()
{
int n=12,i,j,k;
for(i=0;i<n;i++)
{
for(j=0;j<(n-i);j++)
{
printf(" ");
}
for(k=0;k<2*i+1;k++)
{
printf("*");
}
printf("\n");
}
getch();
}
```

Output:



Hollow Diamond pattern

AIM:

Write a C Program to Generate Hollow Diamond Pattern Using Stars

```
#include <stdio.h>
void printDiamond(int n)
{
    int space = n - 1;

    for (int i = 0; i < n; i++)
    {

        for (int j = 0; j < space; j++)
        {
            printf(" ");
        }
        for (int j = 0; j <= i; j++)
        {
            printf("* ");
        }
        printf("\n");
        space--;
    }

    space = 0;

    for (int i = n; i > 0; i--)
    {
        for (int j = 0; j < space; j++) {
            printf(" ");
        }
    }
}
```

```

    }

    for (int j = 0; j < i; j++) {
        printf("* ");
    }
    printf ("\n");
    space++;
}
}

```

```

int main()
{
    printDiamond(8);
    return 0;
}

```

Output:

```

      *
     * *
    * * *
   * * * *
  * * * * *
 * * * * * *
* * * * * * *
* * * * * * *
* * * * * * *
 * * * * * *
  * * * * *
   * * * *
    * * *
     * *
      *

```

Frequency Count of digit in a String

AIM:

Write a C program to given a string, consisting of alphabets and digits, find the frequency of each digit in the given string.

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
void main()
{
    int z=0,one=0,two=0,three=0,four=0,five=0,six=0,seven=0,
    eight=0,nine=0,i=0;
    char str[100];
    printf("enter the string: \n");
    fgets(str,sizeof(str),stdin);
    for(i=0;str[i]!='\0';i++)
    {
        if(str[i]==48)
            z++;
        else if(str[i]==49)
            one++;
        else if(str[i]==50)
            two++;
        else if(str[i]==51)
            three++;
        else if(str[i]==52)
            four++;
        else if(str[i]==53)
            five++;
        else if(str[i]==54)
            six++;
        else if(str[i]==55)
            seven++;
    }
```

```
        else if(str[i]==56)
            eight++;
        else if(str[i]==57)
            nine++;
    }
    printf("%d%d%d%d%d%d%d%d%d",z,one,two,three,four,five,six,seven,eight,nine);
    getch();
}
```

Input:

```
enter the string
H247h4389888634g012235
```

Output:

```
1133311141
```

```
enter the string:___
H247h4389888634g012235
1133311141
```


Each word in a New Line

AIM:

Write a C program to give a sentence, print each word of the sentence in a new line.

```
#include<stdio.h>
#include<string.h>
void main()
{
    int i;
    char str[100];
    printf("enter the string:\n");
    fgets(str,sizeof(str),stdin);
    for(i=0;str[i]!='\0';i++)
    {
        printf("%c",str[i]);
        if(str[i]==' ')
        {
            printf("\n");
        }
    }
    getch();
}
```

Input:

enter the string : hi how are you

Output:

hi
how
are
you

enter the string: hi how are you

hi

how

are

you

Counted searching Element

AIM:

Write a C program Attempt the following:

Twenty five numbers are entered from the keyword into an array. The number to be searched is entered through the keyword by the user. Write a program to find the number to be searched is present in the array and if it is present, display the number of times it appears in the array.

```
#include<stdio.h>
void main()
{
    int a[100],key,i,n,count=0;
    printf("enter the no.of elements:");
    scanf("%d",&n);
    printf("enter the elements:\n");
    for(i=0;i<n;i++)
    {
        scanf("%d",&a[i]);
    }
    printf("enter the seaech key\n");
    scanf("%d",&key);
    for(i=0;i<n;i++)
    {
        if(a[i]==key)
            count++;
    }
    printf("%d",count);
    getch();
}
```

Input:

enter the no.of elements: 25

enter the elements:

10 2 3 10 34 4 10 67 8 9 10 12 23 39 10 10 90 98 89 87 10 87 76 54 32

Output:

7

enter the no.of elements :25

enter the elements:

10 2 3 10 34 4 10 67 8 9 10 12 23 39 10 10 90 98 89 87 10 87 76 54 32

7

Displaying Digits in Words

AIM:

C Program to read a number and displaying its digits in words.

```
#include<stdio.h>

int main()
{
    int n,c=0,rem;

    char one[100][100]={"
    ","one","two","three","four","five","six","seven","eight","nine","ten","eleven",
    "twelve","thirteen","forteen","fifteen","sixteen","seventeen","eighteen","nine
    teen"};

    char tens[100][100]={" ","
    ","twenty","thirty","forty","fifty","sixty","seventy","eighty","ninty"};

    char thou[100][100]={" ","thousand","million","billion"};

    printf("enter the number");

    scanf("%d",&n);

    if(n<=0)

    printf("enter invalid digit is zero");

    if(n>0)
    {
        rem=n%100000;

        if(rem!=0 ){

            if(rem>=10000){

                printf("%s thousand",tens[rem/10000]);

                rem=rem%10000;
```

```
    }  
    if(rem>=1000){  
        printf("%s thousand",one[rem/1000]);  
        rem=rem%1000;  
  
    }  
    if(rem>=100){  
        printf("%s hundred",one[rem/100]);  
        rem=rem%100;  
    }  
    if(rem>=20){  
        printf("%s ",tens[rem/10]);  
        rem=rem%10;  
    }  
    if(rem>0 && rem<=10)  
    {  
        printf("%s ",one[rem]);  
    }  
    }  
    n=n/100000;  
    c++;  
    }  
    return 0;  
    }
```

Input:

Enter the number _45678

Output:

forty five thousand six hundred seventy eight

Enter the number _45678

forty five thousand six hundred seventy eight