A Micro Project Report

on

Problem Solving using C Language

Submittedby

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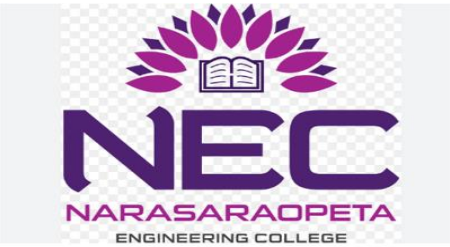

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

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2024-2025

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CERTIFICATE

This is to certify that Katepalli Nandini, Roll No: 23471A05DW, 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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INDEX

Read a number and Displaying Its Digit in Words

Source code:

```
#include <stdio.h>

#include <math.h>


int main()
{
   int x, digit = 0, num;
   printf("Enter a number: ");
   scanf("%d", &x);

   num = (int)log10(x) + 1;

   int original = x;
   while (x != 0)
{
      digit = (digit * 10) + (x % 10);
      x = x / 10;
   }

   int reversedNumDigits = (digit == 0) ? 1 : (int)log10(digit) + 1;

   while (digit != 0)
{
      switch (digit % 10)
{
         case 0:
            printf("zero ");
            break;
         case 1:
```

```
            printf("one ");
            break;
        case 2:
            printf("two ");
            break;
        case 3:
            printf("three ");
            break;
        case 4:
            printf("four ");
            break;
        case 5:
            printf("five ");
            break;
        case 6:
            printf("six ");
            break;
        case 7:
            printf("seven ");
            break;
        case 8:
            printf("eight ");
            break;
        case 9:
            printf("nine ");
            break;
    }
    digit = digit / 10;
}

for (int i = 0; i < num - reversedNumDigits; i++) {
    printf("zero ");
}

return 0;
```

}

Input:

Enter a number : 1020

Output:

One zero two zero

```
Enter a number: 1020
one zero two zero
```

Convert binary number to decimal

Source code:

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
long long convert(long long n);
int main()
{
    long long num;
    printf("enter a binary number:");
    scanf("%lld",&num);
    printf("%lld in binary=%lld in decimal",n,convet(n));
    return 0;
}
long long convert(long long n)
{
     long long dec =0;
}
     int i=0,rem;
     while(n!=0)
     {
          rem=n%10;
          dec=dec+rem power(2,i);
          n=n/10;
          ++i;
     }
     return dec;
}
```

Input :

Enter a binary number : 1010

Output :

1010 in binary = 10 in decimal

Convert decimal numbers to binary

Source code:

```
#include<stdio.h>
#include<math.h>
long long convert(int n);
int main()
{
    int num;

     printf("enter a  decimal number:");
     scanf("%d",&num);
     binary=convert(num);
     printf("%d in decimal=%lld in binary",num,binary);
     return 0;
}
long long convert(int n)
{
       long long binary=0;
      int i=1,rem;
      while(n!=0)
    {
          rem=num%2;
          binary=binary+rem*I;
          num=num/2;
           i=i*10;
    }
    return binary;
 }
```

Input :

Enter a decimal number : 10

Output :

10 in decimal = 1010 in binary

```
Enter a decimal number: 10
10 in decimal = 1010 in binary
```

Convert decimal to octal and hexa decimal

Source code:

```
#include<stdio.h>
#include<conio.h>
int k,j,a[20];
Void oct(int num)
{
        int i=0;
        while(num>0)
        {
              a[i]=num%8;
              i++;
             num=num/8;
        }
        k=i-1;
        printf(“The octal number is:”);
        for(j=k;j>=0;j--)
        {
        printf(“%d”,a[j]);
        }
        printf("\n");
  }
 void hexa(int n)
 {
       printf(“Hexadecimal number is:%x\n”,n);
 }
 int main()
{
      oct(4324);
       hexa(500);
       return 0;
```

}

Input:

The octal number is : 10344

Output:

Hexadecimal number is : 1f4

```
The octal number is: 10344
Hexadecimal number is: 1f4
```