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)

Accredited by NAAC with A+ Grade and NBA under Tier-1

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NARASARAOPETA ENGINEERING COLLEGE: NARASARAOPET

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CERTIFICATE

This is to certify that DHUPATI THANUSH KUMAR, Roll No: 23471A05HI, 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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READ AND DISPLAY NUMBER

AIM: C Program to Read a Number and Displaying Its Digit in Words.

SOURCE CODE:

```
Include<stdio.h>
Int main()
{
   Int n, num =0;
   Printf("Enter a number : ");
   Scanf("%d", &n);
/* Store reverse of n in num */
   While(n != 0)
   {
      Num = (num * 10) + (n % 10);
      N /= 10;
}
   While(num != 0)
   {
      Switch(num % 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;
      }

      Num = num / 10;
   }

   Return 0;
}
```

OUTPUT:

```
Enter a number:22
Two two
```

BINARY TO DECIMAL NUMBER

AIM:. C program Convert binary numbers to decimal.

SOURCE CODE :

```
Include <stdio.h>
// function prototype
Long long convert(long long);
Int main() {
   Long long n;
   Printf("Enter a binary number: ");
   Scanf("%lld", &n);
   Printf("%lld in binary = %lld in decimal", n, convert(n));
   Return 0;
}
/ function definition
Long long convert(long long n) {
   Long long dec = 0;
   Int I = 0, rem;
   While (n != 0) {
// get remainder of n divided by 10
      Rem = n % 10;
/ add the rem * (2 ^ i) to dec
      Dec += rem << I;
// divide n by 10
      N /= 10;
      ++I;
   }
   Return dec;
}
```

OUTPUT:

```
Enter a binary number: 1111
1111 in binary = 15 in decimal.
```

DECIMAL TO BINARY

AIM:C program Convert decimal numbers to binary.

SOURCE CODE:

```
#include <stdio.h>
#include <math.h>
 Function prototype
Long long convert(int);
Int main() {
  Int n;
  Long long bin;
  Printf(“Enter a decimal number: “);
  Scanf(“%d”, &n);
/ convert to binary using the convert() function
  Bin = convert(n);
  Printf(“%d in decimal =  %lld in binary”, n, bin);
  Return 0;
}
/ function to convert decimal to binary
Long long convert(int n) {
  Long long bin = 0;
  Int rem, I = 1;
 //Loop to convert to binary
  While (n != 0) {
// get remainder of n divided by 2
    Rem = n % 2;
    N /= 2;
 // multiply remainder by i
    // add the product to bin
    Bin += rem * I;
    I *= 10;
  }
  Return bin;
}
```

OUTPUT:

```
Enter a decimal number: 13
13 in decimal = 1101 in binary
```

DECIMAL TO OCTA & HEXA

AIM:C program to convert decimal to octal and hexadecimal.

SOURCE CODE:

```
Include<stdio.h>
Void main()
{
        Int n = 777;
        Printf("Decimal value = %d",n);
        Printf("\nOctal value = %o",n);
        Printf("\nHexadecimal value = %x",n);
}
```

OUTPUT:

Decimal value = 777
Octal value = 1411
Hexadecimal value = 309