**KARNATAK LAW SOCIETY’S**

**GOGTE INSTITUTE OF TECHNOLOGY**

**UDYAMBAG, BELAGAVI – 590008**

**(An Autonomous Institution under Visvesvaraya Technological University, Belagavi)**

**(Approved By AICTE, New Delhi)**

**DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING**

 

**SUBJECT: COMPUTER ORGANIZATION**

**Binary Overflow**

**Name USN**

Hemanth I T 2GI18IS015

Laxmi N 2GI18IS020

Rachana Kampli 2GI18IS032

Rohan K 2GI18IS066

Title: Binary Overflow.

Problem Statement:

To check Overflow in Binary Addition using any programming language.

Objectives:

1. To convert decimal number into binary.
2. To get user inputs and display result for that input.
3. To detect whether Overflow occurs or not.

Algorithm:

1. Start
2. Enter two decimal numbers a,b.
3. Sum=a+b;
4. While(a!=0)
   * 1. {
     2. rem=a%2
     3. a=a/2
     4. binary=binary+r\*t1;
     5. c++;
     6. }
5. While(b!=0)
6. {
7. r1=b%2
8. b=b/2
9. binary1=binary1+r1\*t2;
   1. d++;
   2. }
10. If (c>d)
    * 1. n=c;
11. else
    * 1. n=d;
12. While(sum!=0)
    * 1. {
         1. rem1=sum%2;
         2. Sum=sum/2
         3. Binary2=binary2+rem2\*temp3;
         4. temp3=temp3\*10
         5. e++;
      2. }
13. If(e>n)
    * 1. Print OVERFLOW DETECTED
    1. Else
       1. Print OVERFLOW NOT DETECTED
14. Stop

Program:

#include <stdio.h>

#include <math.h>

int main()

{

long binary=0,binary1=0,binary2=0;

int rem,rem1,rem2, temp1 = 1,c=0,d=0,e=0,temp2 = 1,temp3 = 1;

int a,b,sum=8,n;

printf("Enter two Decimal Number: ");

scanf("%d%d", &a,&b);

sum=a+b;

while (a!=0)

{

rem = a%2;

a = a / 2;

binary = binary + rem\*temp1;

temp1 = temp1 \* 10;

c++;

}

while (b!=0)

{

rem1 = b%2;

b = b / 2;

binary1 = binary1 + rem1\*temp2;

temp2 = temp2 \* 10;

d++;

}

if(c>d)

n=c;

else

n=d;

while (sum!=0)

{

rem1 = sum%2;

sum = sum / 2;

binary2 = binary2 + rem2\*temp3;

temp3 = temp3 \* 10;

e++;

}

if(e>n)

printf("OVERFLOW DETECTED\n”);

else

printf("OVERFLOW NOT DETECTED\n”);

return 0;

}