TOWER OF HANOI:

#include <stdio.h>

#include <time.h>

void towers(int,char,char,char);

int main()

{

clock\_t start,end;

double time;

int num;

printf("Enter the number of disks: \n");

scanf("%d",&num);

printf("The sequence of moves involved in Tower of Hanoi are: \n");

start = clock();

towers(num,'A','C','B');

end = clock();

time = ((double)(end - start))/CLOCKS\_PER\_SEC;

printf("\nTime taken : %lf sec\n",time);

return 0;

}

void towers(int num,char frompeg,char topeg,char auxpeg)

{

if (num==1){

printf("\n Move disk 1 from peg %c to peg %c",frompeg,topeg);

return;

}

towers(num - 1,frompeg,auxpeg,topeg);

printf("\n Move disk %d from peg %c to peg %c",num,frompeg,topeg);

towers(num - 1,auxpeg,topeg,frompeg);

}

GCD OF TWO NUMBERS:

#include <stdio.h>

#include <time.h>

int gcd(int num1, int num2);

int main() {

clock\_t start,end;

double time;

int num1, num2;

printf("Enter two positive integers:\n");

scanf("%d %d", &num1, &num2);

start = clock();

printf("\n G.C.D of %d and %d is : %d", num1, num2, gcd(num1, num2));

end = clock();

time = ((double)(end - start))/CLOCKS\_PER\_SEC;

printf("\nTime taken : %lf sec\n",time);

return 0;

}

int gcd(int num1, int num2) {

if (num2 != 0)

{

return gcd(num2, num1 % num2);

}

else

{

return num1;

}

}