**ASSIGNMENT 7 SOLUTION**

**Ans 1.**

#include <stdio.h>

int main() {

// Write C code here

int n, t1 = 0, t2 = 1, nextTerm = 0, i;

printf("Enter the n value: ");

scanf("%d", &n);

if(n == 0 || n == 1)

printf(“%d”, n);

else

nextTerm = t1 + t2;

for (i = 3; i <= n; ++i)

{

t1 = t2;

t2 = nextTerm;

nextTerm = t1 + t2;

}

printf("%d", t2);

return 0;

}

**Ans 2.**

#include <stdio.h>

int main() {

// Write C code here

int fib1 = 0, fib2 = 1, fib3, num, count = 0;

printf("Enter the value of num \n");

scanf("%d", &num);

printf("First %d FIBONACCI numbers are ...\n", num);

printf("%d\n", fib1);

printf("%d\n", fib2);

count = 2; /\* fib1 and fib2 are already used \*/

while (count < num)

{

fib3 = fib1 + fib2;

count++;

printf("%d\n", fib3);

fib1 = fib2;

fib2 = fib3;

}

return 0;

}

**Ans 4.**

#include <stdio.h>

int main() {

// Write C code here

int num1, num2, hcf = 1;

printf("Enter two numbers : ");

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

for(int i = 1; i <= num1 || i <= num2; i++) {

if(num1 % i == 0 && num2 % i == 0)

hcf = i;

}

printf("The HCF: %d", hcf);

return 0;

}

**Ans 5.**

#include <stdio.h>

int main() {

// Write C code here

int num1, num2, hcf, i;

printf("Enter two numbers:\n");

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

// Finding HCF

for(i=1;i<=num1;i++)

{

if(num1%i==0 && num2%i==0)

{

hcf = i;

}

}

// Making Decision

if(hcf == 1)

{

printf("%d and %d are CO-PRIME NUMBERS.", num1, num2);

}

else

{

printf("%d and %d are NOT CO-PRIME NUMBERS.", num1, num2);

}

return 0;

}

**Ans 6.**

#include <stdio.h>

int main() {

// Write C code here

int i, a = 1, count;

while(a <= 100)

{

count = 0;

i = 2;

while(i <= a/2)

{

if(a%i == 0)

{

count++;

break;

}

i++;

}

if(count == 0 && a != 1 )

{

printf(" %d ", a);

}

a++;

}

return 0;

}

**Ans 7.**

#include <stdio.h>

int main() {

// Write C code here

int beg, end, f, temp, i, j ;

printf(" Enter the Begining Number : ") ;

scanf("%d ",& beg) ;

printf(" \n Enter the last Number : ") ;

scanf("%d ",& end) ;

printf(" \n Prime Numbers are :\n ") ;

for ( j = beg ; j <= end ; j++ ) ;

{

f = 0 ;

for ( i = 2 ; i < num ; i++ );

{

if ( j % i == 0 )

f = f + 1 ;

}

if ( f == 0 )

printf(" \n %d " , j) ;

}

return 0;

}

**Ans 9.**

#include <stdio.h>

int main() {

// Write C code here

int n,r,sum=0,temp;

printf("enter the number=");

scanf("%d",&n);

temp=n;

while(n>0)

{

r=n%10;

sum=sum+(r\*r\*r);

n=n/10;

}

if(temp==sum)

printf("armstrong number ");

else

printf("not armstrong number");

return 0;

}

**Ans 10.**

#include <stdio.h>

int main() {

// Write C code here

int i, sum, num, count = 0;

printf("All Armstrong number between 1 and 1000 are:\n");

// This loop will run for 1 to 1000

for (i = 1; i <= 1000; i++) {

num = i;

// Count number of digits.

while (num != 0) {

num /= 10;

count++;

}

num = i;

sum = pow(num % 10, count)

+ pow((num % 100 - num % 10) / 10, count)

+ pow((num % 1000 - num % 100) / 100, count);

// Check for Armstrong Number

if (sum == i) {

printf("%d ", i);

}

count = 0;

}

return 0;

}