Assignment 7 Part-2

Q-1

Ans

#include <stdio.h>

long fibonacciRecursive(int num)

{

if (num <= 1)

return num;

return fibonacciRecursive(num - 1) + fibonacciRecursive(num - 2);

}

int main()

{

int num;

printf("Enter a number: ");

scanf("%d", &num);

printf("\nThe %dth fibonacci number is %ld", num, fibonacciRecursive(num));

return 0;

}

Q-2

Ans

#include<stdio.h>

void main()

{

int i,c=0,n;

int a=0;

int b=1;

printf("Enter a number to generate fibonacci series for first n terms\n");

scanf("%d",&n);

printf("Fibonacci series for first %d terms:-\n",n);

for(i=0;i<n;i++)

{

printf("%d ",c);

a=b;

b=c;

c=a+b;

}

}

Q-3

Ans

#include <stdio.h>  
  int main() {  
        int data, num1 = 0, num2 = 1, temp, flag = 0;  
  
        /\* get the input from the user \*/  
        printf("Enter ur input:");  
        scanf("%d", &data);  
  
        /\* 0 and 1 are fibonacci numbers \*/  
        if (data == num1 || data == num2) {  
                printf("%d is a fibonacci number\n", data);  
                return 0;  
        }  
  
        /\* checking whether a given number is fobonacci no or not \*/  
        while (num2 <= data) {  
                temp = num2;  
                num2 = num1 + num2;  
                num1 = temp;  
                if (num2 == data) {  
                        flag = 1;  
                        break;  
                }  
        }  
  
        /\* print the results \*/  
        if (flag) {  
                printf("%d is a fibonacci number\n", data);  
        } else {  
                printf("%d is not a fibonacci number\n", data);  
        }  
        return 0;  
  }

Q-4

|  |
| --- |
| #include <stdio.h>  int main()  {      int no1, no2, i, hcf=1; // declaring variables.        printf("Enter two positive integers: ");      scanf("%d %d", &no1, &no2); // taking values from user.        for(i=1; i <= no1 && i <= no2; ++i) // iteration for condition.      {          if(no1%i==0 && no2%i==0) // Checking factor of number              hcf = i;      }      printf("H.C.F of %d and %d is %d", no1, no2, hcf); // printing values      return 0;  } |

Q-5

Ans

#**include**<stdio.h>

#**include**<conio.h>

**int** main()

{

**int** num1, num2, hcf, i;

clrscr();

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);

}

getch();

**return**(0);

}

Q-6

Ans

#include <stdio.h>

int main()

{

int i,j,count=0;

for(i=2;i<=100;i++)

{

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

{

if(i%j==0)

count++;

}

if(count==2)

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

count=0;

}

return 0;

}

Q-7

Ans

#include <stdio.h>

int main() {

int low, high, i, flag;

printf("Enter two numbers(intervals): ");

scanf("%d %d", &low, &high);

printf("Prime numbers between %d and %d are: ", low, high);

// iteration until low is not equal to high

while (low < high) {

flag = 0;

// ignore numbers less than 2

if (low <= 1) {

++low;

continue;

}

// if low is a non-prime number, flag will be 1

for (i = 2; i <= low / 2; ++i) {

if (low % i == 0) {

flag = 1;

break;

}

}

if (flag == 0)

printf("%d ", low);

// to check prime for the next number

// increase low by 1

++low;

}

return 0;

}

Q-8

Ans

#include<stdio.h>

#include<conio.h>

void main()

{

int n,i,j,flag=0,out;

clrscr();

printf("enter the num\n");

scanf("%d",&n);

for(i=n+1;i<=100;i++)

{

flag=0;

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

{

if(i%j==0)

{

flag=1;

break;

}

}

if(flag==0)

{

printf("next prime is:%d",i);

break;

}

}

getch();

}

Q-9

Ans

#include <stdio.h>

int main() {

int num, originalNum, remainder, result = 0;

printf("Enter a three-digit integer: ");

scanf("%d", &num);

originalNum = num;

while (originalNum != 0) {

// remainder contains the last digit

remainder = originalNum % 10;

result += remainder \* remainder \* remainder;

// removing last digit from the orignal number

originalNum /= 10;

}

if (result == num)

printf("%d is an Armstrong number.", num);

else

printf("%d is not an Armstrong number.", num);

return 0;

}

Q-10

Ans

#include<stdio.h>

#include<conio.h>

int main( )

{

int no, temp, rem, sum,count=0;

clrscr( );

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

for(no=1; no<=1000; no++)

{

temp=no;

sum=0;

while(temp>0)

{

rem=temp%10;

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

temp=temp/10;

}

if(no==sum)

{

printf("\n%d", no);

count++;

}

}

printf("%d",count);

getch( );

return 0;

}