Assignment - 7

A Job Ready Bootcamp in C++, DSA and IOT

MySirG

Iterative Control Statements (Part - 2)

1.Write a program to find the Nth term of the Fibonnaci series.

ANS:1

#include<stdio.h>

int main()

{

int prev=1,cur=1,next=0,n,i;

printf("Enter A Number\n");

scanf(" %d",&n);

for(i=0;i<=n-1;i++)

{

next=prev+cur;

prev = cur;

cur = next;

}

printf(" %d",next);

}

2. Write a program to print first N terms of Fibonacci series

ANS:2

#include<stdio.h>

int main()

{

int prev=1,cur=1,next=0,n,i;

printf("Enter A Number\n");

scanf(" %d",&n);

printf("1");

for(i=0;i<=n-1;i++)

{

next=prev+cur;

printf(" %d",next);

prev = cur;

cur = next;

}

}

3. Write a program to check whether a given number is there in the Fibonacci

series or not.

ANS:3

#include<stdio.h>

int main()

{

int prev=1,cur=1,next=0,n,i;

printf("Enter A Number\n");

scanf(" %d",&n);

for(i=0;1;i++)

{

next=prev+cur;

printf(" %d",next);

prev = cur;

cur = next;

if(next==n)

{

printf("number is in FIBONACCI series");

break;

}

if(next>n)

{

printf("number is not in FIBONACCI series");

break;

}

}

}

4. Write a program to calculate HCF of two numbers

ANS:4

#include<stdio.h>

int main()

{

int a,b,i,hcf=1;

printf("ENTER TWO NUMBER :");

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

int min=a<b?a:b;

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

{

if(a%i== 0&&b%i== 0)

hcf=i;

}

printf("HCF is %d",hcf);

return 0;

}

5. Write a program to check whether two given numbers are co-prime

numbers or not

ANS:5

#include <stdio.h>

int main()

{

int x, y;

printf("Enter two number: ");

scanf("%d%dd", &x, &y);

int flag = 1;

int condition = x < y ? x : y;

for (int i = 2; i <= condition; i++)

{

if (x % i == 0 && y % i == 0)

{

flag = 0;

break;

}

}

if (flag)

printf("It is co-prime no");

else

printf("It is not co-prime no.");

return 0;

}

6. Write a program to print all Prime numbers under 100

ANS:6

#include <stdio.h>

int main()

{

int i,j,flag=1;

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

{

flag = 1;

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

{

if (i % j == 0)

{

flag = 0;

break;

}

}

if (flag)

printf("%d ", i);

}

return 0;

}

7. Write a program to print all Prime numbers between two given numbers

ANS:7

int main()

{

int num1, num2;

printf("Enter two prime numbers: ");

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

int i, j, flag = 1;

for (i = num1; i <= num2; i++)

{

flag = 1;

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

{

if (i % j == 0)

{

flag = 0;

break;

}

}

if (flag)

printf("%d ", i);

}

return 0;

}

8. Write a program to find next Prime number of a given number

ANS:8

#include <stdio.h>

int main()

{

int n;

printf("Enter number: ");

scanf("%d", &n);

int i = n + 1, j, flag = 1;

int nextPrimeNum;

while (1)

{

flag = 1;

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

{

if (i % j == 0)

{

flag = 0;

break;

}

}

if (flag)

{

printf("Next Prime num: %d", i);

break;

}

i++;

}

return 0;

}

9. Write a program to check whether a given number is an Armstrong number

or not

ANS:9

#include <stdio.h>

int main()

{

int num;

printf("Enter numbre for checking armstrong numnber: ");

scanf("%d", &num);

int sum = 0;

for (int i = num; i != 0; i /= 10)

{

int rem = i % 10;

sum += rem \* rem \* rem;

}

if (sum == num)

printf("Armstrong number");

else

printf("Its NOT a Armstrong number");

return 0;

}

10. Write a program to print all Armstrong numbers under 1000

ANS:10

#include <stdio.h>

int main()

{

for (int j = 1; j <= 1000; j++)

{

int sum;

for (int j = 1; j <= 1000; j++)

{

sum = 0;

for (int i = j; i != 0; i /= 10)

{

int rem = i % 10;

sum += rem \* rem \* rem;

}

if (sum == j)

printf("%d ", j);

}

}

return 0;

}