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

**Assignment – 7**

1.

#include<stdio.h>

#include<conio.h>

int main()

{

int n,i,pv=0,cv=1,next=0;

printf("Enter a Nth term:");

scanf("%d",&n);

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

{

next=pv+cv;

pv=cv;

cv=next;

}

printf("%dth term of fibonacci series :%d ",n,next);

getch();

}

2.

#include<stdio.h>

#include<conio.h>

int main()

{

int n,i,pv=0,cv=1,next=0;

printf("Enter a Nth term:");

scanf("%d",&n);

printf("0 1 ");

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

{

next=pv+cv;

pv=cv;

cv=next;

printf("%d ",next);

}

getch();

}

3.

#include<stdio.h>

#include<conio.h>

int main()

{

int n,i,pv=0,cv=1,next=0;

printf("Enter a number:");

scanf("%d",&n);

if(n==1)

printf("number is found");

else

{

for(i=0;;i++)

{

next=pv+cv;

pv=cv;

cv=next;

if(next==n)

{

printf("number is found");

break;

}

if(next>n)

{

printf("Number is not found");

break;

}

}

}

getch();

}

4.

#include<stdio.h>

#include<conio.h>

int main()

{

int a,b,i,HCF=0;

printf("Enter two numbers:");

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

for(i=1;i<=(a<b?a:b);i++)

{

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

HCF=i;

}

printf("HCF of two numbers:%d",HCF);

getch();

}

5.

#include<stdio.h>

#include<conio.h>

int main()

{

int a,b,i,HCF=0;

printf("Enter two numbers:");

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

for(i=1;i<=(a<b?a:b);i++)

{

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

HCF=i;

}

if(HCF==1)

printf("Co-prime");

else

printf("Not a co-prime");

getch();

}

6.

#include<stdio.h>

#include<conio.h>

int main()

{

int i,n,flag=0;

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

{

flag=0;

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

{

if(n%i==0)

flag=1;

}

if(flag==0)

printf("%d ",n);

}

getch();

}

7.

#include<stdio.h>

#include<conio.h>

int main()

{

int a,b,i,n,flag=0;

printf("Enter two numbers:");

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

for(n=a;n<=b;n++)

{

flag=0;

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

{

if(n%i==0)

flag=1;

}

if(flag==0)

printf("%d ",n);

}

getch();

}

8.

#include<stdio.h>

#include<conio.h>

int main()

{

int a,i,n,flag=0;

printf("Enter a numbers:");

scanf("%d",&a);

for(n=a;;n++)

{

flag=0;

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

{

if(n%i==0)

flag=1;

}

if(flag==0)

{

printf("%d ",n);

break;

}

}

getch();

}

9.

#include<stdio.h>

#include<math.h>

int cntdigits(int n)

{

int count=0;

while(n!=0)

{

count++;

n=n/10;

}

return count;

}

int isarmstrong(int n)

{

int orignalnumber=n;

int numdigits = cntdigits(n);

int sum=0;

while(n!=0)

{

int digit=n%10;

sum=sum+pow(digit,numdigits);

n=n/10;

}

return sum==orignalnumber;

}

int main()

{

int num;

printf("Enter a number:");

scanf("%d",&num);

if(isarmstrong(num))

{

printf("Armstrong number");

}

else

{

printf("Not Armstrong number");

}

return 0;

}

10.

#include<stdio.h>

#include<math.h>

int cntdigits(int n)

{

int count=0;

while(n!=0)

{

count++;

n=n/10;

}

return count;

}

int isarmstrong(int n)

{

int orignalnumber=n;

int numdigits = cntdigits(n);

int sum=0;

while(n!=0)

{

int digit=n%10;

sum=sum+pow(digit,numdigits);

n=n/10;

}

return sum==orignalnumber;

}

int main()

{

int i;

printf("All Armstrong number under 1000:");

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

{

if(isarmstrong(i))

{

printf("%d ",i);

}

}

return 0;

}