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\*\*Iterative Control Statements\*\*

**Q.1.Write A Program To Find Nth Term Of A Fibonacci**

**Series.**

**Ans:**

#include<stdio.h>

int fibo (n)

{

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

return n;

return fibo(n-1)+fibo(n-2);

}

int main()

{

int n;

printf("Enter A Number\n");

scanf("%d",&n);

printf("%d",fibo(n));

return 0;

}

**Q.2.Write A Program To Find First N Fibonacci series.**

**Ans:**

#include<stdio.h>

int fibo (n)

{

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

return n;

return fibo(n-1)+fibo(n-2);

}

int main()

{

int n;

printf("Enter A Number\n");

scanf("%d",&n);

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

{

printf("%d ",fibo(i));

} return 0;

}

**Q.3. Write a program to check whether a given number is there in the Fibonacci series or not.**

**Ans:**

#include<stdio.h>

int main()

{

int n,a=0,b=1;

printf("Enter A Number\n");

scanf("%d",&n);

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

{

b=a+b;

a=b-a;

if(a==n)

{ printf("Given Number Is In Fibonacci Series");

return 0;

}

} printf("The given Number Is Not In Fibonacci Series");

return0;

}

**Q.5. Write a program to check whether two given numbers are co-prime numbers or not**

**Ans:**

#include<stdio.h>

int main()

{

int num1,num2,min,i;

printf("Enter Two Numbers");

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

min=num1>num2?num1:num2;

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

{

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

break;

} if(i==min+1)

printf("The %d and %d Are Co-prime Numbers",num1,num2);

else

printf("%d ANd %d Are Not Co-Prime",num1,num2);

return 0;

}

**Q. 6. Write a program to print all Prime numbers**

**under 100**

Ans:

#include<stdio.h>

int main()

{

int i=1,n=2,j;

while(n<100)

{

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

{

if(n%j==0)

break;

}

if(j==n)

{

printf("%d ",n);

i++;

} n++;

} return 0;

}

**Q.7. Write a program to print all Prime numbers**

**between two given numbers**

Ans:

#include<stdio.h>

int main()

{

int num1,num2,i,n;

printf("Enter Two Numbers For in Between Prime numbers ");

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

n=num1;

printf("The %d To %d Prime Numbers Are \n",num1,num2);

while(n<num2)

{

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

{

if(n%i==0)

break;

}

if(n==i)

{

printf("%d ",n);

}

n++;

}

Return 0

}

**Q.8.Write A Program To Find Next Prime Number Of A Given**

**Number.**

**Ans:**

#include<stdio.h>

int main()

{

int num,i;

printf("Enter A Number ");

scanf("%d",&num);

while(num)

{

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

{

if(num%i==0)

break;

}

if(num==i)

{

printf("%d ",num);

break;

}

num++;

}

Return 0;

}

**Q.9. Write a program to check whether a given number is an Armstrong number or not**

**Ans:**

#include<stdio.h>

int main()

{

int n,i,reminder,arms=0;

printf("Enter A Number");

scanf("%d",&n);

i=n;

while(n)

{

reminder=n%10;

n=n/10;

arms=arms+(reminder\*reminder\*reminder);

}

if(arms==i)

printf("The %d Is Armstrong Number",i);

else

printf("The %d IS Not An Armstrong Number",i);

}

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

**Ans:**

#include<stdio.h>

int main()

{

int n,i,reminder,arms;

printf("The Under 1000 Armstrong Numbers Are ");

for(i=0;i<=1000;i++)

{

n=i;

while(n)

{

reminder=n%10;

arms=arms+(reminder\*reminder\*reminder);

n=n/10;

}

if(arms==i)

printf(" %d ",i);

arms=0;

}

}