ASSIGNMENT 7

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/\* To find the Nth term of the fibonnaci series \*/

#Include<stdio.h>

int fib (int n)

{

if(n<=1)

return 0;

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

}

int main()

{

int n = 9;

cout << fib();

return 0;

}

-------------------------------------------------------------------------------------------------------------------

/\* to print first N terms of Fibonacci series \*/

#Include<stdio.h>

int main()

{

int i, n;

int a=0, b=2;

int nextTerm = a+b;

printf("Enter the number of term: ");

scanf("%d", &n);

printf("Fibonacci Series: %d, %d", a,b);

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

{

printf("%d", nextterm);

a=b;

b=nextTerm;

nextTerm = a+b;

}

return 0;

}

-------------------------------------------------------------------------------------------------------------------/\* to check whether a given number is there in the fibonacci series or not \*/

#Include<stdio.h>

int isPerfectsquare (intx)

{

int s= (int) sqrt (x);

return (s\*s==x);

}

int is Fibonacci (int x)

{

return is Perfectsquare (5\*x\*x+4)|| is Perfectsquare (5\*x\*x-4);

}

int main(void)

{

int n=8;

if(n>0)

{

printf("IS %d a Fibonacci number ? %d", n, is Fibonacci (n));

}

return 0;

}

-------------------------------------------------------------------------------------------------------------------

/\* to calculate HCF of two number \*/

#Include<stdio.h>

int main()

{

int a,b,i,HCF=1;

printf("Enter two positive integer");

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

for(i=1; i<=a && i<=b; ++i)

{

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

HCF=i;

}

printf("HCF of %d and %d is %d", a,b, HCF);

return 0;

}

-------------------------------------------------------------------------------------------------------------------

/\* to check whether two given number are co-prime number or not \*/

#Include<stdio.h>

int main()

{

int a,b,HCF,i;

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

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

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

{

if( 1%i==0 && b%i==0)

{

HCF=i;

}

}

if HCF==1

{

printf("%d and %d are co-prime number." a,b);

}

else

{

printf("%d and %d are not co-prime number", a,b);

}

return 0;

}

-------------------------------------------------------------------------------------------------------------------

/\* to print all prime number under 100 \*/

#Include<stdio.h>

int main()

{

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;

}

-------------------------------------------------------------------------------------------------------------------/\* to find next Prime number between two given numbers\*/

#Include<stdio.h>

int main()

{

int l,h,i,flag;

printf("Enter two number ");

scanf("%d %d ", &l, &h);

printf("prime number between %d and %d are? l,h);

while(l<h)

{

flag=0;

if(l<=1)

{

++l;

continue;

}

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

{

if(low %i ==0)

{

flag=1;

break;

}

}

if(flag==0)

printf("%d", l);

++low;

}

return 0;

}

-------------------------------------------------------------------------------------------------------------------

/\* to find next prime number of a given number \*/

#Include<stdio.h>

int main()

{

int i,j,n,count=0;

printf("Enter the number");

scanf("%d", &n);

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

{

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

{

if(i\*j==0)

count ++;

}

if (count==2)

{

printf("%d", i);

break;

}

}

-------------------------------------------------------------------------------------------------------------------

/\* to check whether a given number is an Armstrong number or not \*/

#Include<stdio.h>

int main()

{

int a,b,sum=0, rem;

printf("\n Enter a number:");

scanf("%d", &a);

b=a;

while(a!=0)

{

rem=a%10;

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

a=a/10;

}

if (b==sum)

printf("\n %d is an armstrong no", b);

else

printf("\n %d is not an armstrong", b);

return 0;

}

-------------------------------------------------------------------------------------------------------------------

/\* to print all armstrong number under 1000 \*/

#Include<stdio.h>

int main()

{

int n,r,x,s;

printf("Armstrong number are \n");

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

{

a=0;

x=n;

while(x:=10)

{

r=x%10;

s=s\*r\*r\*r;

x=x/10;

}

if(s==n)

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

}

}

-------------------------------------------------------------------------------------------------------------------