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Assignment-7

(1)

```
#include <stdio.h>
    int main()
      {
    int n, i=1, a=-1, b=1, c;
    printf("Enter a term\n");
    scanf("%d", &n);
    printf("%d term of fibonacci series is : ", n);
     for( ; i<=n ; i++)
        {
          c= a+b;
          a=b;
          b=c;
        }
    printf("%d", c);
     return 0;
    }
```

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(2) # include <stdio.h>

```
int main()
{
int n, i, a=0, b=1, c;
printf("Enter number of terms\n");
scanf("%d", &n);
printf("Fibonacci series of %d terms are: \n", n);
for(i=1, a=-1, b=1; i<=n; i++)
    {
      c=a+b;
printf("%d ", c);
      a=b;
      b=c;
    }

return 0;
}
```

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③
```
#include <stdio.h>
int main()
{
int n, a, b, c=0;
printf("Enter a number\n");
scanf("%d", &n);
~~printf("%d is a~~
for(a=-1, b=1; c<=n; )
{
c=a+b;
if(c==n)
break;
a=b;
b=c;
}
if(c==n)
~~printf("%d is in series of fibo~~
printf("%d is in fibonacci series", n);
else
printf("%d is not in fibonacci series", n);
}
```

n	a	b	c
23	-1	1	0

c=	c=1	c=1
0	a=0	a=1
a=1	b=1	b=1
b=0		

c=2	c=3	c=5
a=1	a=2	a=3
b=2	b=3	b=5

21+13=34

c=8	c=13	c=21	c=34
a=5	a=8	a=13	
b=8	b=13	b=21	

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④
```
#include<stdio.h>
    int main()
    {
int a,b,i=2,c=0;
printf("Enter two numbers\n");
scanf("%d%d",&a,&b);
printf("%d%d\n",a,b);
printf("HCF of %d and %d is %d",a,b);
for(i=2;i<=(a>b?b:a);i++)
    {
    if(a%i==0 && b%i==0)
        c=c>i?c:i;
    }
if(c==0)
    printf("1");
else
    printf("%d",c);
}
```

⑤
```
#include<stdio.h>
    int main()
    {
int a,b,i=2,c=0;
printf("Enter two numbers\n");
scanf("%d%d",&a,&b);
printf("%d%d\n",a,b);
for(i=2;i<=(a>b?b:a);i++)
    {
```

```
if(a%i==0 && b%i==0)
    c=c>i?c:i;
}
if(c==0)
 printf("%d and %d are co-prime numbers\n",a,b);
else
printf("%d and %d are not co-prime numbers\n",a,b);
}
```

(6)
```
#include<stdio.h>
int main()
{
int i,j,count=0;
printf("Prime numbers under 100\n");
for(i=2;i<=100;i++)
    { count=0;
 for(j=2;j<=i/2;j++)
    {
 if(i%j==0)
    {
    count=1;
    break;
    }
    }
if(n==2||n==3)
 printf("%d ",b);
else if(count==0)
        printf("%d\n");
```

count=1

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(7) #include <stdio.h>
int main()
{
int range1, range2, count, i, j;
printf("Enter range1 and range2\n");
scanf("%d %d", &range1, &range2);
printf("Prime numbers between %d and %d are: \n
range1, and range2);

for(i=range1+1 ; i<range2 ; i++)
{
count=0;
for(j=2 ; j<=i/2 ; j++)
{
if(i%j==0)
{
count=1;
break;
}
if(i==2||i==3)
printf("%d", i);
else if(count==0)
printf("%d", i);
}

return 0;

}

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(8)
```
#include <stdio.h>
    int main()
    {
    int number, i, j, count;
    printf(" Enter a number\n");
     scanf("%d", &number);
printf(" Prime Numbers after %d is ", number);
  for(i=number+1;    ;i++)
      {
       count=0;
for(j=2 ; j<=i/2 , j++)
      {
   if(i%j==0)
        {
        count=1;
        break;
        }
   if(count==0)
     {
     printf("%d", i)
      break;
     }
return 0;
}
```

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⑨
```
#include <stdio.h>
int main()
{
int number, n, a=0; bool b;
printf("Enter a number\n");
scanf("%d", &number);
n = number;
while (n)
{
b = n%10;
a = a + b*b*b;
n = n/10;
}
if (a == number)
printf("%d is an armstrong number", a);
else
printf("%d is not an armstrong number", a);
return 0;
}
```

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(10) #include <stdio.h>
int main()
{
int number, a, b, i;
printf(" Armstrong numbers under 1000 are\n");
for (i=1 ; i<=1000 ; i++)
{
number = i;
a=0;
while(number)
{
b = number %10;
a = a + b* b* b;
number = number/10;
}
if(a==i)
printf("%d ", i);
}
return 0;
}