

Write a program/function in any programming language that will implement Calling Subprograms Indirectly as discussed on the slides of ch9. Your program/function will take 2 non-zero, positive integers, e.g., 6 and 12 OR 16 and 2, as input parameters, and output any prime numbers between these 2 inputs.

Steps for execution

1. Copy the code from ***“Advanced Software Paradigms\_CSCI\_6221\_10\_Sagar\_Sheth\_HW4.txt”***.
2. Open the below link in the web browser.
  - a. <https://www.programiz.com/c-programming/online-compiler/>
3. Paste the Code in and Click on the Execute Run.



```
main.c
1 // Online C compiler to run C program online
2 #include <stdio.h>
3
4 void GetPrimeRange(int n1, int n2)
5 {
6     int i,j,flag,temp;
7     if(n1>n2)
8     {
9         temp=n2;
10        n2=n1;
11        n1=temp;
12    }
13    for(i=n1;i<=n2;i++)
14    {
15        flag=0;
16        for(j=2;j<=i/2;j++)
17        {
18            if(i%j==0)
19            {
20                flag=1;
21                break;
22            }
23        }
24        if(flag==0)
25        {
26            printf("%d is a prime number.\n", i);
27        }
28    }
29 }
30 int main() {
31     int n1,n2;
32     printf("Enter 2 positive integers: \n");
33     printf("Enter First positive integer: \n");
34     scanf("%d", &n1);
35     printf("Enter Second positive integer: \n");
36     scanf("%d", &n2);
37     void (*IndirectGetPrimeRange)(int a, int b)=GetPrimeRange;
38     IndirectGetPrimeRange(n1,n2);
39
40 }
```

The screenshot shows an online C compiler interface. At the top, there's a tab labeled 'main.c' and a 'Run' button highlighted with a red box. The code area contains a C program that takes two integers as input and prints all prime numbers between them. The program uses a function 'GetPrimeRange' which is called indirectly via a function pointer in the 'main' function. The code is as follows:

4. The below output should be displayed on the terminal.

#### Output

```
/tmp/khwUPHCelm.o
Enter 2 positive integers:
Enter First positive integer:
40
Enter Second positive integer:
149
41 is a prime number.
43 is a prime number.
47 is a prime number.
53 is a prime number.
59 is a prime number.
61 is a prime number.
67 is a prime number.
71 is a prime number.
73 is a prime number.
79 is a prime number.
83 is a prime number.
89 is a prime number.
97 is a prime number.
101 is a prime number.
103 is a prime number.
107 is a prime number.
109 is a prime number.
113 is a prime number.
127 is a prime number.
131 is a prime number.
137 is a prime number.
139 is a prime number.
149 is a prime number.
|
```