PRACTICAL – III 22nd to 27th July 2024

Program-1

C Program to Display Prime Numbers Between Two Intervals Using Functions

Prime numbers have only 2 factors, 1 and themselves. For example, 2,3, 5, 7, ,… are the first 5 prime numbers. Here we will build a C program to display prime numbers between two intervals using functions using 2 approaches, for loop and while loop.

Example

Input: *num1 = 2, num2 = 10*

Output: *Prime numbers between 2 and 10 are: 2 3 5 7*

Explanation: *The prime numbers between the given intervals 2(starting limit) and 10(er are 2 3 5 and 7*

```
// C Program to demonstrate Prime Numbers
// Between Two Intervals Using for
// loop in a function
#include <stdio.h>
 // User-defined function to check
// prime number
int checkPrimeNumber(int number)
{    int i, f = 1;
     // Condition for finding the
    // prime numbers between the
    // given intervals
    for (i = 2; i <= number / 2; ++i)
    {  if (number % i == 0)
        { f = 0;
            break;
        }
    }
     return f;
```

```
}
// Driver code
int main()
{    int num1 = 2, num2 = 10, j, f;
     printf("Prime numbers between %d and %d are: ",
           num1, num2);
    for (j = num1; j < num2; ++j)
    {  // if flag is equal to 1 then
       // it is a prime number
       // calling the function
       f = checkPrimeNumber(j);
        if (f == 1)
       {     // Printing the result
          printf("%d ", j);
       }
    }
     return 0;
}
```

Output

Prime numbers between 2 and 10 are: 2 3 5 7

Program – II

Write a program in C to store elements in an array and print them.

```c
#include <stdio.h>
// Main function
int main()
{
    int arr[10];  // Declare an array of size 10 to store integer
values
    int i;
    // Print a message to prompt the user for input
    printf("\n\nRead and Print elements of an array:\n");
    printf("---------------------------------------\n");
```

```c
    // Prompt the user to input 10 elements into the array
    printf("Input 10 elements in the array :\n");

for(i=0; i<10; i++)
    {
          printf("element - %d : ",i);  // Prompt the user to input
the i-th element
        scanf("%d", &arr[i]);  // Read the input and store it in the
array
    }
    // Display the elements in the array
    printf("\nElements in array are: ");
    for(i=0; i<10; i++)
    {
        printf("%d  ", arr[i]);  // Print each element in the array
    }
    printf("\n");
      return 0;
}
```