

## Computer Programming Lab – 2

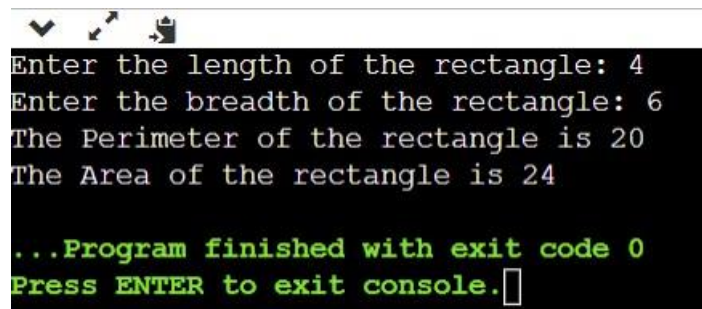
1. Write a function to calculate area and perimeter of a rectangle.

```
#include <stdio.h>

int pr(int len, int brd){
    int peri;
    peri = 2*(len+brd);
    return (peri);
}

int ar(int len, int brd){
    int ara;
    ara = (len*brd);
    return (ara);
}

int main()
{
    int l, b, p, a;
    printf("Enter the length of the rectangle: ");
    scanf("%d", &l);
    printf("Enter the breadth of the rectangle: ");
    scanf("%d", &b);
    p = pr(l,b);
    printf("The Perimeter of the rectangle is %d\n", p);
    a = ar(l,b);
    printf("The Area of the rectangle is %d", a);
    return 0;
}
```



```
Enter the length of the rectangle: 4
Enter the breadth of the rectangle: 6
The Perimeter of the rectangle is 20
The Area of the rectangle is 24

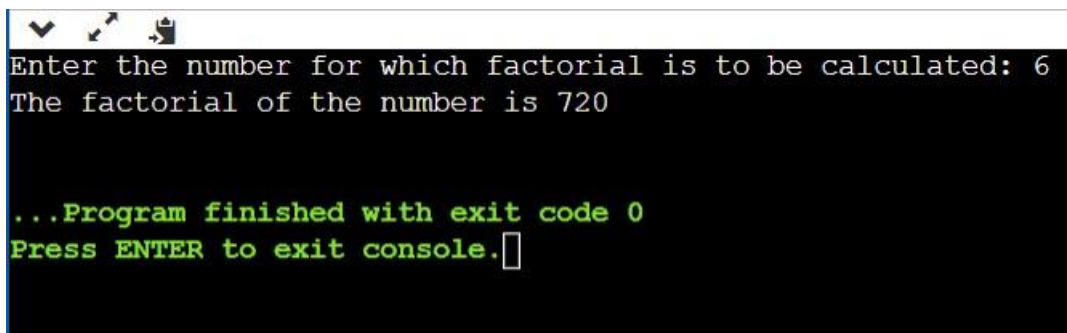
...Program finished with exit code 0
Press ENTER to exit console.
```

2. Write a function to calculate the factorial of a number (a non-negative integer). The function accepts the number as an argument

```
#include <stdio.h>
```

```
int fact(int number){  
    int fact = 1, i;  
    for(i=1; i<=number; i++){  
        fact = fact*i;  
    }  
    return (fact);  
}
```

```
int main()  
{  
    int num, Factorial;  
    printf("Enter the number for which factorial is to be calculated: ");  
    scanf("%d", &num);  
    Factorial = fact(num);  
    printf("The factorial of the number is %d\n", Factorial);  
    return 0;  
}
```



```
Enter the number for which factorial is to be calculated: 6  
The factorial of the number is 720  
  
...Program finished with exit code 0  
Press ENTER to exit console.
```

3. Write a function to check whether a number falls in a given range. Take number and range from user.

```
#include <stdio.h>
```

```

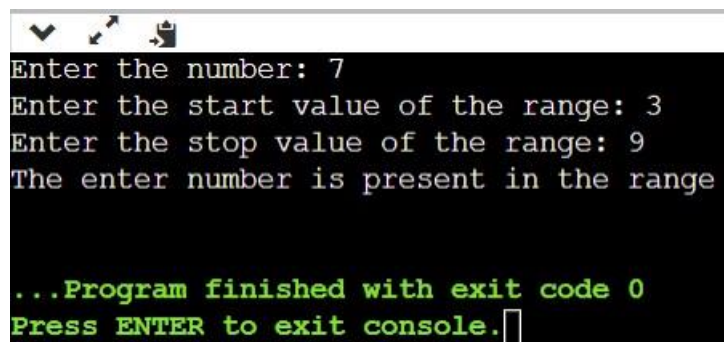
int check(int number, int starter, int stopper)
{
    if( (number>= starter) && (number<= stopper) )
        printf("The enter number is present in the range \n");
    else
        printf("The enter number is not present in the range");
    return 0;
}

```

```

void main()
{
    int num, start, stop, c;
    printf("Enter the number: ");
    scanf("%d", &num);
    printf("Enter the start value of the range: ");
    scanf("%d", &start);
    printf("Enter the stop value of the range: ");
    scanf("%d", &stop);
    c = check(num, start, stop);
}

```



```

Enter the number: 7
Enter the start value of the range: 3
Enter the stop value of the range: 9
The enter number is present in the range

...Program finished with exit code 0
Press ENTER to exit console.

```

4. Write a function that takes a number as a parameter and check the number is prime or not.

```
#include <stdio.h>
```

```

int prime(int number){
    int i, c=0;
    for (i = 2; i <= number / 2; ++i) {
        if (number % i == 0) {
            c = 1;
            break;
        }
    }

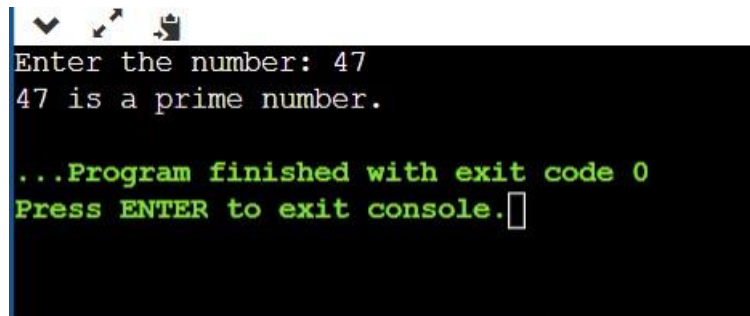
    if (c == 0)
        printf("%d is a prime number.", number);
    else
        printf("%d is not a prime number.", number);
    return 0;
}

```

```

void main()
{
    int num, Check;
    printf("Enter the number: ");
    scanf("%d", &num);
    Check = prime(num);
}

```



```

Enter the number: 47
47 is a prime number.

...Program finished with exit code 0
Press ENTER to exit console.

```

5. Write a function to print largest of three numbers.

```
#include <stdio.h>
```

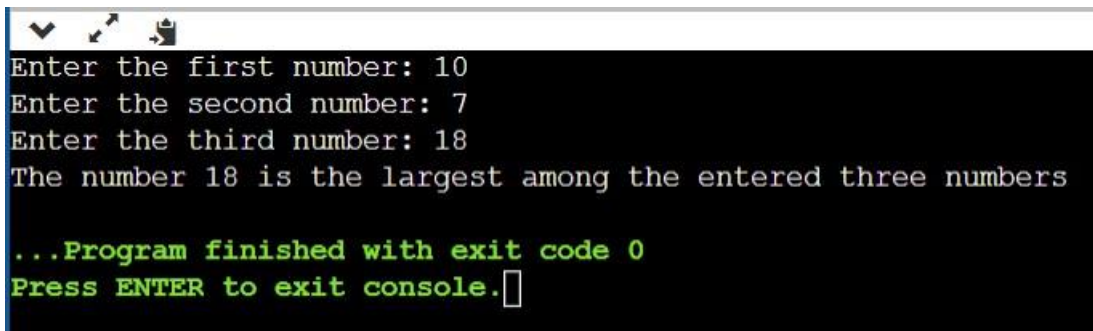
```

int greatest(int number1, int number2, int number3){
    if (number1>number2 && number1>number3)
        printf("The number %d is the largest among the entered three numbers",
number1);

```

```
    else if (number2>number3)
        printf("The number %d is the largest among the entered three numbers",
number2);
    else
        printf("The number %d is the largest among the entered three numbers",
number3);
}
```

```
void main()
{
    int num1, num2, num3, Check;
    printf("Enter the first number: ");
    scanf("%d", &num1);
    printf("Enter the second number: ");
    scanf("%d", &num2);
    printf("Enter the third number: ");
    scanf("%d", &num3);
    Check = greatest(num1, num2, num3);
}
```



```
Enter the first number: 10
Enter the second number: 7
Enter the third number: 18
The number 18 is the largest among the entered three numbers

...Program finished with exit code 0
Press ENTER to exit console.
```