

Introduction to Sequential Programming

OBJECTIVES:

1. Evaluation of arithmetic expressions.
 2. Writing a C program using sequential structures.
- You should prepare the preliminary work before coming to the laboratory session. Please bring soft copies of the preliminary work with you.
 - You will be asked to write two new C programs during the laboratory session related with the sequential programming.

PRELIMINARY WORK:

1. Assume that in the following program fragments, variables are `int` type.
Write separate C programs to evaluate the given program fragments and show the outputs produced by each of the program fragments by writing the results in the corresponding boxes.

Part a-)

```
i= 5;  
j = ++i * 3 - 2 ;  
printf(" i=%d j=%d \n", i, j);
```

Part b-)

```
m=4; n= 3  
j = m / m % m * m + n * 4;  
printf(" m=%d n=%d j=%d\n",m,n,j);
```

Part c-)

```
m = 3 * (n = 3);  
m *= n--;  
j = m + n;  
printf(" m=%d n=%d j=%d\n",m,n,j);
```

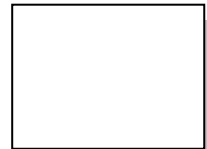
Part d-)

```
x = 2; j = 8;  
j = 1 + (m %= 1 + (n /= -1 + x++));  
printf(" m=%d n=%d j=%d x=%d\n",m,n,j,x);
```



Part f-)

```
a= 3; b=5;  
printf("Result=%d\n",a-- && ++a && b--);  
printf("a=%d b=%d\n", a, b);
```



2. Write a C program to calculate the area of a rectangle. The program should prompt the user to enter the width and height of the rectangle, and then calculate and print the area of the rectangle.
3. Write a C program that asks the user to enter a three digit number, then prints the number with its digits reversed. A session with the program should have the following appearance:

```
Enter a two-digit number: 281  
The reversal is: 182
```

Hint: If n is an integer, then $n \% 10$ is the last digit in n and $n / 10$ is n with the last digit removed.