

**C Language Programming: Homework #7**  
**Assigned on 12/05/2017(Tuesday), Due on 12/12/2017(Tuesday)**

Design a variable argument function that can compute any kind of polynomial such as  $a_0 + a_1x^1 + a_2x^2 \dots + a_nx^n$ . Please use `argv` and `argc` in `main` to input.

### **Requirement:**

Use *va\_list* to design a function **compute(x, N, a0, ...)** that return the result of polynomial  $a_0 + a_1x^1 + a_2x^2 \dots + a_nx^n$ , **N** represent the number of parameter. Use `argv` to input variable **x**, call **compute(x, 3)**, **compute(x, 2, 4, 6)**, **compute(x, 1, 2, 0, 7, 5)** and print the result to the screen.

### **Example:**

Your program must have these three function calls and you can only use a function **compute()**.

```
r1 = compute(x, 1, 3);  
r2 = compute(x, 3, 2, 4, 6);  
r3 = compute(x, 5, 1, 2, 0, 7, 5);
```

### **Command line:**

```
> ./hw7 [x]
```

### **Output:**

Output the result of functions mentioned above to the screen.

(Note: **Don't** print any unnecessary message to screen, thank you.)

For example:

```
> ./hw7 2  
3  
34  
141
```

## Score:

Use of *va\_list*: 50%

Correctness: 30%

Command line input: 10%

Report: 10%