Звіт

CPA Programing Essentials in C++

Chapter 1

## Lab_1_2_6

```
[ec2-user@ip-172-31-81-43 Lab_1_2_6]$ g++ -lm -o output Lab*.cpp
[ec2-user@ip-172-31-81-43 Lab_1_2_6]$ ./output
Hello world!
It's me, your first program.
[ec2-user@ip-172-31-81-43 Lab_1_2_6]$
```

## Lab_1_3_1

```
[ec2-user@ip-172-31-81-43 Lab_1_3_1]$ g++ -lm -o output Lab*.cpp
[ec2-user@ip-172-31-81-43 Lab_1_3_1]$ ./output
result:  10800
[ec2-user@ip-172-31-81-43 Lab_1_3_1]$
```

## Lab_1_4_2

```
[ec2-user@ip-172-31-81-43 Lab_1_4_2]$ g++ -lm -o output Lab*.cpp
[ec2-user@ip-172-31-81-43 Lab_1_4_2]$ ./output
result: 6 expected result : 6
result: 24 expected result : 24
result: 6 expected result : 6
result: 32 expected result : 32
result: 0 expected result : 0
[ec2-user@ip-172-31-81-43 Lab_1_4_2]$
```

## Lab_1_4_40(1)

```
[ec2-user@ip-172-31-81-43 Lab_1_4_40(1)]$ g++ -lm -o output Lab*.cpp
[ec2-user@ip-172-31-81-43 Lab_1_4_40(1)]$ ./output
Enter value for x: 1
y = 0.0949234[ec2-user@ip-172-31-81-43 Lab_1_4_40(1)]$ ./output
Enter value for x: -1.5
y = 0.0890702[ec2-user@ip-172-31-81-43 Lab_1_4_40(1)]$ ./output
Enter value for x: 12.345
y = 0.101057[ec2-user@ip-172-31-81-43 Lab_1_4_40(1)]$ ./output
Enter value for x: 4
y = 0.0989138[ec2-user@ip-172-31-81-43 Lab_1_4_40(1)]$
```

## Lab_1_4_40(2)

```
[ec2-user@ip-172-31-81-43 Lab_1_4_40(2)]$ g++ -lm -o output Lab*.cpp
[ec2-user@ip-172-31-81-43 Lab_1_4_40(2)]$ ./output
Enter i: 100
Enter j: 3
261838[ec2-user@ip-172-31-81-43 Lab_1_4_40(2)]$ ./output
Enter i: 3
Enter j: 100
-5[ec2-user@ip-172-31-81-43 Lab_1_4_40(2)]$ ./output
Enter i: 123
Enter j: 321
-125[ec2-user@ip-172-31-81-43 Lab_1_4_40(2)]$ ./output
Enter i: 12345
Enter j: 54321
-12347[ec2-user@ip-172-31-81-43 Lab_1_4_40(2)]$
```

## Lab_1_6_11

```
[ec2-user@ip-172-31-81-43 Lab_1_6_11]$ g++ -lm -o output Lab*.cpp
[ec2-user@ip-172-31-81-43 Lab_1_6_11]$ ./output
Enter a value: -2
THAT'S NOT TRUE :(
[ec2-user@ip-172-31-81-43 Lab_1_6_11]$ ./output
Enter a value: 0
THAT'S TRUE :)
[ec2-user@ip-172-31-81-43 Lab_1_6_11]$ ./output
Enter a value: 4
THAT'S TRUE :)
[ec2-user@ip-172-31-81-43 Lab_1_6_11]$ ./output
Enter a value: 10
THAT'S TRUE :)
[ec2-user@ip-172-31-81-43 Lab_1_6_11]$ ./output
Enter a value: 22
THAT'S NOT TRUE :(
[ec2-user@ip-172-31-81-43 Lab_1_6_11]$ ./output
Enter a value: 100
THAT'S NOT TRUE :(
[ec2-user@ip-172-31-81-43 Lab_1_6_11]$ ./output
Enter a value: 111
THAT'S TRUE :)
[ec2-user@ip-172-31-81-43 Lab_1_6_11]$ ./output
Enter a value: 654
THAT'S NOT TRUE :(
[ec2-user@ip-172-31-81-43 Lab_1_6_11]$
```

## Lab_1_7_3

```
[ec2-user@ip-172-31-81-43 Lab_1_7_3]$ g++ -lm -o output Lab*.cpp
[ec2-user@ip-172-31-81-43 Lab_1_7_3]$ ./output
2.3
2.30
2.123456
2.12
2
[ec2-user@ip-172-31-81-43 Lab_1_7_3]$
```

## Lab_1_7_4

```
[ec2-user@ip-172-31-81-43 Lab_1_7_4]$ g++ -lm -o output Lab*.cpp
[ec2-user@ip-172-31-81-43 Lab_1_7_4]$ ./output
x:1
y:1
Results are equal (by 0.000001 epsilon)
[ec2-user@ip-172-31-81-43 Lab_1_7_4]$ ./output
x:1011
y:1112
Results are not equal (by 0.000001 epsilon)
[ec2-user@ip-172-31-81-43 Lab_1_7_4]$ ./output
x:123
y:124
Results are not equal (by 0.000001 epsilon)
[ec2-user@ip-172-31-81-43 Lab_1_7_4]$
```

Lab_1_7_5

```
[ec2-user@ip-172-31-81-43 Lab_1_7_5]$ g++ -lm -o output Lab*.cpp
[ec2-user@ip-172-31-81-43 Lab_1_7_5]$ ./output
Input first octet:4
Input second octet:2
Input third octet:255
Input fourth octet:212
IP: 4.2.255.212
[ec2-user@ip-172-31-81-43 Lab_1_7_5]$ ./output
Input first octet:4
Input second octet:1
Input third octet:2
Input fourth octet:3
IP: 4.1.2.3
[ec2-user@ip-172-31-81-43 Lab_1_7_5]$ ./output
Input first octet:172
Input second octet:31
Input third octet:81
Input fourth octet:333
The number must be in the range from 1 to 255[ec2-user@ip-172-31-81-43 Lab_1_7_5
]$
```