세계 속의 빛
이공계 대학

Computer Programming

Quiz1

Oct. 20, 2023

Problem 1 (pr1.c)

- Tom goes on a bus tour. The tour guide gives free time. Write a program to calculate the time Tom should return to the tour bus. The result of input and output must be identical to the given output.

Problem 1 (pr1.c)

- **Program output**

```
[ohyong@cse Quiz1_c456]$ vi pr1.c
[ohyong@cse Quiz1_c456]$ gcc pr1.c -o pr1
[ohyong@cse Quiz1_c456]$ ./pr1
Enter the current time (hour:minute)-> 14:30
Enter your free time (in minutes)-> 50
Time to return (hour:minute)-> 15:20
```

```
[ohyong@cse Quiz1_c456]$ ./pr1
Enter the current time (hour:minute)-> 09:00
Enter your free time (in minutes)-> 75
Time to return (hour:minute)-> 10:15
```

Problem 2 (pr2.c)

- Write a program that takes a positive integer as input and calculates the factorial value. Implement it using a *while* loop as a **user-defined function.**
  - If you do not create and implement a user function and just process factorial within the main() function, you will get 0 points.

e.g $5! = 5 \times 4 \times 3 \times 2 \times 1, 0! = 1$

Problem 2 (pr2.c)

- **Program output**

```
[ohyong@cse Quiz1_c456]$ vi pr2.c
[ohyong@cse Quiz1_c456]$ gcc pr2.c -o pr2
[ohyong@cse Quiz1_c456]$ ./pr2
Enter a number: 5
Result-> 5! = 120
```

```
[ohyong@cse Quiz1_c456]$ ./pr2
Enter a number: 10
Result-> 10! = 3628800
```

```
[ohyong@cse Quiz1_c456]$ ./pr2
Enter a number: 0
Result-> 0! = 1
```

Problem 3 (pr3.c)

- Write a program that outputs the following:
  - The input integer is greater than or equal to 1 and less than or equal to 9.

- **Program output**

```
[ohyong@cse Quiz1_c456]$ vi pr3.c
[ohyong@cse Quiz1_c456]$ gcc pr3.c -o pr3 -std=c99
[ohyong@cse Quiz1_c456]$ ./pr3
Enter a num: 5
1****
12***
123**
1234*
12345
```

```
[ohyong@cse Quiz1_c456]$ ./pr3
Enter a num: 9
1********
12*******
123******
1234*****
12345****
123456***
1234567**
12345678*
123456789
```

Submission

- **Submit to CSE server**

At the end of the Quiz1, submit your C source files by typing

~gs1401/bin/submit Quiz1_c456 pr1.c pr2.c pr3.c // due : 16:00

You may check that you have submitted your source code correctly by typing

~gs1401/bin/submit -check