세계 속의 빛
이공계 대학

Computer Programming

Quiz1

Oct. 25, 2024

Problem 1 (pr1.c)

- Write a program that takes two integers as input and determines whether the result of their multiplication is even or odd.

Problem 1 (pr1.c)

- **Program output**

```
[ohyong@cse Quiz1_s123]$ vi pr1.c
[ohyong@cse Quiz1_s123]$ gcc pr1.c -o pr1
[ohyong@cse Quiz1_s123]$ ./pr1
Enter two integers: 2 4
The product is even.
```

```
[ohyong@cse Quiz1_s123]$ ./pr1
Enter two integers: 3 -5
The product is odd.
```

```
[ohyong@cse Quiz1_s123]$ ./pr1
Enter two integers: 6 0
The product is even.
```

Problem 2 (pr2.c)

- Write a program that continuously takes integer inputs from the user, adds them up, and then outputs the final sum if the user enters `0`.
  - ✓ Use the while statement. 4 points deducted if while loop is not used

Problem 2 (pr2.c)

- **Program output**

```
[ohyong@cse Quiz1_s123]$ vi pr2.c
[ohyong@cse Quiz1_s123]$ gcc pr2.c -o pr2
[ohyong@cse Quiz1_s123]$ ./pr2
Enter numbers (enter 0 to stop):
5
4
0
The total sum is: 9
```

```
[ohyong@cse Quiz1_s123]$ ./pr2
Enter numbers (enter 0 to stop):
5
3
-8
-7
0
The total sum is: -7
```

```
[ohyong@cse Quiz1_s123]$ ./pr2
Enter numbers (enter 0 to stop):
0
The total sum is: 0
```

Problem 3 (pr3.c)

- Write a digitSum() function that takes a positive integer *n* less than 1 million from the user and returns the sum of each digit. Display an error if a number out of range is entered.
  - ✓ If you write a program using only the main() function without implementing the digitSum() function, you will receive a 4-point deduction.
  - ✓ Implement using a while loop within the digitSum() function. In other words, if you implement it only with an if - else statement without using a while loop, 4 points will be deducted.
  - ✓ The function prototype is as follows:

```
int digitSum(int n)
{


}
```

Problem 3 (pr3.c)

- **Program output**

```
[ohyong@cse Quiz1_s123]$ vi pr3.c
[ohyong@cse Quiz1_s123]$ gcc pr3.c -o pr3
[ohyong@cse Quiz1_s123]$ ./pr3
Enter a positive integer (less than or equal to 1,000,000): 123000000
Please enter a valid positive integer less than or equal to 1,000,000.
[ohyong@cse Quiz1_s123]$ ./pr3
Enter a positive integer (less than or equal to 1,000,000): 123456
The sum of the digits is: 21
[ohyong@cse Quiz1_s123]$ ./pr3
Enter a positive integer (less than or equal to 1,000,000): -34
Please enter a valid positive integer less than or equal to 1,000,000.
[ohyong@cse Quiz1_s123]$ ./pr3
Enter a positive integer (less than or equal to 1,000,000): 2468
The sum of the digits is: 20
```

Submission

- **Submit to CSE server**

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

~gs1401/bin/submit Quiz1_s123 pr1.c pr2.c pr3.c // due : 10:50

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

~gs1401/bin/submit -check