세계 속의 빛 광주과학기술원

Computer Programming

Quiz1

Apr. 14, 2023

Problem 1 (pr1.c)

- Write a program that calculates and prints the sum of three integers entered by the user. However, if the user enters a negative number, it is excluded from the total.

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 a number: 10
Enter a number: 20
Enter a number: -30
Enter a number: 40

Total is 70.
```

```
[ohyong@cse Quiz1_s123]$ ./pr1
Enter a number: 100
Enter a number: -200
Enter a number: 300
Enter a number: -400
Enter a number: 500

Total is 900.
```

Problem 2 (pr2.c)

- Write a program that receives two integers a and b (2 <= a < b <=1000) from the user, prints the prime number between the two numbers, and prints the sum. The function's prototype is:

```
void find_SumPrime(int a, int b);
```

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 two integers a and b(2 <= a < b <=1000): 2 10
2 3 5 7
Sum of prime numbers between 2 and 10 is 17
```

```
[ohyong@cse Quiz1_s123]$ ./pr2
Enter two integers a and b(2 <= a < b <=1000): 10 1000
11 13 17 19 23 29 31 37 41 43 47 53 59 61 67 71 73 79 83 89 97 101 103 107 109 113
27 131 137 139 149 151 157 163 167 173 179 181 191 193 197 199 211 223 227 229 233
39 241 251 257 263 269 271 277 281 283 293 307 311 313 317 331 337 347 349 353 359
67 373 379 383 389 397 401 409 419 421 431 433 439 443 449 457 461 463 467 479 487
91 499 503 509 521 523 541 547 557 563 569 571 577 587 593 599 601 607 613 617 619
31 641 643 647 653 659 661 673 677 683 691 701 709 719 727 733 739 743 751 757 761
69 773 787 797 809 811 821 823 827 829 839 853 857 859 863 877 881 883 887 907 911
19 929 937 941 947 953 967 971 977 983 991 997
Sum of prime numbers between 10 and 1000 is 76110
```

Problem 3 (pr3.c)

- Write a program that outputs the day of the week given a date expressed as d(day), m(month) and y(year). You will use the following formulae:

$$m_1 = \begin{cases} m-2\,, & \text{if } m \geq 3 \\ m+10\,, & \text{if } m < 3 \end{cases} \qquad y_1 = \begin{cases} y\,, & \text{if } m \geq 3 \\ y-1\,, & \text{if } m < 3 \end{cases}$$

$$f = d + y_s + \frac{y_s}{4} - 2n_s + \frac{n_s}{4} + \frac{26m_1 - 2}{10}$$

with n_s being the first two digits of y_1, and y_s the last two digits of y_1.

The day of the week is given by the modulo of f and 7 (0 is Sunday, 1 is Monday, etc.). Print your answer as a constant character string (i.e. "Sunday", "Monday", etc.).

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 date in d m y format : 14 4 2023
Friday
```

```
[ohyong@cse Quiz1_s123]$ ./pr3
Enter date in d m y format : 25 12 2022
Sunday
```

```
[ohyong@cse Quiz1_s123]$ ./pr3
Enter date in d m y format : 1 1 2024
Monday
```

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 : 18:00

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

~gs1401/bin/submit -check