

CSC3320 System Level Programming

Lab Assignment 7 - Post-Lab

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Due at 11:59 pm on Friday, March 5, 2021

Purpose: Learn how to get input and print out formatted results using *scanf* and *printf* separately in C.

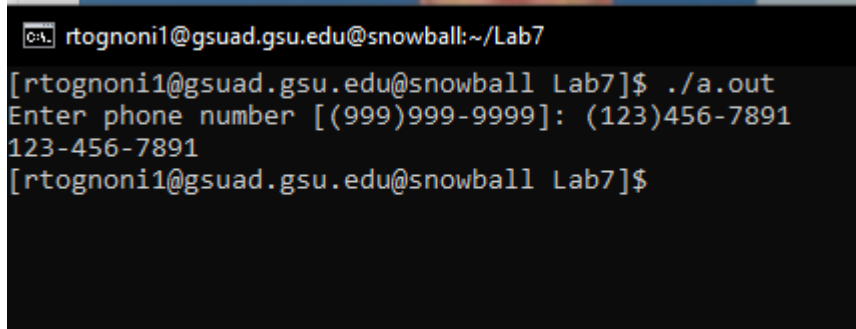
Part 1:

1) Write a C program named as ***getPhoneNumber.c*** that prompts the user to enter a telephone number in the form (999)999-9999 and then displays the number in the form 999-999-999:

Enter phone number [(999)999-9999]: (404)123-4567

You entered 404-123-4567

Question: Execute your ***getPhoneNumber.c*** and attach a [screenshot](#) of the output. Then [write](#) the source code of ***getPhoneNumber.c*** in [your answer sheet](#) and upload your file ***getPhoneNumber.c*** to googleClassroom.



```
rtognoni1@gsuad.gsu.edu@snowball:~/Lab7
[rtognoni1@gsuad.gsu.edu@snowball Lab7]$ ./a.out
Enter phone number [(999)999-9999]: (123)456-7891
123-456-7891
[rtognoni1@gsuad.gsu.edu@snowball Lab7]$
```

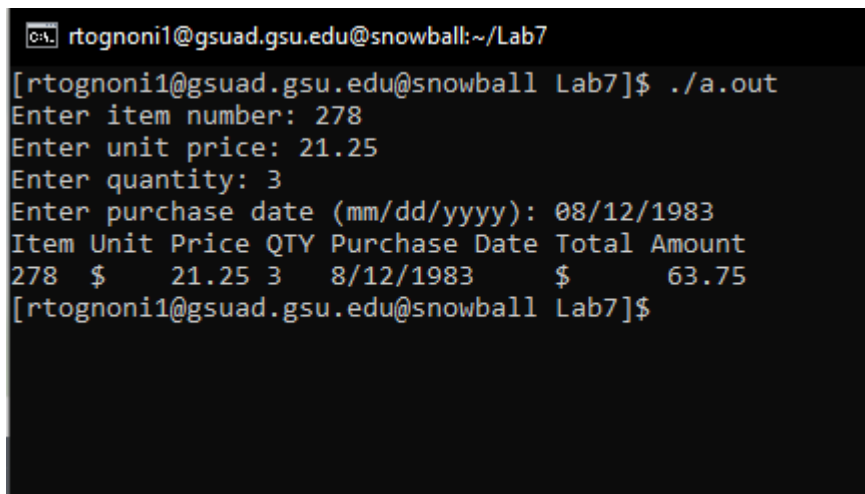
```
#include<stdio.h>

int main() {
    int a,b,c;
    printf("Enter phone number [(999)999-9999]: ");
    // %*c means do not assign character to any variable.
    scanf("%*c %d %*c %d %*c %d", &a, &b, &c);
    printf("%d-%d-%d\n", a, b, c);
}
```

2) Write a program named as **calcPrice.c** that formats product information entered by the user and calculate the total amount of purchase.

```
Enter item number:583
Enter unit price:13.5
Enter quantity:2
Enter purchase date (mm/dd/yyyy):09/15/2016
Item Unit Price QTY Purchase Date Total Amount
583      $ 13.50 2    9/15/2016          $ 27.00
```

The item number, quantity and date should be left justified; the unit price and total amount should be right justified. Hint: Use tabs to line up the columns. Question: Execute your **calcPrice.c** and attach a [screenshot](#) of the output. Then [write](#) the source code of **calcPrice.c** in [your answer sheet](#) and upload your file **calcPrice.c** to [classroom](#).



```
rtognoni1@gsuad.gsu.edu@snowball:~/Lab7
[rtognoni1@gsuad.gsu.edu@snowball Lab7]$ ./a.out
Enter item number: 278
Enter unit price: 21.25
Enter quantity: 3
Enter purchase date (mm/dd/yyyy): 08/12/1983
Item Unit Price QTY Purchase Date Total Amount
278 $ 21.25 3 8/12/1983 $ 63.75
[rtognoni1@gsuad.gsu.edu@snowball Lab7]$
```

```
#include <stdio.h>

int main () {

    int itemNum, quantity, day, month, year;
    float unitPrice;

    printf("Enter item number: ");
    scanf("%d", &itemNum);
    printf("Enter unit price: ");
    scanf("%f", &unitPrice);
    printf("Enter quantity: ");
    scanf("%d", &quantity);
    printf("Enter purchase date (mm/dd/yyyy): ");
    scanf("%d %*c %d %*c %d", &day, &month, &year);

    printf("Item Unit Price QTY Purchase Date Total Amount\n");
    printf("%-4d $%9.2f %-3d %d/%d/%-9d$%11.2f\n",
            itemNum, unitPrice, quantity, day, month, year, unitPrice * quantity );

}
```

Part 2: (Optional)

Note : This part is not for grading. But you will get some feedback. Can you write a shell script to finish the same task as in question 1) of Part 1?

You can absolutely replicate either question in shell. For part 1 you could use `grep` and `sed` to manipulate the phone numbers for the output. For part 2 you could use the shell version of `printf` to replicate it exactly but it may be more difficult with `echo` given the data types. .

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Submission:

- Please follow the instructions below step by step, and then write a report by answering the questions and upload the report (named as `Lab7_FirstNameLastName.pdf` or `Lab7_FirstNameLastName.doc`) to Google Classroom, under the rubric Lab 7 Out-of-lab Assignment. • Upload files `getPhoneNumber.c` and `calcPrice.c` to the rubric named “Lab7” of the classroom. **Note: if you do not upload the C files you would get zero for this assignment.**
- Please add the lab assignment NUMBER and your NAME at the top of your file sheet.

