CSC3320 System Level Programming
Lab Assignment 7 - Post-Lab

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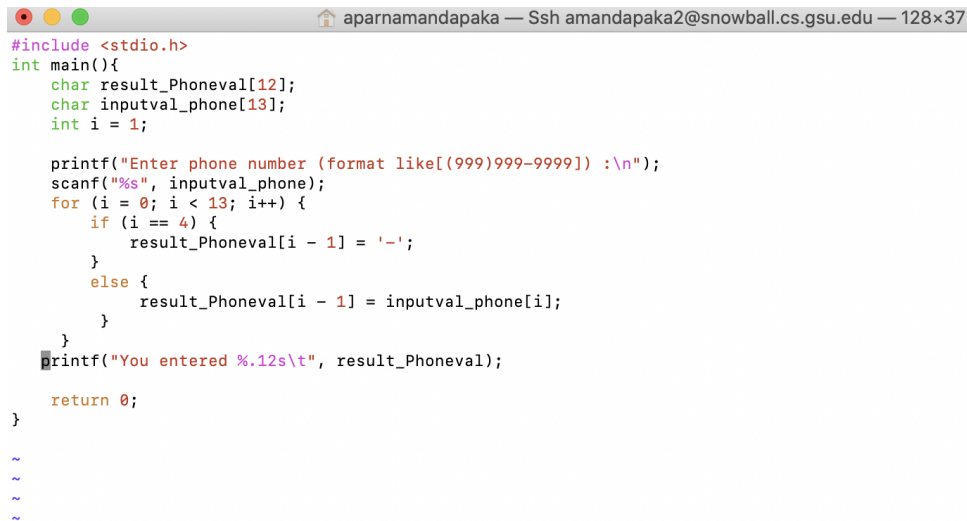
using *scanf* and *printf* separately in C.

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.

```
⬤ ⬤ ⬤                  🏠 aparnamandapaka — Ssh amandapaka2@snowball.cs.gsu.edu — 128×37
#include <stdio.h>
int main(){
    char result_Phoneval[12];
    char inputval_phone[13];
    int i = 1;

    printf("Enter phone number (format like[(999)999-9999]) :\n");
    scanf("%s", inputval_phone);
    for (i = 0; i < 13; i++) {
        if (i == 4) {
            result_Phoneval[i - 1] = '-';
        }
        else {
            result_Phoneval[i - 1] = inputval_phone[i];
        }
    }
    printf("You entered %.12s\t", result_Phoneval);

    return 0;
}
~
~
~
~
```

```
-bash-4.2$
-bash-4.2$ ls
ad-bk.txt         calculator.sj       hello.sh       mandatabase       question2.sh
address-book.txt  checkError.sh       Helpme         mandatabase.txt   question.sh
a.out             fn.txt              helpme.sh      midterm           Result
calcPrice.c       foo.sh              helpme.sh.txt  myexamfile.txt    simple.sh
calcPrice.c.save  foo.sj              homeworks      output.txt        temp_course.txt
calculator        getPhoneNumber.c    Lab3           phonebook.sh      test.out
calculator.sh     getPhoneNumber.c M-M Lab4          phone.out
-bash-4.2$ gc.getPhoneNumber.c -o phone.out
-bash: gc.getPhoneNumber.c: command not found
-bash-4.2$ gcc.getPhoneNumber.c -o phone.out
-bash: gcc.getPhoneNumber.c: command not found
-bash-4.2$ gcc getPhoneNumber.c -o phone.out
-bash-4.2$ ./phone.out
Enter phone number (format like[(999)999-9999]) :
(404)123-4567
You entered 404-123-4567         -bash-4.2$
-bash-4.2$
-bash-4.2$
```

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.

```c
#include <stdio.h>
int main(){
    int item;
    double price;
    int quantity;
    char date[10];
    printf("Enter item number:");
    scanf("%d", &item);
    printf("Enter unit price:");
    scanf("%lf", &price);
    printf("Enter quantity:");
    scanf("%d", &quantity);
    printf("Enter purchase date:");
    scanf("%s", date);
    double total = price * quantity;
    printf("Item\tUnit Price\tQTY\tPurchase Date\tTotal Amount\n");
    printf("%d\t$%9.2lf\t%d\t%s\t$%9.2lf\n\n", item, price, quantity, date, total);
    return 0;
}
~
~
```

```
-bash-4.2$
-bash-4.2$ gcc calcPrice.c -o test.out
-bash-4.2$ ./test.out
Enter item number:583
Enter unit price:13.5
Enter quantity:2
Enter purchase date:09/15/2016
Item    Unit Price      QTY     Purchase Date   Total Amount
583     $    13.50      2       09/15/2016      $    27.00

-bash-4.2$
```

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? **Yes, a shell script can be written to do the same task as in question 1 to display the phone number as output.**

Submssion:

- 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.