

CSC3320 System Level Programming

Lab Assignment 7 - Post-Lab

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.

```
#include<stdio.h>
```

```
int main(){
```

```
char phone[13];
```

```
printf("Enter phone number [(999)999-9999]:");
```

```
scanf("%s",phone);
```

```
char nphone[12];
```

```
int i;
```

```
for(i=1;i<13;i++){
```

```
if(i==4){
```

```
nphone[i-1] = '-';
```

```
}
```

```
else{
```

```
nphone[i-1] = phone[i];
```

```
}
```

```
}
```

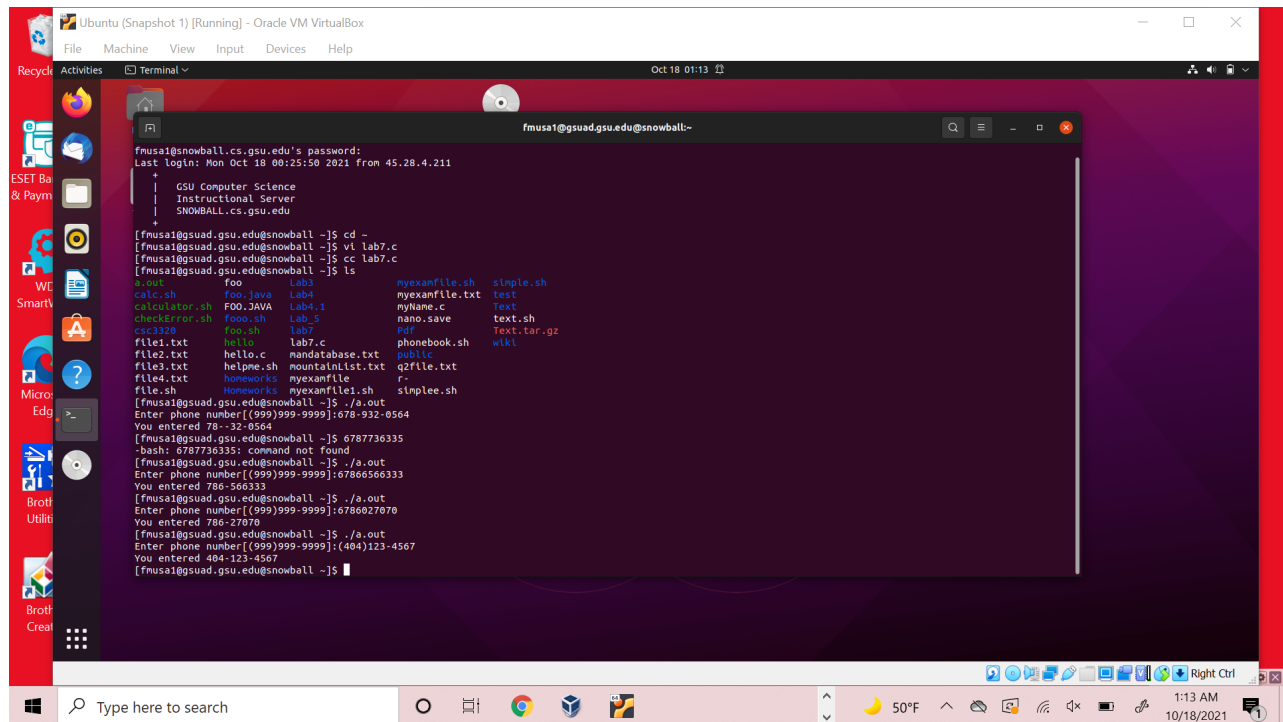
```
//add ending char
```

```
nphone[i-1] = '\0';
```

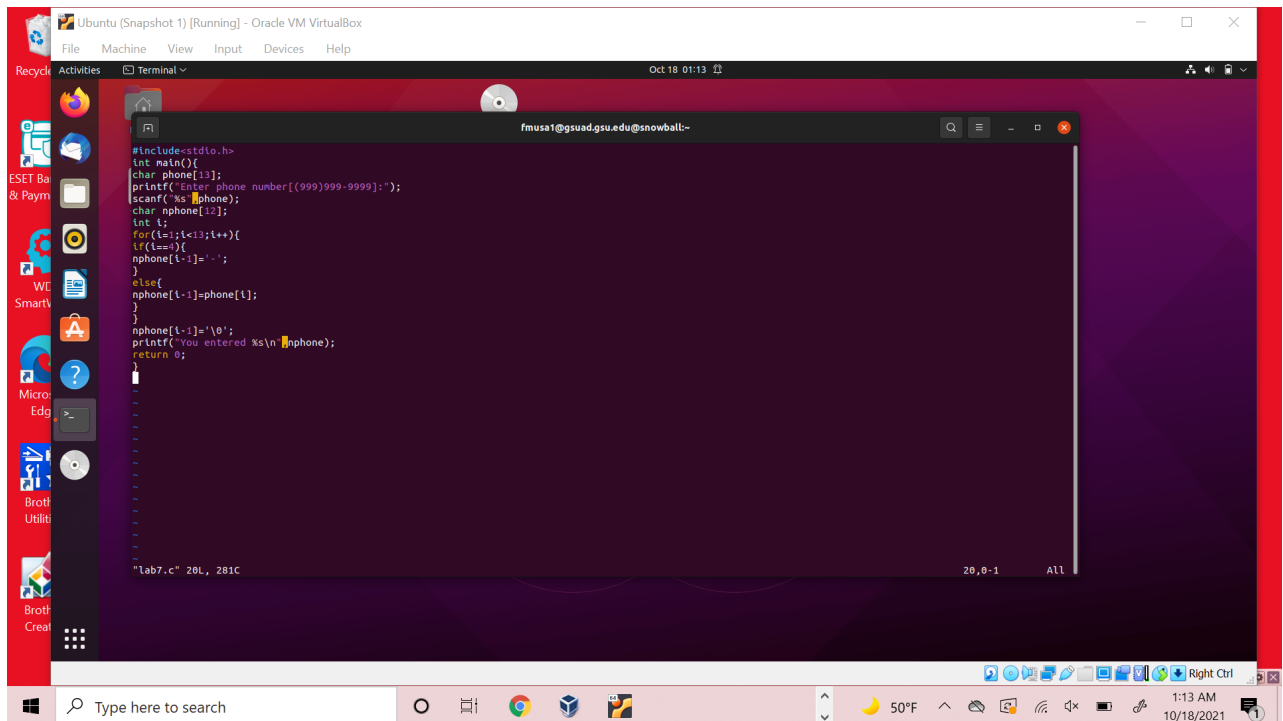
```
printf("You entered %s\n",nphone);
```

```
return 0;
```

```
}
```



```
fmsa1@snowball.cs.gsu.edu's password:
Last login: Mon Oct 18 00:25:50 2021 from 45.28.4.211
+
+   GSU Computer Science
+   | Instructional Server
+   | SNOWBALL.cs.gsu.edu
+
[fmsa1@gsuad.gsu.edu@snowball ~]$ cd ~
[fmsa1@gsuad.gsu.edu@snowball ~]$ vi lab7.c
[fmsa1@gsuad.gsu.edu@snowball ~]$ cc lab7.c
[fmsa1@gsuad.gsu.edu@snowball ~]$ ls
a.out          foo.java      Lab3          myexanfile.sh  simple.sh
calc.sh        foo.java      Lab4          myexanfile.txt  test
calculator.sh  foo.java      Lab4.1        myName.c        Text
checkError.sh  foo.sh        Lab_5         nano.save       text.sh
csc3320        foo.sh        lab7          Pdf             Text.tar.gz
file1.txt      hello        lab7.c        phonebook.sh    wikt
file2.txt      hello.c      mandatabase.txt public
file3.txt      helpme.sh   mountainList.txt q2file.txt
file4.txt      homeworks   myexanfile    r-
file.sh        homeworks   myexanfile1.sh simplee.sh
[fmsa1@gsuad.gsu.edu@snowball ~]$ ./a.out
Enter phone number[(999)999-9999]:678-932-0564
You entered 78-32-0564
[fmsa1@gsuad.gsu.edu@snowball ~]$ 6787736335
-bash: 6787736335: command not found
[fmsa1@gsuad.gsu.edu@snowball ~]$ ./a.out
Enter phone number[(999)999-9999]:67866566333
You entered 786-566333
[fmsa1@gsuad.gsu.edu@snowball ~]$ ./a.out
Enter phone number[(999)999-9999]:6786027070
You entered 786-27070
[fmsa1@gsuad.gsu.edu@snowball ~]$ ./a.out
Enter phone number[(999)999-9999]:(404)123-4567
You entered 404-123-4567
[fmsa1@gsuad.gsu.edu@snowball ~]$
```



```
#include<stdio.h>
int main(){
    char phone[13];
    printf("Enter phone number[(999)999-9999]:");
    scanf("%s",phone);
    char nphone[12];
    int i;
    for(i=1;i<13;i++){
        if(i==4){
            nphone[i-1]='-';
        }
        else{
            nphone[i-1]=phone[i];
        }
    }
    nphone[i-1]='\0';
    printf("You entered %s\n",nphone);
    return 0;
}
```

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**.

```
int main(){
```

```
    int item_number;
```

```
    double unit_price;
```

```
    int quantity;
```

```
    char purchase_date[12];
```

```
    printf("Enter item number:");
```

```
    scanf("%d", &item_number);
```

```
    printf("Enter unit price:");
```

```
    scanf("%lf", &unit_price);
```

```
    printf("Enter quantity:");
```

```
    scanf("%d", &quantity);
```

```
    printf("Enter purchase date:");
```

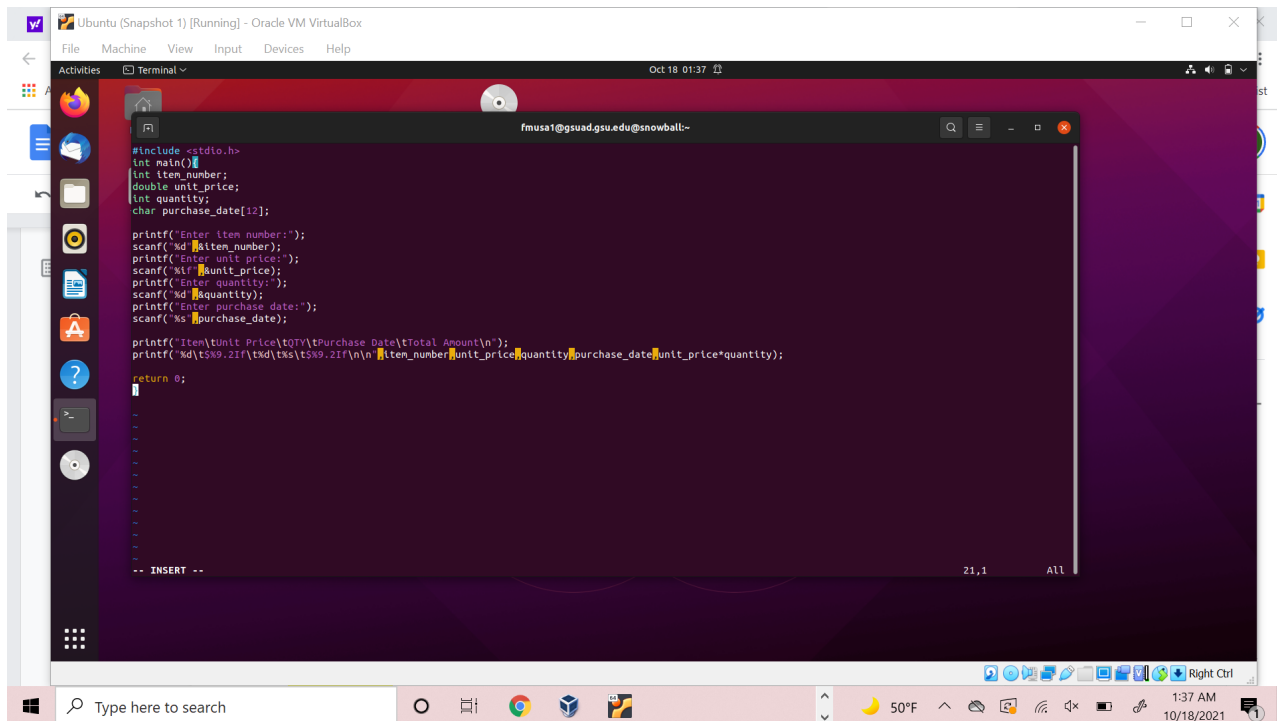
```
    scanf("%s", purchase_date);
```

```
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_number, unit_price, quantity, purchase_date,  
unit_price * quantity);
```

```
return 0;
```

```
}
```



The screenshot shows a Windows 10 desktop environment. A window titled "Ubuntu (Snapshot 1) [Running] - Oracle VM VirtualBox" is open. Inside the window, a terminal window is running a C program. The program's output shows a table header and one row of data. The table header is "Item\tUnit Price\tQTY\tPurchase Date\tTotal Amount\n". The row of data is "21\t\$9.21\t1\t\t\$9.21\n\n". The terminal window also shows the source code of the program, which includes headers, variable declarations, and printf/scanf statements. The Windows taskbar at the bottom shows the search bar, task view button, and several application icons. The system tray on the right shows the date and time as 1:37 AM on 10/18/2021.

```
#include <stdio.h>
int main()
{
    int item_number;
    double unit_price;
    int quantity;
    char purchase_date[12];

    printf("Enter item number:");
    scanf("%d", &item_number);
    printf("Enter unit price:");
    scanf("%lf", &unit_price);
    printf("Enter quantity:");
    scanf("%d", &quantity);
    printf("Enter purchase date:");
    scanf("%s", &purchase_date);

    printf("Item\tUnit Price\tQTY\tPurchase Date\tTotal Amount\n");
    printf("%d\t$%9.2lf\t%d\t\t$%9.2lf\n\n", item_number, unit_price, quantity, purchase_date, unit_price*quantity);

    return 0;
}
```

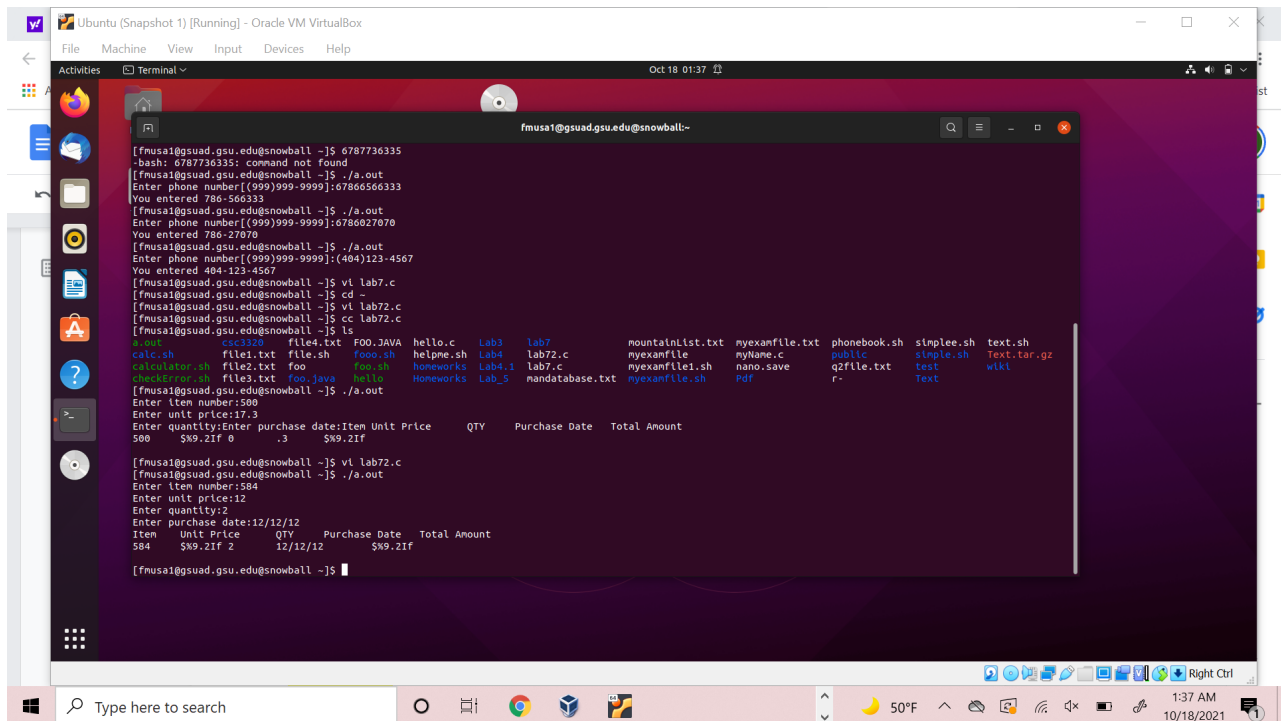
-- INSERT --

21,1 ALL

Type here to search

50°F

1:37 AM
10/18/2021



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?

1

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.

