

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 Google Classroom.

```
#include <stdio.h>

int main (void)
{
    int a1, b1, c1;
    printf("Enter phone number [(999)999-9999]: ");
    scanf("(%d)%d-%d", &a1, &b1, &c1);
    printf("You entered %d-%d-%d\n", a1, b1, c1);
    return 0;
}
```

```
[rshaon1@gsuad.gsu.edu@snowball ~]$ cat getPhoneNumber.c
#include <stdio.h>

int main (void)
{
    int a1, b1, c1;
    printf("Enter phone number [(999)999-9999]: ");
    scanf("(%d)%d-%d", &a1, &b1, &c1);
    printf("You entered %d-%d-%d\n", a1, b1, c1);

    return 0;
}
[rshaon1@gsuad.gsu.edu@snowball ~]$
```

```
[rshaon1@gsuad.gsu.edu@snowball ~]$ gcc getPhoneNumber.c
[rshaon1@gsuad.gsu.edu@snowball ~]$ ./a.out
Enter phone number [(999)999-9999]: (404)123-4567
You entered 404-123-4567
[rshaon1@gsuad.gsu.edu@snowball ~]$
```

2) Write a program named as **calcPrice.c** that formats product information entered by the user and calculates 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 the **classroom**.

```
#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 (mm/dd/yyyy):");
    scanf("%s", &purchase_date);

    printf("Item\tUnit Price\tQTY\tPurchase Date\tTotal Amount\n");
    printf("%d\t$%.2lf\t%d\t%s\t$%.2lf\n", item_number, unit_price, quantity, purchase_date, unit_price * quantity);

    return 0;
}
```

```
[rshaon1@gsuad.gsu.edu@snowball ~]$ cat calcPrice.c
#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 (mm/dd/yyyy):");
    scanf("%s", &purchase_date);

    printf("Item\tUnit Price\tQTY\tPurchase Date\tTotal Amount\n");
    printf("%d\t$%.2lf\t%d\t%s\t$%.2lf\n", item_number, unit_price, quantity, purchase_date, unit_price * quantity);

    return 0;
}
[rshaon1@gsuad.gsu.edu@snowball ~]$
```

```
[rshaon1@gsuad.gsu.edu@snowball ~]$ gcc calcPrice.c
[rshaon1@gsuad.gsu.edu@snowball ~]$ ./a.out
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        09/15/2016      $    27.00

[rshaon1@gsuad.gsu.edu@snowball ~]$
```

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?

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.