

## 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(void) {
    int num1, num2, num3;
    printf("Enter phone number [(999)999-9999]: ");
    scanf("(%d)%d-%d", &num1, &num2, &num3);
    printf("You entered %d-%d-%d\n", num1, num2, num3);

    return 0;
}
```

```
[vdol10@gsuad.gsu.edu@snowball ~]$ vi getPhoneNumber.c
[vdol10@gsuad.gsu.edu@snowball ~]$ cat getPhoneNumber.c
#include <stdio.h>

int main(void) {
    int num1, num2, num3;
    printf("Enter phone number [(999)999-9999]: ");
    scanf("(%d)%d-%d", &num1, &num2, &num3);
    printf("You entered %d-%d-%d\n", num1, num2, num3);

    return 0;
}

[vdol10@gsuad.gsu.edu@snowball ~]$
```

```
[vdol10@gsuad.gsu.edu@snowball ~]$ gcc getPhoneNumber.c
[vdol10@gsuad.gsu.edu@snowball ~]$ ./a.out
Enter phone number [(999)999-9999]: (123)456-7890
You entered 123-456-7890
[vdol10@gsuad.gsu.edu@snowball ~]$
```

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**.

```

#include <stdio.h>

int main ()
{
    int itemNumber;
    double unitPrice;
    int quantity;
    char purchaseDate[12];

    printf("Enter Item Number: ");
    scanf("%d", &itemNumber);

    printf("Enter Unit Price: ");
    scanf("%lf", &unitPrice);

    printf("Enter Quantity: ");
    scanf("%d", &quantity);

    printf("Enter Purchase Date (mm/dd/yyyy): ");
    scanf("%s", &purchaseDate);

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

    return 0;
}
~
~
~
"calcPrice.c" 28L, 571C
28,0-1 All

```

```

[vdol10@gsuad.gsu.edu@snowball ~]$ cat calcPrice.c
#include <stdio.h>

int main ()
{
    int itemNumber;
    double unitPrice;
    int quantity;
    char purchaseDate[12];

    printf("Enter Item Number: ");
    scanf("%d", &itemNumber);

    printf("Enter Unit Price: ");
    scanf("%lf", &unitPrice);

    printf("Enter Quantity: ");
    scanf("%d", &quantity);

    printf("Enter Purchase Date (mm/dd/yyyy): ");
    scanf("%s", &purchaseDate);

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

    return 0;
}
[vdol10@gsuad.gsu.edu@snowball ~]$

```

```

[vdol10@gsuad.gsu.edu@snowball ~]$ gcc calcPrice.c
[vdol10@gsuad.gsu.edu@snowball ~]$ ./a.out
Enter Item Number: 741
Enter Unit Price: 12.3
Enter Quantity: 6
Enter Purchase Date (mm/dd/yyyy): 10/11/2021
Item    Unit Price    QTY    Purchase Date    Total Amount
741     $    12.30      6      10/11/2021      $    73.80
[vdol10@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?

```
[vdol10@gsuad.gsu.edu@snowball ~]$ vi getPhoneNumber.sh
[vdol10@gsuad.gsu.edu@snowball ~]$ chmod a+x getPhoneNumber.sh
[vdol10@gsuad.gsu.edu@snowball ~]$ ./getPhoneNumber.sh
Enter phone number [(999)999-9999]:
123
456
7890
You entered (123)456-7890
[vdol10@gsuad.gsu.edu@snowball ~]$ cat getPhoneNumber.sh
#!/bin/bash

# part 1 question 1 but in shell script
# ./getPhoneNumber.sh

echo "Enter phone number [(999)999-9999]: "
read num1
read num2
read num3
echo "You entered ($num1)$num2-$num3"

[vdol10@gsuad.gsu.edu@snowball ~]$
```

## 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.