

**CSE 1242 - COMPUTER PROGRAMMING II**  
**Programming Assignment # 2**  
**DUE DATE: 18/12/2020 - 23:59 (No extension)**

1. Write a function that will take one integer pointer, `*number`, and an integer `N`. Then reverse number's last `N` digits.

- The function header must be as the following:

```
void reverseN(int *number, int N)
```

- You should take input numbers from the user in `main` function and then invoke the function `reverseN` with appropriate parameters.
- The `main` function should print the result, as the updated value of the number.

**Sample Runs:**

Run 1:

```
176 2
167
```

Run 2:

```
63712 3
63217
```

Run 2:

```
32145 5
54123
```

Run 2:

```
345 5
N must be less than 4!
```

- You should perform appropriate error checking whether the `N` is greater than the number of digits of number.

2. In this question, you will write a program to print the letters W, X, Y and Z using the character of '\*' with the given size. Make sure your program conforms to the following requirements:

- Accept the size of the letter (in the number of lines) from the user. This number should be an odd number greater than or equal to 5. If the value entered is invalid, tell the user so, and ask for another one. Repeat until you get a valid size.
- Accept the letter to be printed from the user. If the letter is W, X, Y or Z, go to the next step. If not, tell the user that the letter is invalid, and ask for another one. Repeat until you get a valid letter.
- Print the letter by using '\*' character with the given size. The sample run gives examples for each letter.
- Repeat the entire process if the user indicates they wish to continue.

Example:

```
Welcome to the letter printer.  
Enter the size: 3  
Invalid size. Enter the size again: -4  
Invalid size. Enter the size again: 7  
Enter the letter: C  
Invalid letter: Enter the letter again: #  
Invalid letter: Enter the letter again: X
```

```
*      *  
*      *  
*  *  
*  
*  *  
*      *  
*      *
```

```
Would you like to continue? (Y or N): Y  
Enter the size: 8  
Invalid size. Enter the size again: 11  
Enter the letter: Z
```

[illegible]

```
Would you like to continue? (Y or N): Y
Enter the size: 9
Enter the letter: W
```

The scatter plot displays a parabolic trend, suggesting a quadratic relationship between the number of hours per week and the number of hours per day. The data points are as follows:

Hours per Week (X)	Hours per Day (Y)
1	1
2	4
3	9
4	16
5	25
6	36
7	49
8	64
9	81
10	100
11	121
12	144
13	169
14	196
15	225
16	256
17	289
18	324
19	361
20	400
21	441
22	484
23	529
24	576
25	625
26	676
27	729
28	784
29	841
30	900
31	961
32	1024
33	1089
34	1156
35	1225
36	1296
37	1369
38	1444
39	1521
40	1600
41	1681
42	1764
43	1849
44	1936
45	2025
46	2116
47	2209
48	2304
49	2401
50	2500
51	2601
52	2704
53	2809
54	2916
55	3025
56	3136
57	3249
58	3364
59	3481
60	3600
61	3721
62	3844
63	3969
64	4096
65	4225
66	4356
67	4489
68	4624
69	4761
70	4900
71	5041
72	5184
73	5329
74	5476
75	5625
76	5776
77	5929
78	6084
79	6241
80	6400
81	6561
82	6724
83	6889
84	7056
85	7225
86	7396
87	7569
88	7744
89	7921
90	8100
91	8281
92	8464
93	8649
94	8836
95	9025
96	9216
97	9409
98	9604
99	9801
100	10000

```
Would you like to continue? (Y or N): Y
Enter the size: 5
Enter the letter: Y
```

Would you like to continue? (Y or N): N  
Goodbye :)

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### Submission Instructions:

Please zip and submit your files using filename YourNumberHW2.zip (ex: 150713852HW2.zip) to Canvas system (under Assignments tab). Your zip file should contain the following files:

- C source files: Q1.c Q2.c

### Important Notes:

- The outputs of your programs must be the same as the examples above.
- Only parts selected from the selected questions will be graded. So if you send only one program, you might get a grade of 0 based on our evaluation.
- Please be sure that your programs should run properly on both your computer and a different computer.

### Notes:

1. All work on programming assignments must be done individually unless stated otherwise.
2. Write a comment at the beginning of your program to explain the purpose of the program.
3. Write your name and student ID as a comment.
4. Include necessary comments to explain your actions.
5. Select meaningful names for your variables and class name.
6. You are allowed to use the materials that you have learned in lectures & labs.
7. Do not use things that you did not learn in the course.
8. **Program submissions** should be done through the Canvas class page, under the assignments tab. Do not send program submissions through e-mail. E-mail attachments will not be accepted as valid submissions.
9. You are responsible for making sure you are turning in the right file, and that it is not corrupted in anyway. We will not allow resubmissions if you turn in the wrong file, even if you can prove that you have not modified the file after the deadline.
10. In case of any form of **copying and cheating** on solutions, you will get **FF** grade from the course! You should submit your own work. In case of any forms of cheating or copying, both giver and receiver are equally culpable and suffer equal penalties. **All types of plagiarism will result in FF grade from the course.**
11. No late submission will be accepted.