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:

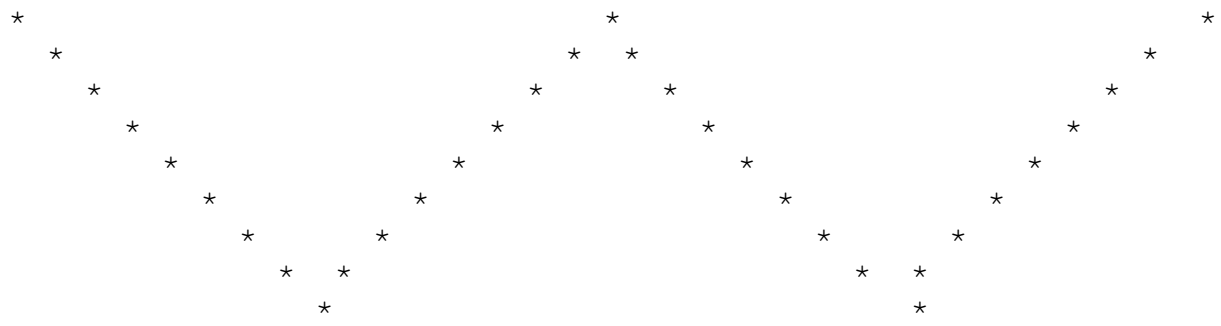
- Accept the size of the letter (in the number of lines) from the user. This number should be an odd number greater than or equal to 5. If the value entered is invalid, tell the user so, and ask for another one. Repeat until you get a valid size.
- Accept the letter to be printed from the user. If the 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
```

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

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



```
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 :)
```

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.