Due Date: 18 December 2011 till midnight

Write a C program to ask and get positive 4 digit integer numbers until user inputs ‘n’ to quit. Program will force user to input 4-digit numbers as given in the sample run. If the 4-digit number $abcd$ is entered by user, program will check if the number satisfies the following rule:

$$a^b \times c^d = abcd$$

If the number satisfies the above rule, program will display a proper message as given below.

**Sample Run:**

Enter a 4 digit integer: 5
Enter a 4 digit integer: 25
Enter a 4 digit integer: 3465
It doesn’t satisfy the rule.
Do you want to continue?(y/n)y

Enter a 4 digit integer: 15
Enter a 4 digit integer: 250
Enter a 4 digit integer: 3265
It doesn’t satisfy the rule.
Do you want to continue?(y/n)n

Bye!

**IMPORTANT NOTES:**

- add your **name** as a Comment Line at the top of your program.
- name the your hw file as: **name_surname_hw1.cpp** (ex: ayse_ordu_hw1.cpp), wrong named hws will not be accepted!
- program should include comments to explain your program.
- program should be easy to follow.
- program should work for all possible inputs.
- program should include proper input and output messages.

Mail your homework to emreakkus@cankaya.edu.tr with subject line containing **HW number** and your **name**. Late homeworks will be graded out of $100 - 10d^2$ where $d$ is the number of late days.