

EXPONENTS / Powers Table

Objectives: User input, calculations

NOTE: Points will still be awarded for items that are written correctly but don't actually work due to other things being broken. There is a total of 10 points available for this lab.

Task: Display a table of powers.

What will the application do?

- **1 Point:** The application prompts the user to enter an integer.
- **3 Point:** The application displays a table of squares and cubes from 1 to the value entered.
- **1 Point:** The application prompts the user to continue.

Build Specifications:

- **1 Point:** Assume that the user will enter valid data.
- **1 Point:** The application should continue only if the user agrees to.

Additional Requirements:

- **1 Point:** For answering the Lab Summary when submitting to the LMS
- **-2 Points:** if there are any syntax errors or if the program does not run (for example, in a Main method).

Hints:

- Don't mess up the difference between squares and cubes!
- Use `\t` to tab to line up columns properly

Extra Challenges:

- **1 Point:** Provide validation by rejecting 0 or negative numbers as user input; keep prompting the user until they enter a valid number.
- **1 Point:** Research formatted strings and right-align the numbers in columns instead of left-aligning them
- **1 Point:** Find out the maximum number whose cube will fit in an int, and limit the user input to that number or less



Console Preview:

```
Learn your squares and cubes!

Enter an integer: {user input here, for example: 5}

Number          Squared          Cubed
=====
1               1               1
2               4               8
3               9              27
4              16              64
5              25             125

Continue? (y/n): {user input here, for example: Y}

Enter an integer: ...
```

