## Review for finals \#4 Due Thursday $5 / 27 / 21$ by midnight

Your final exam (Thursday June 3 at 8:30AM) will be on Python. Today we're going to review using a try/except structure, printing numbers in columns, and printing pretty pictures using numbers in a list.

Today's task:

- Create a new program called Review 4 in repl.
- Use a try/except structure to ask the user for a number greater than 20. Give one error message if the user does not enter a number and a different error message if their number is 20 or less.
- Print the numbers from 1 to the number the user entered in 5 columns with a tab between each number. See sample output below.
- Use the following list of numbers to print three different cool pictures (all different from the one you did last class):
nums $=[2,4,6,7,7,8,8,8,8,9,10,10,7,8,7,6,4,3,3,3,2,2]$
To print numbers in columns you use the following print call:

```
print(x,end="\t")
```

This prints a number then a tab instead of a new line. Then every once in a while (use the \% operator to see when your number is divisible by 5 to be specific) you use a regular print line:

```
print()
```

to go to a new line. We did this a bunch the first semester. Specifically, I show you how to do columns in the day 27 assignment.

Sample output on next page.

Please enter an integer greater than 20: 10
Your entry needs to be larger than 20.
Please enter an integer greater than 20: whassup
Invalid entry, please try again.
Please enter an integer greater than 20: 27

| 1 | 2 | 3 | 4 | 5 |
| :--- | :--- | :--- | :--- | :--- |
| 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 |
| 26 | 27 |  |  |  |

Design 1 (using . center method):
\$\$
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(using both .ljust and
Design
.rjust methods): .rjust methods):

| \$\$ | \$\$ |
| :---: | :---: |
| \$\$\$\$ | \$\$\$\$ |
| \$\$\$\$\$\$ | \$\$\$\$\$\$ |
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| \$\$\$\$ | \$\$\$\$ |
| \$\$\$ | \$ \$ \$ |
| \$\$\$ | \$\$\$ |
| \$ \$ \$ | \$\$\$ |
| \$\$ | \$\$ |
| \$\$ | \$\$ |

Design 3 (closing everything up in a box):

|  | \$\$ | * |
| :---: | :---: | :---: |
|  | \$\$\$\$ | * |
| * | \$\$\$\$\$\$ | * |
| * | \$\$\$\$\$\$\$ | * |
| * | \$\$\$\$\$\$\$ | * |
| * | \$\$\$\$\$\$\$\$ | * |
| * | \$\$\$\$\$\$\$\$ | * |
| * | \$\$\$\$\$\$\$\$ | * |
| * | \$\$\$\$\$\$\$\$ | * |
| * | \$\$\$\$\$\$\$\$\$ | * |
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|  | \$\$\$ | * |
|  | \$\$\$ | * |
|  | \$\$ | * |
|  | \$\$ | * |

Design 4 (flipping to vertical):

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

(You only need to do three different displays of the information, I showed you 4 to give you more ideas. You can do your own interesting versions. Feel free to be creative. You don't have to use stars or \$s, you can print any characters. Also, your different versions would be one after another, not in two columns like I did here; I did the columns to put them all on one page, you just have to print them out one after another.)

