## Review for finals \#4 Due Thursday 5/26/22 end of class period

Your final exam 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. Test your program. Does it work if you enter nothing? Does it work if you enter the number 5? Do you get a different error message for those two situations? You should.
- 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. I know we did it in the Review 2 assignment we did on day46 assignment to give you one example.

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

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

Design 3 (closing everything up in a box):

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

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.)

