

## Part 1: Mod and Integer Division

*Question: How can I use mod (%) and integer division (/) to figure out the nth digit of an Integer?*

In **part1.py**, complete the code so that after it gets a value for "number" and "n" from the user, it prints out the nth digit (from the right) of the given number.

Again, your solution should use mod (%) and integer division (/) to figure out this nth digit of the integer. Think about how you can do so.

As an example, if I have number = 123456, I want to be able to use mod and division in some way to fetch the 1st digit of this number (which is 6), or 2nd (which is 5), or 3rd (which is 4), etc. using some equation that involves the values of "number" and "n".

## Part 2: Star Drawings with Nested Loops

Take a look at **starry.py** posted on our course website. Take some time looking through the code, explaining how it works.

Add your explanation as in-line comments if needed.

Once you feel completely confident in your understanding of **starry.py**, comment out the given loop and add in other loops which draw at least three of the following drawings (*n should be the # of rows for each of them*). If you choose any of the last three, decide what you want to do if n is even.

The image displays five distinct star patterns arranged horizontally. Each pattern consists of 6 rows of stars. Pattern 1 is a right-angled triangle pointing up. Pattern 2 is an inverted right-angled triangle pointing down. Pattern 3 is a diamond shape. Pattern 4 is a hollow diamond shape. Pattern 5 is a single star in the center of a 6x6 grid.

You are only allowed to use the following three print functions:

```
print("*", end="") // print without newline at the end
print(" ", end="")
print() // print an empty line (go to the nextline)
```

**What you're submitting:**

You will be handing in two python files: **part1.py** and **starry.py** with comments added for the example drawing, and three sections of code added in to draw at least three of the patterns above.

If for any of the parts, you could not figure out a solution, hand in your attempt with comments that briefly explain your attempts at doing so, and why those attempts failed.

If you use any online sources, cite them!

Submit your attempt and/or solution on Google Classroom!