

Assignment 1

Question 1 (easy):

What will the following code output? You can use CoLab or shell to check out the output by running the code, but understand how they work because that's what's most important.

- `8//8`
- `16//8`
- `80//8`

- `8%8`
- `16%8`
- `80%8`

- `6//8`
- `7//8`
- `9//8`
- `12//8`

- `6%8`
- `7%8`
- `9%8`
- `12%8`

Question 2 (easy):

Type this in your python shell or in google colab:

```
x = "Hello! My name is Samad. I am the best B)"
```

You do not agree with this, so you slice off the unimportant bits...

Slice off this string to get only "Hello"

Question 3 (medium):

Backstory: Lets say that you are a programmer for the Govt. of Delhi, India. The Govt. of Delhi has recently filed a law about even and odd number plates on cars in Delhi. Even and odd cars are allowed to stay on road alternatively to reduce pollution. They have already placed cameras to figure out the number on the plate of all cars. And you are given this number as an integer (n).

Question: Given an integer (n), how can we use the modulo operator (%) in computer science to figure out if 'n' is even or odd?

Hint: The answer is in the form `__%__` with the blanks filled out. When `__%__` evaluates to 0, then the number is even. If it evaluates to 1, the number is odd.

Question 4 (hard):

Type this in your python shell or in google CoLab:

```
x = "Tu8AepQfAul@ts@dava1Qd7kaRLMQ^ RziZUI!EA1X omaSRYPL"
```

Now, slice this string with the following criteria in mind:

- Slice in reverse mode
- Start from the third-last character (so start with 'Y')
- Stop on the 15th Character (Remember, not the 15th index!)
- For every letter you select, skip 2 letters (Remember, step = number of letters you want to skip + 1)

Hint: The output should be something very familiar to all Ismailis 😊