Python

1. WAP to input 2 numbers and check whether the first is divisible by the second and print true or false depending on the divisibility.
2. In the palindrome example, make the code case insensitive.
   i.e. **N**aman should also be treated as a palindrome (**HINT:** first convert to either upper or lower case).
3. WAP to input the sides of a triangle and print whether equilateral(all sides equal), isosceles (2 sides equal), or scalene (no sides equal).
4. WAP to input age and print the respective text depending on the age ranges as present in the table.

Age	Text to be displayed
0-12	Child
13-17	Teen
18-50	Adult
51-100	Senior Citizen
age > 100	All the Best

5. WAP to input year (check if user enters valid year. Should be 4-digit number and should not be negative) and print whether leap year or not. (If really interested in why you also have to check the divisibility by 400 just google the exact time it takes for the earth to revolve around the sub)
6. WAP to input a string and convert it to Upper Case if number of characters is odd and convert to lower case otherwise.
7. WAP to input a string and print **Veg** if the string doesn't contain the word egg. Otherwise print **Non-Veg**. As usual eggs can be both big and small.
8. Give output of:

```
if not 1:
    print("False")
else:
    print("True")
```

```
if 1:
    print("True")
else:
    print("False")
```

```
if 'a' > 'A':
    print('Weird !!')
else:
    print('Makes Sense')
```

```
a = [1,2,3,4]
if 1 > 1:
    a = a[::-1]
else:
    a = a[-1::-1]
print(a)
```

9. WAP to input marks in 5 subjects and print the grade as per following logic:

% between 90-100 Grade-A

% between 80 - 89 Grade-B

% between 60 - 79 Grade-C

% < 60 Grade-F

10. WAP it input age and salary and calculate Tax as per tax rates if following table:

Salary Range	Age < 60	Age >= 60
0-2,50,000	0	0
2,50,001-5,00,000	5%	3%
5,00,001-10,00,000	10%	8%
Salary>10,00,001	15%	12%

11. Fill the blank:

I am really good at python. The reason being at least I know Python is a _____ and not a Reptile.

12. Try to think of a cool example to show the difference between normal if else and nested if-else. We'll discuss in the class on this one.

13. Try each of the below statements separately (remember difference between statement and expression) on the python interpreter and guess the output before trying:

```
print( 20 if not 1 == 1 else 10)
print( 30 if not 1 == 1 else 20 if 'a' < 'A' else 10)
print( 40 if not 1 == 1 else 30 if 'a' < 'A' else 20 if '' else 10)
print( 'No' if not 1 == 1 else ('No' if 'a' < 'A' else ('OMG' if 'oh!!' else 'No')))
```

[Copy Paste won't work, type the complete statement on the interpreter]