# Assignment - 1

Deadline - July, 4th 23:59

## 1 Calculations

### 1a

Define three variables var1, var2 and var3. Calculate the average of these variables and assign it to the variable average. Print the result using a full sentence.

### 1b

Suppose the cover price of a book is 24.95 EUR, but bookstores get a 40 percent discount. Shipping costs 3 EUR for the first copy and 75 cents for each additional copy. User input is total number of books and output is total cost of books. Use variables with clear names for your calculations and print the result using a full sentence.
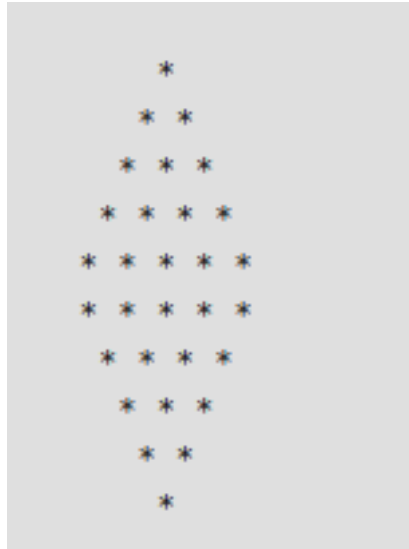
## 2 Printing and user input

**2a** Write a program to have a little conversation with someone. First ask them for their name, introduce yourself, ask about their age and then say something about your own age compared to theirs. Try to generate the following conversation:

```
Hello. What is your name?

-- Emily.

Hello, Emily. My name is Robert. How old are you?

-- 23

I'm 25 years old, so I'm 2 older than you.
```

Also account for situations where the other person is older or the same age. You will need to use if-statements!

## 3 Star Pattern

Print the following star pattern, Figure out 'n' value for pattern below and keep n as user input.

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

# 4 Parcel Delivery

The required postage for an international parcel delivery service is calculated based on item weight and country of destination:

| Tariff zone | 0 - 2 kg | 2 - 5 kg | 5 - 10 kg | 10 - 20 kg | 20 - 30 kg |
|---|---|---|---|---|---|
| EUR 1 | € 13.00 | € 19.50 | € 25.00 | € 34.00 | € 45.00 |
| EUR 2 | € 18.50 | € 25.00 | € 31.00 | € 40.00 | € 55.00 |
| World | € 24.30 | € 34.30 | € 58.30 | € 105.30 | - |

Create two variables weight and zone. Use (nested) if-statements to find the required postage based on these variables. Assign the result to a variable postage and print the result using a full sentence.

# 5 Password Validity

Write a Python program to check the validity of password input by users. Conditions are as follows :

- At least 1 letter between [a-z] and 1 letter between [A-Z].

- At least 1 number between [0-9].

- At least 1 character from [$#].

- Minimum length 6 characters.

- Maximum length 16 characters.

**Good Luck!!**