

Exercises Week 2-1 (Lists)

EX.4-1 From input to list

Open VSC then -> File -> Open folder -> select "Python course" folder.

Create a new file "ex4-1.py"

TASK: Create a Python program that initializes an empty list and then asks the user to input five numeric or string values. Add these values in the list and display the list.

(*) use **FOR** loop

EXAMPLE:

```
Enter any string or number: 125
Enter any string or number: Yes
Enter any string or number: 556.236
Enter any string or number: No
Enter any string or number: True
My list: ['125', 'Yes', '556.236', 'No', 'True']
```

EX.4-2 Random colours

Create a new file "ex4-2.py"

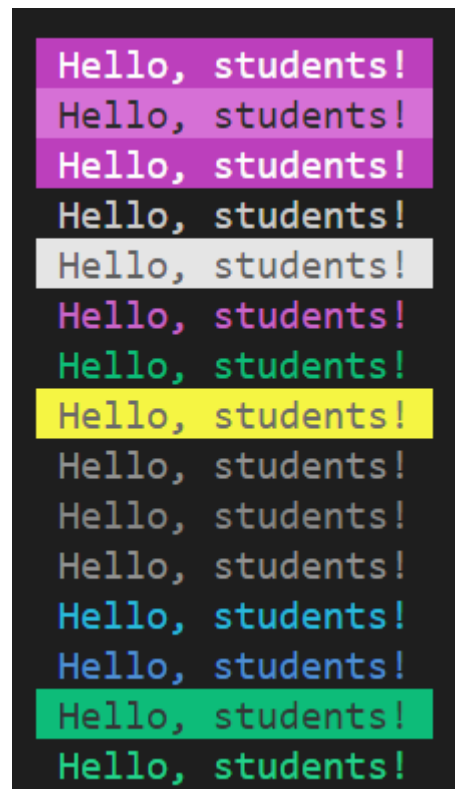
TASK: Create a Python program that prints "Hello, students!" thirty times in random colours.

(*) use **FOR** loop

(**) Use a list of different colours and function **choice()** from module **random** to pick up the random element from this list:

```
COLOURS = ["\033[30m", "\033[31m", "\033[32m", "\033[33m", "\033[34m",
"\033[35m", "\033[36m", "\033[37m", "\033[90m", "\033[91m",
"\033[92m", "\033[93m", "\033[94m", "\033[95m", "\033[96m",
"\033[97m", "\033[49m", "\033[40m", "\033[41m", "\033[42m",
"\033[43m", "\033[44m", "\033[45m", "\033[46m", "\033[47m",
"\033[100m", "\033[101m", "\033[102m", "\033[103m", "\033[104m",
"\033[105m", "\033[106m", "\033[107m"]
```

EXAMPLE:



EX.4-3 Multiplicator

Create a new file "ex4-3.py"

TASK: (1) Write a Python program that generates 10 different random float numbers, rounded to 2 decimal places. Place these numbers into a list, multiply all of them together, and display the result of the multiplication.

(2) Calculate the sum of all elements, average, minimum and maximum

EXAMPLE:

list: [2.50, 4.00, 100.00]. Result = $2.50 * 4.00 * 100.00 = 1000.00$

```
List: [2.08, 3.04, 1.07, 2.45, 7.46, 0.73, 0.46, 4.57, 9.05, 7.95]
Result of multiplication = 13653.31807270658
Sum = 38.860000000000001
Avg = 3.89
Min = 0.46
Max = 9.05
```

(*) use **uniform()** function from **random** module to generate float numbers:

https://www.w3schools.com/python/ref_random_uniform.asp

(**) use **round()** function to round the number to two decimal places

(***) use **sum()**, **min()**, **max()**, **statistics.mean()**

EX.4-4 Invitation email

Create a new file "ex4-4.py"

TASK: Create a function which takes a name as a parameter and generates the invitation email text for this person. Display this email text for each student from the list.

(*) Use formatted string.

(**) Use f""" Dear... """ (triple quotes) to compose a multiline string.

(***) list of the students:

```
students = ["Punit", "Graham", "Alex", "Karen", "Van",  
            "Falwinder", "Gurpreet", "Jasper", "Lyle",  
            "Nega", "Amandeep", "Pawandeep", "Daman",  
            "Pruthviraj", "Beau", "Thilini", "Jashandeep",  
            "Ritesh", "Sahilpreet", "Onkar", "Sourav",  
            "Harkamalpreet", "Talwinder"]
```

(****) message:

Dear {...},

We are happy to invite you to our Student Work Exhibition,

happening on Thursday, 21 September 2023,

at the Whitecliffe campus (67 Symonds Street, Auckland)

from 10:00 AM to 1:00 PM.

Join us in celebrating the remarkable achievements of our students

and the outstanding work they've accomplished this term.

We look forward to seeing you at the exhibition!

Best regards,

Ying, Marina, Rashid, John, Pinal

EXAMPLE:

Dear Ann,

We are happy to invite you to our Student Work Exhibition,
happening on Thursday, 21 September 2023,
at the Whitecliffe campus (67 Symonds Street, Auckland)
from 10:00 AM to 1:00 PM.

Join us in celebrating the remarkable achievements of our students
and the outstanding work they've accomplished this term.
We look forward to seeing you at the exhibition!

Best regards,
Ying, Marina, Rashid, John, Pinal