

Data Science with Python
Ticket Out the Door
Set 10: Two-Dimensional Lists

Name _____ Period _____

Skill 10.1 Exercise 1

Create a two-dimensional list called `ages` where each sublist contains a student's name and their age. Use the following data:

- "Aaron" is 15
- "Dhruti" is 16

Skill 10.2 Exercise 1

Refer to the image below to answer the following,

gradebook

	Assignment 1	Assignment 2	Assignment 3	Assignment 4	Assignment 5
Bart	4.5	1	5	2	4
Kyle	R	5	4	2	2.5
Bugs	1	2	3	4	3
Marvin	4	M	3	3.5	4

What is the row and column associated with Kyle's score on Assignment 3?

What is the value associated with the following location: `row = 3, col = 2`

What is the length of `row = 2`?

What is the length of column 5?

Skill 10.2 Exercise 2

Using the provided table, create a two-dimensional list called `class_name_test` to represent the data. Each sublist in `class_name_test` should have one student's name and their associated score.

Name	Test Score
"Jenny"	90
"Alexus"	85.5
"Sam"	83
"Ellie"	101.5

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Use double square brackets ([])[] to select Sam's test score from the list class_name_test. Save it to the variable sams_score.

Use double square brackets ([])[] to select Ellies test score from the list class_name_test. ***This time only use negative indices!***

Skill 10.3 Exercise 1

Our school is expanding! We are welcoming a new set of students today from all over the world.

Using the provided table, create a two-dimensional list called incoming_class to represent the data. Each sublist in incoming_class should contain the name, nationality, and grade for a single student.

Name	Nationality	Grade Level
"Kenny"	"American"	9
"Tanya"	"Ukrainian"	9
"Madison"	"Indian"	7

"Madison" passed an exam to advance a grade. She will be pushed into 8th grade rather than her current 7th in our list. Modify the list using double brackets [][] to make the change. ***Use positive indices.***

"Kenny" likes to be called by his nickname "Ken". Modify the list using double brackets [][] to accommodate the change but ***only using negative indices.***

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Skill 10.4 Exercise 1

Refer to the lists below,

```
owners = ["Jenny", "Alexus", "Sam", "Grace"]
dogs_names = ["Elphonse", "Dr. Doggy DDS", "Carter", "Ralph"]
```

Use `zip()` to create a new variable called `owners_and_dogs_names` that combines `owners` and `dogs_names` lists into a `zip` object.

Then, create a new variable named `list_of_names` by calling the `list()` function on `owners_and_dogs_names`.

Print `list_of_names`.

What is printed?