

```
2dlist = [list1, list2, list3]
```

A list made up of lists

	Sex	Race	Height	Income	Marital Status	Years of Educ.
R1001	M	1	70	50	1	12
R1002	M	2	72	100	2	20
R1003	F	1	55	250	1	16
R1004	M	2	65	20	2	16
R1005	F	1	60	10	3	12
R1006	M	1	68	30	1	9
R1007	F	5	66	25	2	21
R1008	F	4	61	43	1	18
R1009	M	1	69	67	1	12

```
1 fruits = ["apple", "orange", "banana", "coconut"]
2 vegetables = ["celery", "carrots", "potatoes"]
3 meats = ["chicken", "fish", "turkey"]
4
5
6 groceries = [fruits, vegetables, meats]
7
8 fruits[0]
9 print(fruits)
```

main.py

C:\Users\HP\PyCh

1

2

3

4

5

6

7

8

9

```
fruits = ["apple", "orange", "banana", "coconut"]
```

```
vegetables = ["celery", "carrots", "potatoes"]
```

```
meats = ["chicken", "fish", "turkey"]
```

```
groceries = [fruits, vegetables, meats]
```

```
fruits[0] = "pineapple"
```

```
print(fruits)
```

```
1  
2 fruits = ["apple", "orange", "banana", "coconut"]  
3 vegetables = ["celery", "carrots", "potatoes"]  
4 meats = ["chicken", "fish", "turkey"]  
5  
6 groceries = [fruits, vegetables, meats]  
7  
8 print(groceries[0])
```

**This returns an entire row**

```
fruits = _____["apple", "orange", "banana", "coconut"]  
vegetables = ["celery", "carrots", "potatoes"]  
meats = _____["chicken", "fish", "turkey"]  
  
groceries = [fruits, vegetables, meats]  
  
print(groceries[0][1])
```

```
1
2 fruits = ["apple", "orange", "banana", "coconut"]
3 vegetables = ["celery", "carrots", "potatoes"]
4 meats = ["chicken", "fish", "turkey"]
5
6 groceries = [fruits, vegetables, meats]
7
8 print(groceries[1][1])
```

1  
2  
3  
4  
5  
6  
7  
8

```
fruits = ["apple", "orange", "banana", "coconut"]  
vegetables = ["celery", "carrots", "potatoes"]  
meats = ["chicken", "fish", "turkey"]  
  
groceries = [fruits, vegetables, meats]  
  
print(groceries[2][3])
```



```
1
2 fruits = ["apple", "orange", "banana", "coconut"]
3 vegetables = ["celery", "carrots", "potatoes"]
4 meats = ["chicken", "fish", "turkey"]
5
6 groceries = [fruits, vegetables, meats]
7
8 print(groceries[2][1])
```

```
1  
2 fruits = ["apple", "orange", "banana", "coconut"]  
3 vegetables = ["celery", "carrots", "potatoes"]  
4 meats = ["chicken", "fish", "turkey"]  
5  
6 groceries = [fruits, vegetables, meats]  
7  
8 print(groceries[0][0])
```

```
1
2 groceries = ["apple", "orange", "banana", "coconut"],
3             ["celery", "carrots", "potatoes"],
4             ["chicken", "fish", "turkey"]
5
6 print(groceries[0][0])
```

```
1
2 groceries = ["apple", "orange", "banana", "coconut"],
3             ["celery", "carrots", "potatoes"],
4             ["chicken", "fish", "turkey"]]
5
6 for collection in groceries:
7     print(collection)
```

**This iterates over the rows**

```
Run: main x
['apple', 'orange', 'banana', 'coconut']
['celery', 'carrots', 'potatoes']
['chicken', 'fish', 'turkey']
```

```
1
2 groceries = ["apple", "orange", "banana", "coconut"],
3             ["celery", "carrots", "potatoes"],
4             ["chicken", "fish", "turkey"]]
5
6 for collection in groceries:
7     for food in collection:
8         print(food)
```

This iterates over the  
elements in each row

for collection in groceries : for food in collection

C:\Users\HP\PycharmProjects\practice\venv\bin\python.exe C:/Users/HP/PycharmProjects/practice/main.py

apple  
orange  
banana  
coconut

The image shows a PyCharm IDE window with a project named 'practice'. The file explorer on the left shows the project structure: 'practice' (C:\Users\HP\PycharmProjects\practice) containing a 'venv' folder and a 'main.py' file. The 'main.py' file is open in the editor, showing the following Python code:

```
1  
2 groceries = ["apple", "orange", "banana", "coconut"],  
3             ["celery", "carrots", "potatoes"],  
4             ["chicken", "fish", "turkey"]]  
5  
6 for collection in groceries:  
7     for food in collection:  
8         print(food, end=" ")  
9     print()
```

The code is executed, and the output is shown in the Run console at the bottom. The output is: 'apple orange banana coconut celery carrots potatoes chicken fish turkey'. The console also shows the command used to run the script: 'C:\Users\HP\PycharmProjects\practice\venv\bin\python.exe C:/Users/HP/PycharmProjects/practice/main.py'.

```
1 num_pad = ((1, 2, 3),
2            (4, 5, 6),
3            (7, 8, 9),
4            ("*", 0, "#"))
5
6
7 for row in num_pad:
8     print(row)
```

for row in num\_pad

```
C:\Users\HP\PycharmProjects\practice\venv\bin\python.exe C:/Users/HP/Py
(1, 2, 3)
(4, 5, 6)
(7, 8, 9)
('*', 0, '#')
```

practice C:\Users\HP\PyCharm\practice

- > venv
- main.py
- External Libraries
- Scratches and Consoles

```
1 num_pad = ((1, 2, 3),
2             (4, 5, 6),
3             (7, 8, 9),
4             ("*", 0, "#"))
5
6
7 for row in num_pad:
8     for num in row:
9         print(num, end=" ")
```

for row in num\_pad : for num in row

run: main x

↑  
↓  
\*  
0  
#



```
1 num_pad = ((1, 2, 3),
2             (4, 5, 6),
3             (7, 8, 9),
4             ("*", 0, "#"))
5
6
7 for row in num_pad:
8     for num in row:
9         print(num, end=" ")
10    print()
```

for row in num\_pad

Run: main

```
1 2 3
4 5 6
7 8 9
* 0 #
```













































