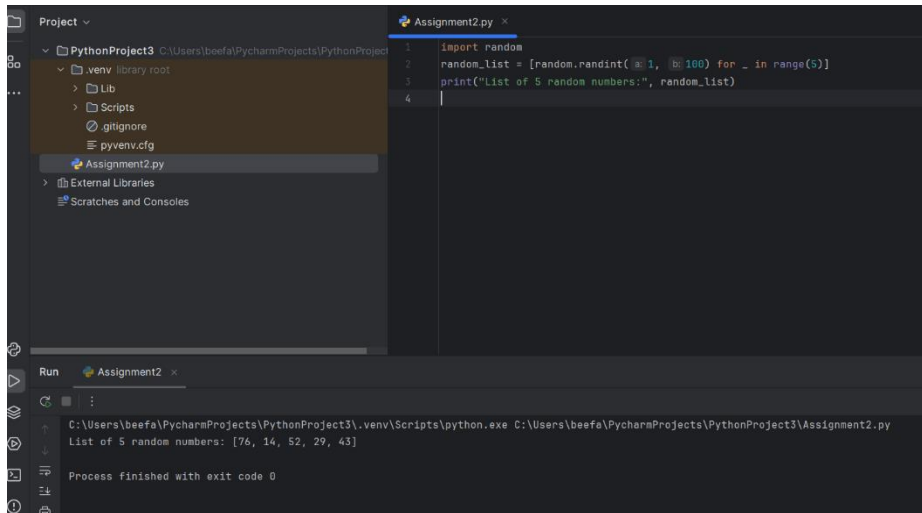


List Exercise

Create a list of 5 random numbers and print the list



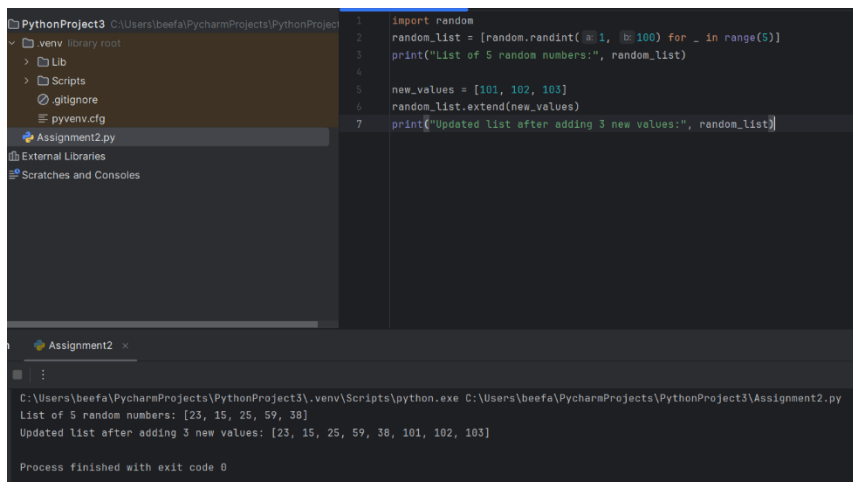
The screenshot shows the PyCharm IDE with a project named 'PythonProject3'. The file explorer on the left shows the project structure, including a virtual environment (.venv) and a file named 'Assignment2.py'. The main editor window displays the code for 'Assignment2.py':

```
1 import random
2 random_list = [random.randint(a=1, b=100) for _ in range(5)]
3 print("List of 5 random numbers:", random_list)
4
```

The Run window at the bottom shows the execution output:

```
C:\Users\beefa\PycharmProjects\PythonProject3\.venv\Scripts\python.exe C:\Users\beefa\PycharmProjects\PythonProject3\Assignment2.py
List of 5 random numbers: [76, 14, 52, 29, 43]
Process finished with exit code 0
```

Insert 3 new values to the list and print the updated list



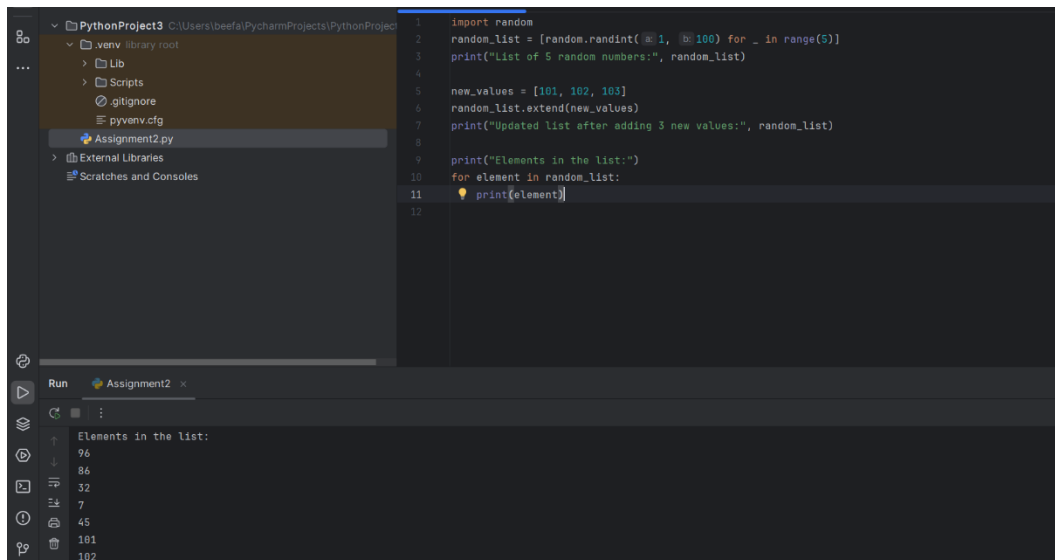
The screenshot shows the PyCharm IDE with the same project. The file explorer on the left shows the project structure, including a virtual environment (.venv) and a file named 'Assignment2.py'. The main editor window displays the code for 'Assignment2.py':

```
1 import random
2 random_list = [random.randint(a=1, b=100) for _ in range(5)]
3 print("List of 5 random numbers:", random_list)
4
5 new_values = [101, 102, 103]
6 random_list.extend(new_values)
7 print("Updated list after adding 3 new values:", random_list)
```

The Run window at the bottom shows the execution output:

```
C:\Users\beefa\PycharmProjects\PythonProject3\.venv\Scripts\python.exe C:\Users\beefa\PycharmProjects\PythonProject3\Assignment2.py
List of 5 random numbers: [23, 15, 25, 59, 38]
Updated list after adding 3 new values: [23, 15, 25, 59, 38, 101, 102, 103]
Process finished with exit code 0
```

Use a for loop to print each element in the list



```
1 import random
2 random_list = [random.randint(1, 100) for _ in range(5)]
3 print("List of 5 random numbers:", random_list)
4
5 new_values = [101, 102, 103]
6 random_list.extend(new_values)
7 print("Updated list after adding 3 new values:", random_list)
8
9 print("Elements in the list:")
10 for element in random_list:
11     print(element)
```

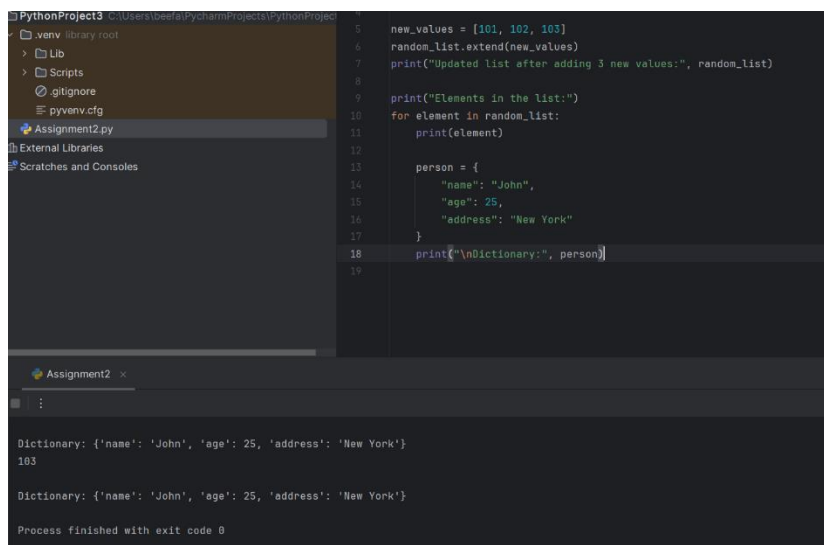
Run Assignment2

Elements in the list:

96
86
32
7
45
181
102

Dictionary

Create a dictionary with keys 'name', 'age', and 'address' and values 'John', 25, and 'New York'



```
5 new_values = [101, 102, 103]
6 random_list.extend(new_values)
7 print("Updated list after adding 3 new values:", random_list)
8
9 print("Elements in the list:")
10 for element in random_list:
11     print(element)
12
13 person = {
14     "name": "John",
15     "age": 25,
16     "address": "New York"
17 }
18 print("\nDictionary:", person)
```

Assignment2

Dictionary: {'name': 'John', 'age': 25, 'address': 'New York'}

103

Dictionary: {'name': 'John', 'age': 25, 'address': 'New York'}

Process finished with exit code 0

Add a new key-value pair to the dictionary with key 'phone' and value '1234567890'

```
5 new_values = [101, 102, 103]
6 random_list.extend(new_values)
7 print("Updated list after adding 3 new values:", random_list)
8
9 print("Elements in the list:")
10 for element in random_list:
11     print(element)
12
13 person = {
14     "name": "John",
15     "age": 25,
16     "address": "New York"
17 }
18 print("\nDictionary:", person)
19
20 person["phone"] = "1234567890"
21 print("Updated dictionary:", person)
22
23
```

Assignment2

```
Updated dictionary: {'name': 'John', 'age': 25, 'address': 'New York', 'phone': '1234567890'}
103

Dictionary: {'name': 'John', 'age': 25, 'address': 'New York'}
Updated dictionary: {'name': 'John', 'age': 25, 'address': 'New York', 'phone': '1234567890'}

Process finished with exit code 0
```

Set

Create a set with values 1, 2, 3, 4, and 5

```
7 random_list.extend(new_values)
8 print("Updated list after adding 3 new values:", random_list)
9
10 print("Elements in the list:")
11 for element in random_list:
12     print(element)
13
14 person = {
15     "name": "John",
16     "age": 25,
17     "address": "New York"
18 }
19 print("\nDictionary:", person)
20
21 person["phone"] = "1234567890"
22 print("Updated dictionary:", person)
23
24 my_set = {1, 2, 3, 4, 5}
25 print("\nSet:", my_set)
26
```

Assignment2

```
Dictionary: {'name': 'John', 'age': 25, 'address': 'New York'}
Updated dictionary: {'name': 'John', 'age': 25, 'address': 'New York', 'phone': '1234567890'}

Set: {1, 2, 3, 4, 5}

Process finished with exit code 0
```

Add the value 6 to the set

```
PythonProject3 C:\Users\beefa\PycharmProjects\PythonProject3
venv library root
  Lib
  Scripts
  .gitignore
  pyvenv.cfg
Assignment2.py
External Libraries
Scratches and Consoles

9 print("Elements in the List:")
10 for element in random_list:
11     print(element)
12
13 person = {
14     "name": "John",
15     "age": 25,
16     "address": "New York"
17 }
18 print("\nDictionary:", person)
19
20 person["phone"] = "1234567890"
21 print("Updated dictionary:", person)
22
23 my_set = {1, 2, 3, 4, 5}
24 print("\nSet:", my_set)
25
26 my_set.add(6)
27 print("Set after adding 6:", my_set)
28

Assignment2 x
:
Dictionary: {'name': 'John', 'age': 25, 'address': 'New York'}
Updated dictionary: {'name': 'John', 'age': 25, 'address': 'New York', 'phone': '1234567890'}

Set: {1, 2, 3, 4, 5}
Set after adding 6: {1, 2, 3, 4, 5, 6}

Process finished with exit code 0
```

Remove the value 3 from the set

```
PythonProject3 C:\Users\beefa\PycharmProjects\PythonProject3
venv library root
  Lib
  Scripts
  .gitignore
  pyvenv.cfg
Assignment2.py
External Libraries
Scratches and Consoles

12
13 person = {
14     "name": "John",
15     "age": 25,
16     "address": "New York"
17 }
18 print("\nDictionary:", person)
19
20 person["phone"] = "1234567890"
21 print("Updated dictionary:", person)
22
23 my_set = {1, 2, 3, 4, 5}
24 print("\nSet:", my_set)
25
26 my_set.add(6)
27 print("Set after adding 6:", my_set)
28
29 my_set.remove(3)
30 print("Set after removing 3:", my_set)
31

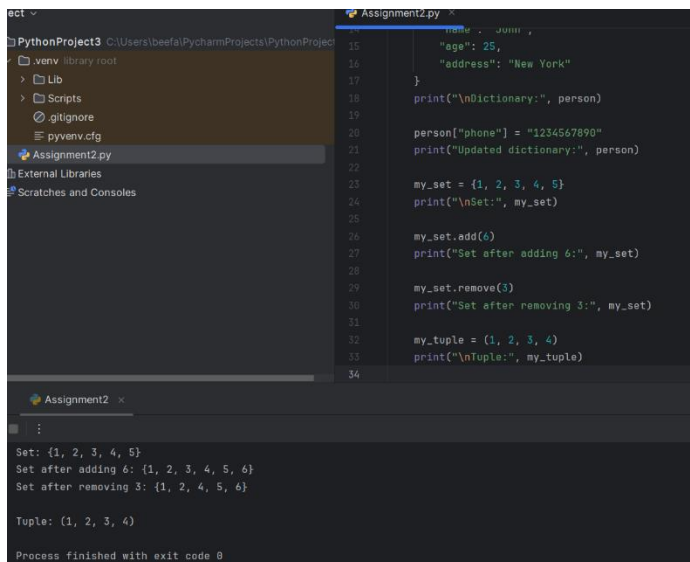
Assignment2 x
:
Updated dictionary: {'name': 'John', 'age': 25, 'address': 'New York', 'phone': '1234567890'}

Set: {1, 2, 3, 4, 5}
Set after adding 6: {1, 2, 3, 4, 5, 6}
Set after removing 3: {1, 2, 4, 5, 6}

Process finished with exit code 0
```

Tuple

Create a tuple with values 1, 2, 3, and 4



The screenshot shows the PyCharm IDE with a file explorer on the left and a code editor on the right. The file explorer shows a project named 'PythonProject3' with a subdirectory 'venv' and a file 'Assignment2.py'. The code editor shows the following Python code:

```
14 name = "John"
15 age = 25,
16 address = "New York"
17 }
18 print("\nDictionary:", person)
19
20 person["phone"] = "1234567890"
21 print("Updated dictionary:", person)
22
23 my_set = {1, 2, 3, 4, 5}
24 print("\nSet:", my_set)
25
26 my_set.add(6)
27 print("Set after adding 6:", my_set)
28
29 my_set.remove(3)
30 print("Set after removing 3:", my_set)
31
32 my_tuple = (1, 2, 3, 4)
33 print("\nTuple:", my_tuple)
34
```

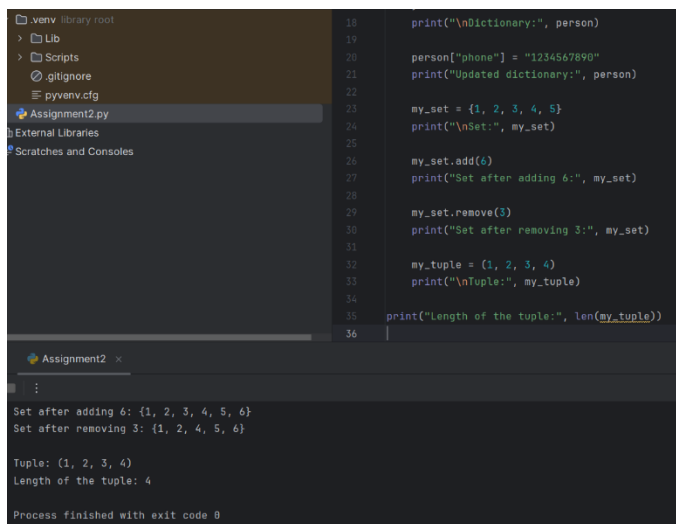
The output console at the bottom shows the following output:

```
Set: {1, 2, 3, 4, 5}
Set after adding 6: {1, 2, 3, 4, 5, 6}
Set after removing 3: {1, 2, 4, 5, 6}

Tuple: (1, 2, 3, 4)

Process finished with exit code 0
```

Print the length of the tuple



The screenshot shows the PyCharm IDE with a file explorer on the left and a code editor on the right. The file explorer shows a project named 'PythonProject3' with a subdirectory 'venv' and a file 'Assignment2.py'. The code editor shows the following Python code:

```
18 print("\nDictionary:", person)
19
20 person["phone"] = "1234567890"
21 print("Updated dictionary:", person)
22
23 my_set = {1, 2, 3, 4, 5}
24 print("\nSet:", my_set)
25
26 my_set.add(6)
27 print("Set after adding 6:", my_set)
28
29 my_set.remove(3)
30 print("Set after removing 3:", my_set)
31
32 my_tuple = (1, 2, 3, 4)
33 print("\nTuple:", my_tuple)
34
35 print("Length of the tuple:", len(my_tuple))
36
```

The output console at the bottom shows the following output:

```
Set after adding 6: {1, 2, 3, 4, 5, 6}
Set after removing 3: {1, 2, 4, 5, 6}

Tuple: (1, 2, 3, 4)
Length of the tuple: 4

Process finished with exit code 0
```