

1. What is dictionary in Python? Explain with an example

Python dictionary is an unordered collection of items. Each item of a dictionary has a key/value pair. are optimized to retrieve values when the key is known.

Example: # empty dictionary

```
my_dict = {}
```

dictionary with integer keys

```
my_dict = {1: 'apple', 2: 'ball'}
```

dictionary with mixed keys

```
my_dict = {'name': 'John', 1: [2, 4, 3]}
```

using dict()

```
my_dict = dict({1: 'apple', 2: 'ball'})
```

from sequence having each item as a pair

```
my_dict = dict([(1, 'apple'), (2, 'ball')])
```

3. Write a Python program to sum all the items in a list.

```
def sum_list(items):
```

```
    sum_numbers = 0
```

```
    for x in items:
```

```
        sum_numbers += x
```

```
    return sum_numbers
```

```
print(sum_list([1,2,-8]))
```

Output: -5

4. Write a Python program to create a list of empty dictionaries.

```
n = 5
```

```
l = [{} for _ in range(n)]
```

```
print(l)
```

Output:

```
[{}, {}, {}, {}, {}]
```

5. Write a Python program to access dictionary keys element by index.

```
num = {'physics': 80, 'math': 90, 'chemistry': 86}
```

```
print(list(num)[0])
```

Output:

physics