



# Introduction to Python



1. Review



2. Why Python



3. Basic Concepts



4. Project

A large, light grey diamond shape with a dark grey border, tilted at a 45-degree angle. Inside the diamond, the text "Introduction to python" is written in a bold, dark grey font.

**Introduction to  
python**



# 1. Review

---



## 2. Why Python



## 3. Basic Concepts



## 4. Project

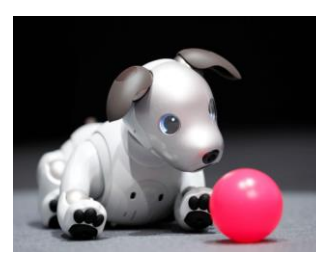
A large, light grey diamond shape with a dark grey border, tilted at an angle. The text "Introduction to python" is centered inside it.

**Introduction to  
python**



# 1. Review

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## 1- Rule-base



I give you the exact Rules

## 2- Machine Learning



Many examples  
Hints (what to look)

## 3- Deep Learning



Many Many examples!  
No Hints!

## 4- Reinforcement Learning



Many Many examples!  
rewarded by doing good!  
penalized by doing bad!



# 1. Review

---

## 1- Rule-base



I give you the exact Rules



# 1. Review

---



## 2. Why Python



## 3. Basic Concepts



## 4. Project

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**Introduction to  
python**



1. Review



2. Why Python



3. Basic Concepts



4. Project

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**Introduction to  
python**



1. Review



**2. Why Python**

---



3. Basic Concepts



4. Project

A large, light grey diamond shape with a dark grey border. The text "Introduction to python" is centered inside the diamond.

**Introduction to  
python**





## 2. Why Python

---





## 2. Why Python

---





## 2. Why Python

---



**Hello!**



**?!!**

**10010101010**



## 2. Why Python

---



**Hello!**



**10010101010**



## 2. Why Python



**Hello!**

**Hello!**

**Hi!**

**Programming  
Language**

**10101**

**11101**



**10010101010**



## 2. Why Python



**Hello!**

**Hello!**

**Hi!**



**Python**

**10101**

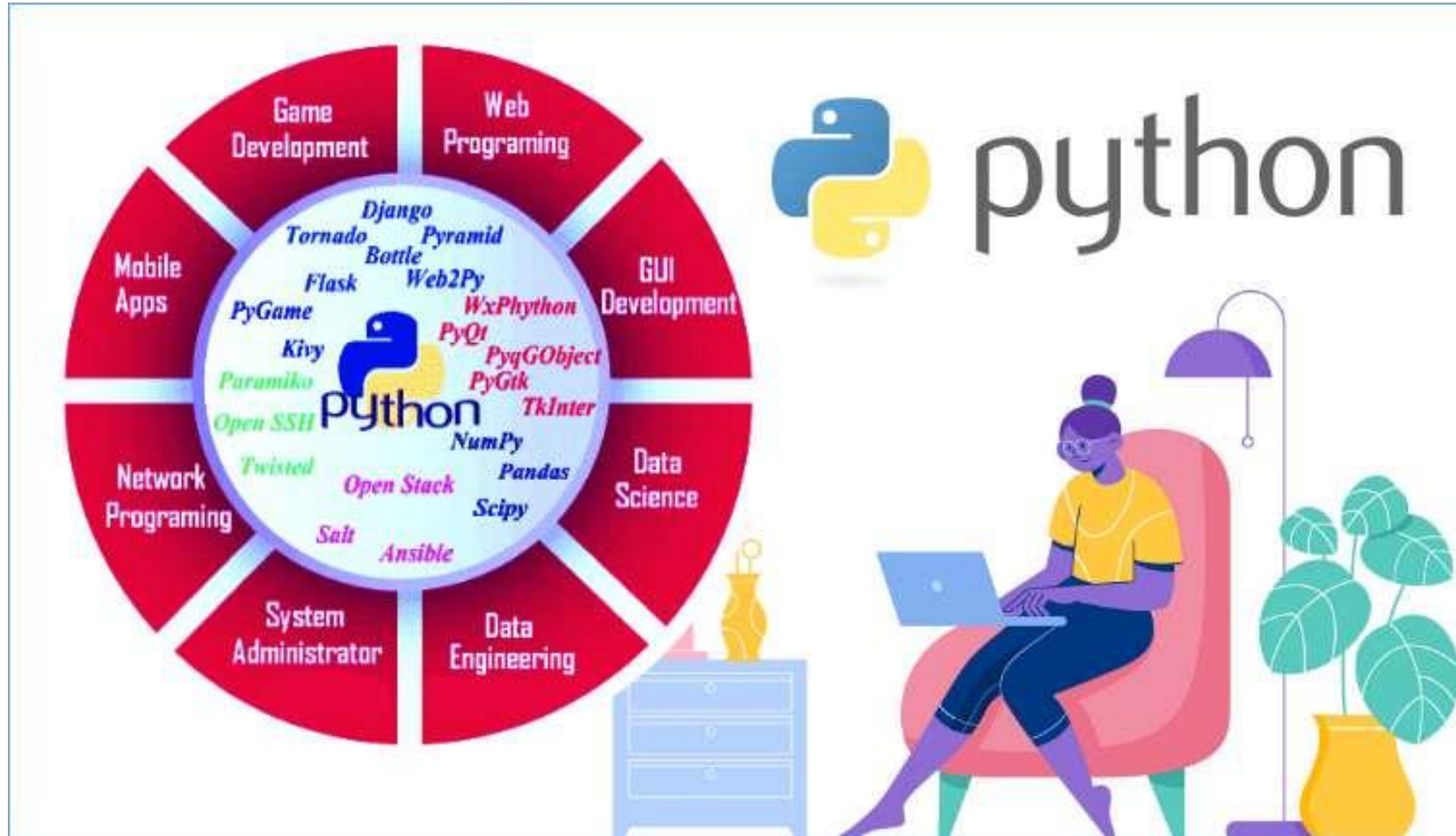
**11101**



**10010101010**



## 2. Why Python





## 2. Why Python

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Google

NETFLIX

alexa

Meta

amazon

PayPal

Uber





1. Review



**2. Why Python**

---



3. Basic Concepts



4. Project

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**Introduction to  
python**



1. Review



2. Why Python



3. Basic Concepts



4. Project

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**Introduction to  
python**



1. Review



2. Why Python



**3. Basic Concepts**

---



4. Project

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Introduction to  
python



# 3. Basic Concepts

---

## Variable

**$X = 1$**

**X**

**1**



# 3. Basic Concepts

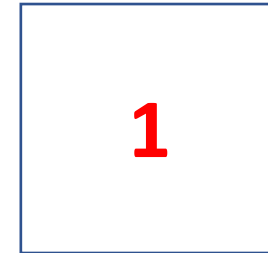
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## Variable

$$X = 1$$

$$X = 1 + 3$$

**X**





# 3. Basic Concepts

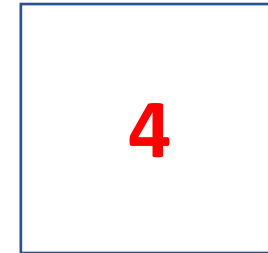
---

## Variable

$$X = 1$$

$$X = 1 + 3$$

**X**





# 3. Basic Concepts

---

## Variable

**x = 1**

**y = "hello"**

**z = 2.5**

**x**

**1**

**y**

**hello**

**z**

**2.5**



# 3. Basic Concepts

---

## Variable

**x = 1**

Integer(int)

**x**

**1**

**y = "hello"**

String(str)

**y**

**hello**

**z = 2.5**

float

**z**

**2.5**





### 3. Basic Concepts

If / Else      True or False

X = 4

If X is 4:

If True      print(x)

else:

If False      print("No")

X

4

Result:

4



### 3. Basic Concepts

---

#### If / Else



`X = 4`

`Y = 1`

`X = Y + 1`

`If X is 4:`

`print("X is 4")`

`else:`

`print(x)`

**X**





### 3. Basic Concepts

---

#### If / Else

`X = 4`

→ `Y = 1`

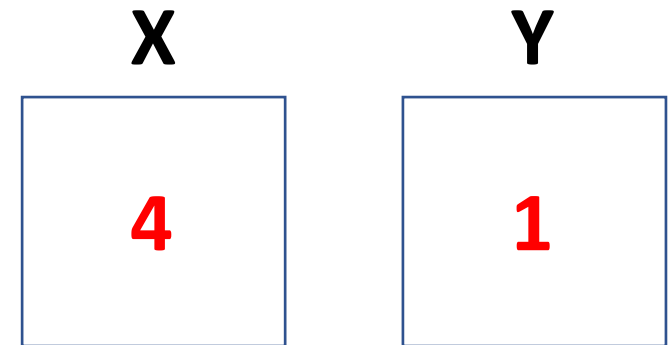
`X = Y + 1`

`If X is 4:`

`print("X is 4")`

`else:`

`print(x)`





### 3. Basic Concepts

---

#### If / Else

`X = 4`

`Y = 1`

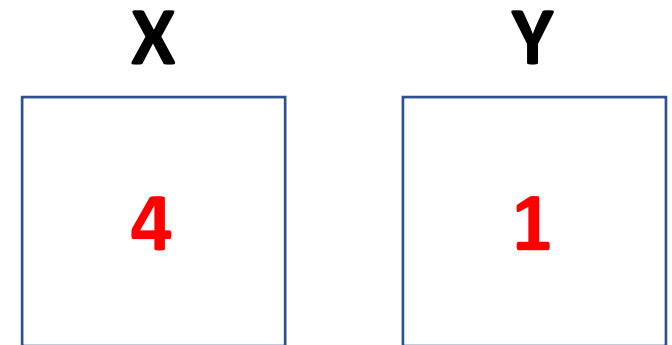
→ `X = Y + 1`

`If X is 4:`

`print("X is 4")`

`else:`

`print(x)`





### 3. Basic Concepts

---

#### If / Else

`X = 4`

`Y = 1`

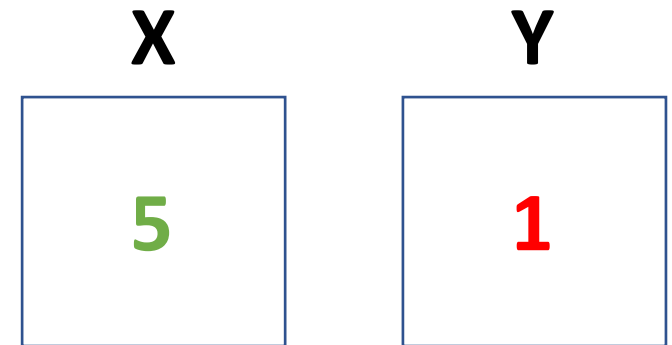
→ `X = Y + 1`

`If X is 4:`

`print("X is 4")`

`else:`

`print(x)`





### 3. Basic Concepts

---

#### If / Else

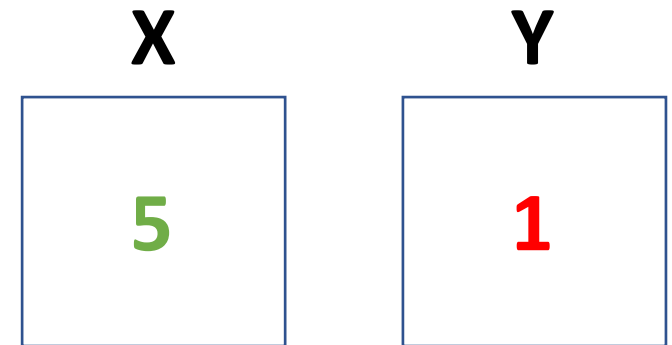
`X = 4`

`Y = 1`

`X = Y + 1`

→ `If X is 4:`  
    `print("X is 4")`

`else:`  
    `print(x)`



**True or False**



### 3. Basic Concepts

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#### If / Else

`X = 4`

`Y = 1`

`X = Y + 1`



`If X is 4:`

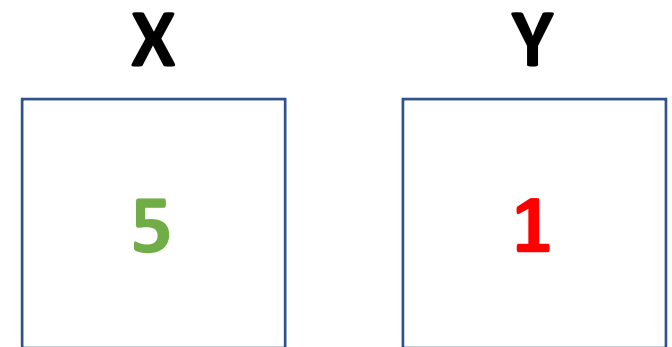
**If True**

`print("X is 4")`

`else:`

**If False**

`print(x)`



**True or False**



### 3. Basic Concepts

#### If / Else

`X = 4`

`Y = 1`

`X = Y + 1`



`If X is 4:`

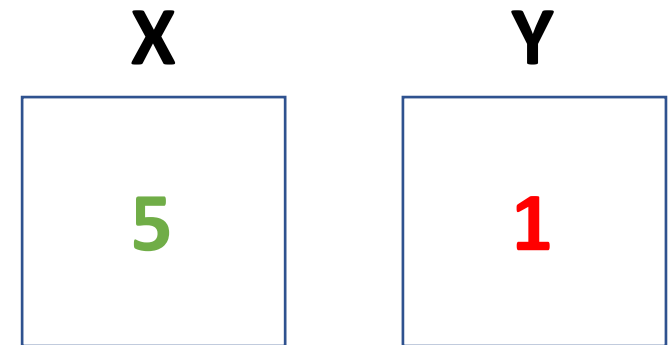
**If True**

`print("X is 4")`

`else:`

**If False**

`print(x)`



**Result :**

**5**





### 3. Basic Concepts

---

#### List

**x = [1, 2, 3, 4, 5]**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
----------	----------	----------	----------	----------

**x = ["apple", "orange", "banana"]**

<b>apple</b>	<b>orange</b>	<b>banana</b>
--------------	---------------	---------------



### 3. Basic Concepts

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**Iterate through a list:**

➔ `list = [1, 2, 3, 4, 5]`  
`for number in list:`  
 `print(number)`

1	2	3	4	5
---	---	---	---	---

**Result:**

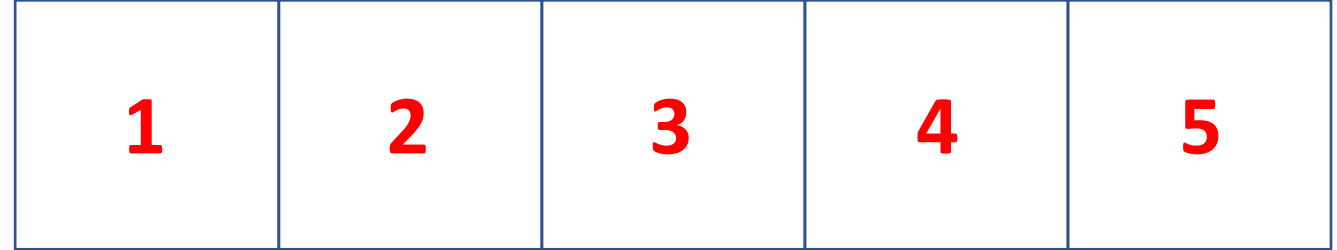


### 3. Basic Concepts

**Iterate through a list:**

```
list = [1, 2, 3, 4, 5]
```

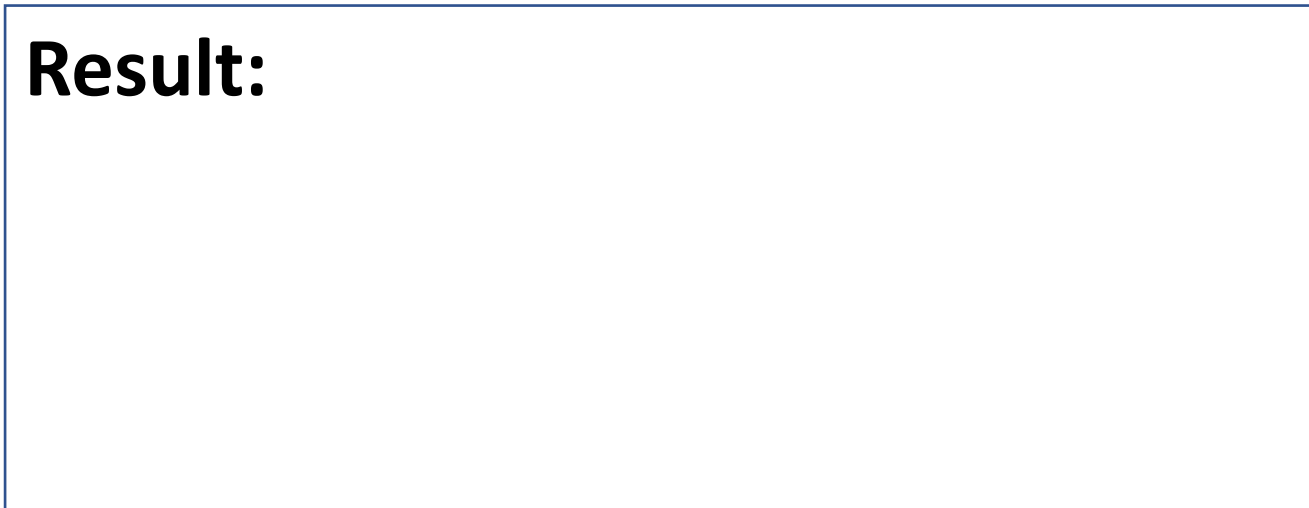
```
→ for number in list:  
    print(number)
```



**number**



**Result:**



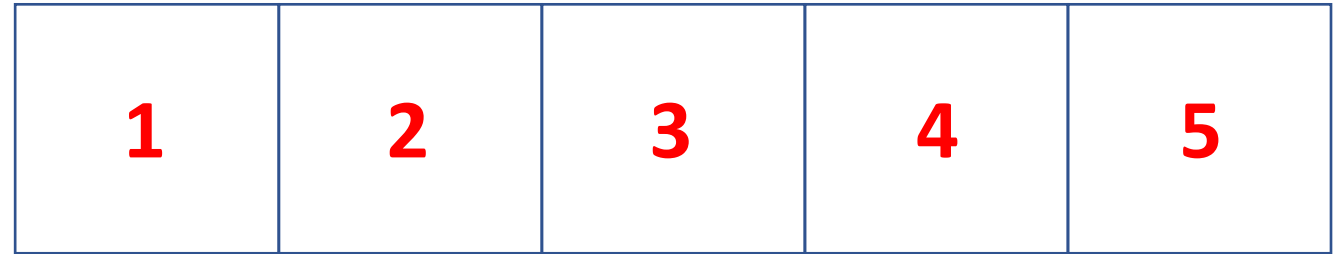


### 3. Basic Concepts

**Iterate through a list:**

```
list = [1, 2, 3, 4, 5]
```

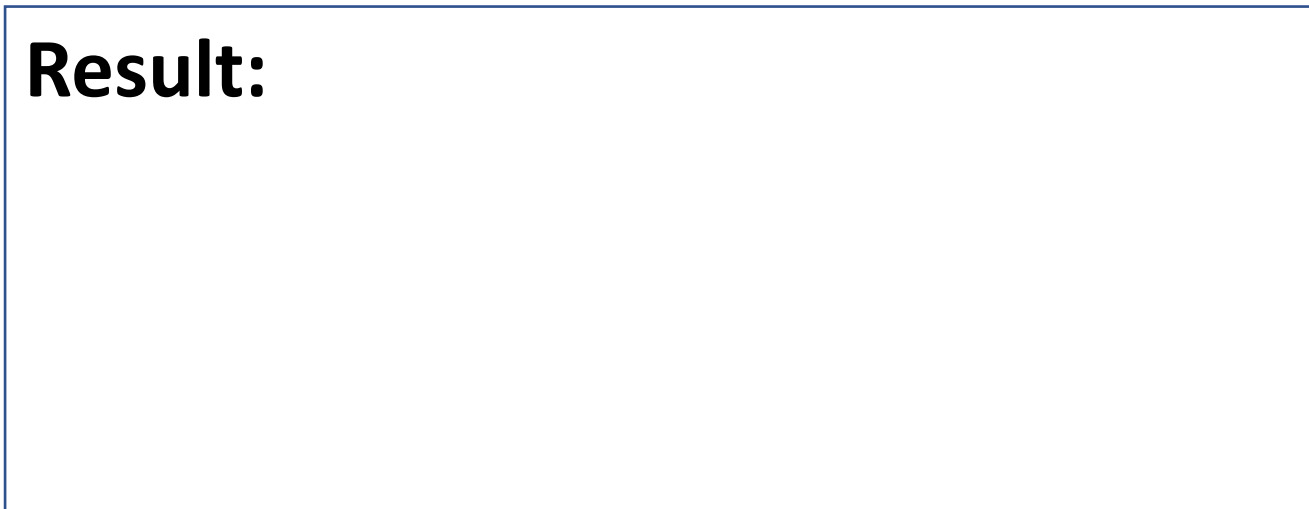
```
→ for number in list:  
    print(number)
```



**number**



**Result:**





### 3. Basic Concepts

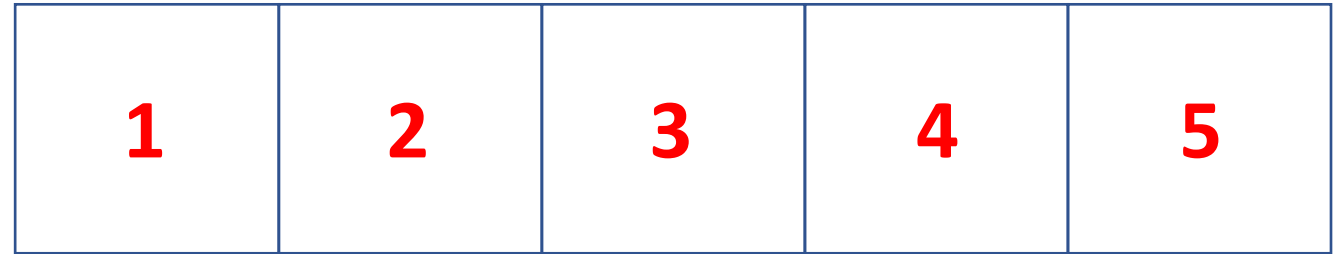
**Iterate through a list:**

```
list = [1, 2, 3, 4, 5]  
for number in list:  
    print(number)
```



**Result:**

1



**number**



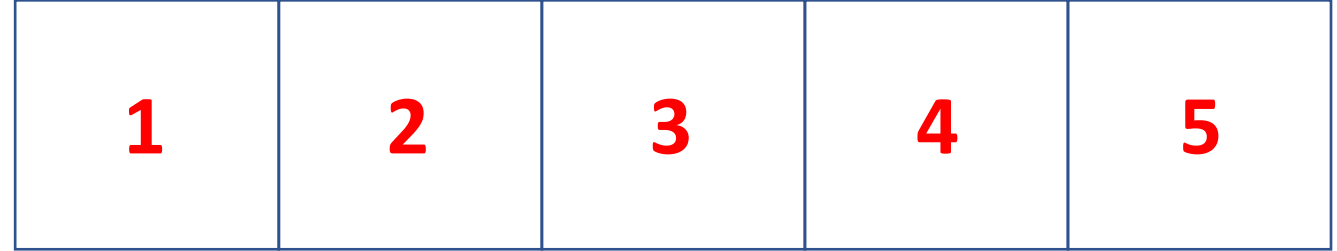


### 3. Basic Concepts

Iterate through a list:

```
list = [1, 2, 3, 4, 5]
```

```
for number in list:  
    print(number)
```



**number**



**Result:**

1

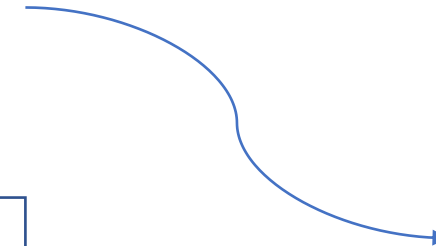
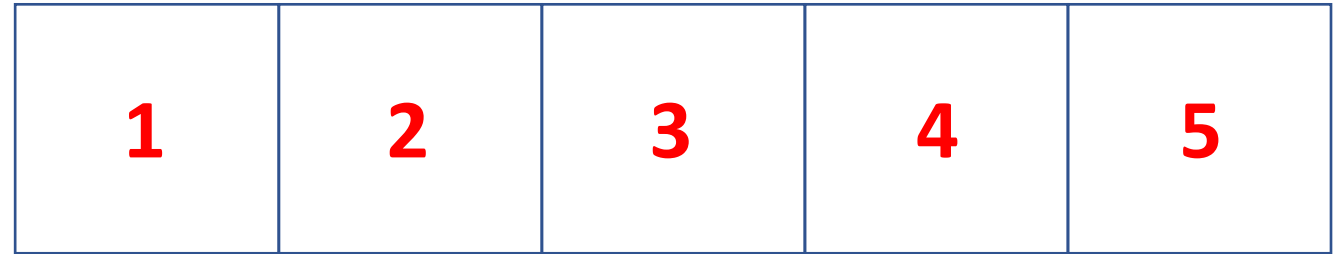


### 3. Basic Concepts

Iterate through a list:

```
list = [1, 2, 3, 4, 5]
```

```
for number in list:  
    print(number)
```



**number**



**Result:**

1

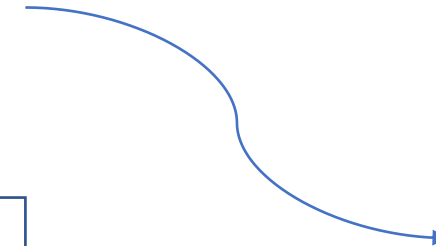
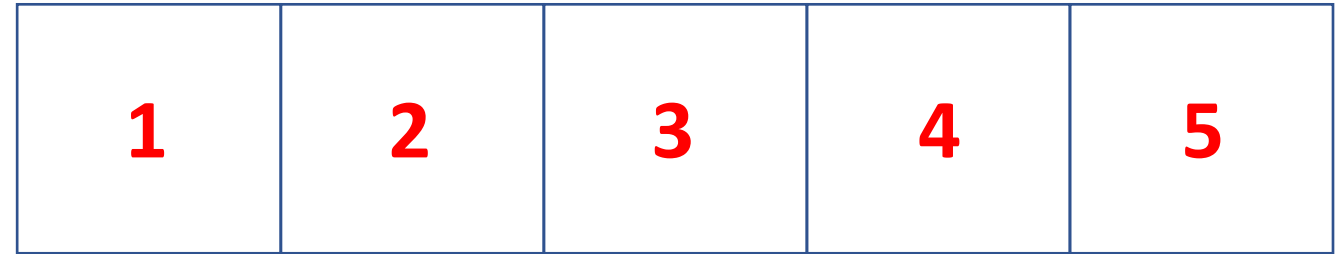
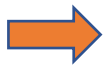


### 3. Basic Concepts

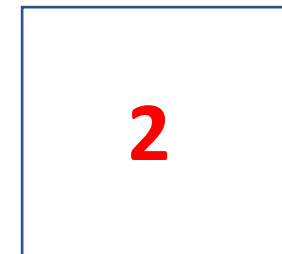
Iterate through a list:

```
list = [1, 2, 3, 4, 5]
```

```
for number in list:  
    print(number)
```



**number**



**Result:**

1

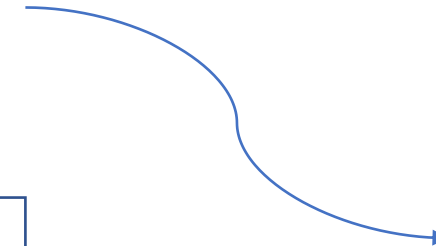
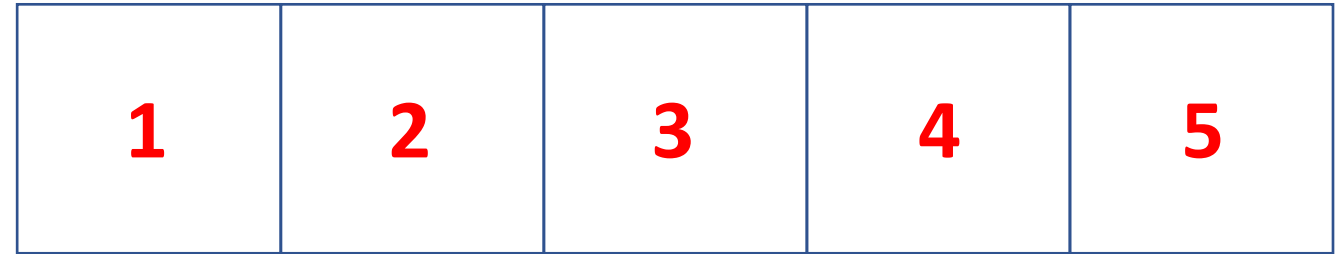
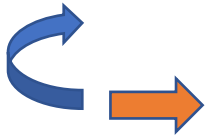




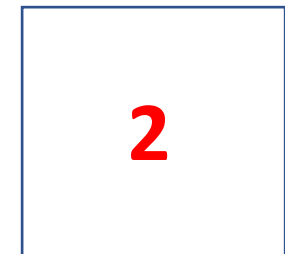
### 3. Basic Concepts

Iterate through a list:

```
list = [1, 2, 3, 4, 5]
for number in list:
    print(number)
```



**number**



**Result:**

1

2



### 3. Basic Concepts

Iterate through a list:

```
list = [1, 2, 3, 4, 5]
```

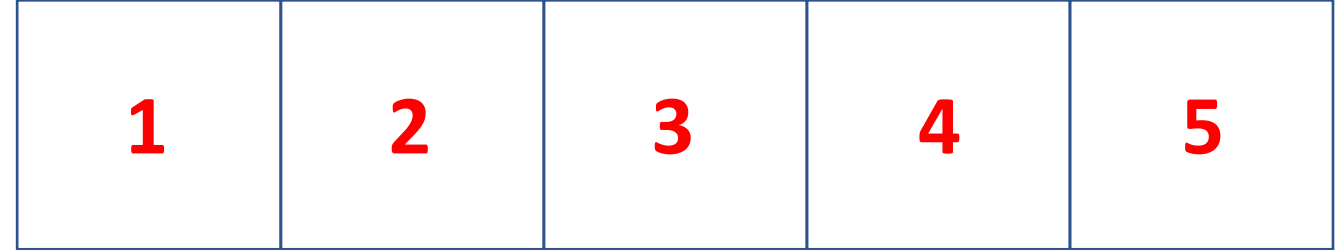
```
for number in list:  
    print(number)
```



**Result:**

1

2



**number**

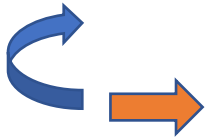
3



### 3. Basic Concepts

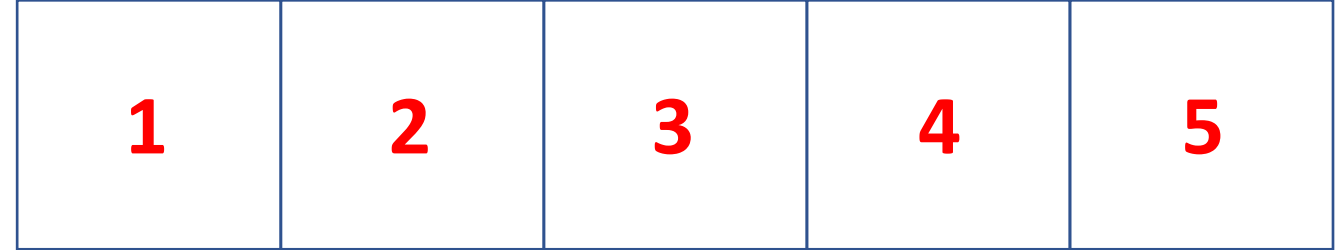
Iterate through a list:

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list = [1, 2, 3, 4, 5]
for number in list:
    print(number)
```



**Result:**

1  
2  
3



**number**



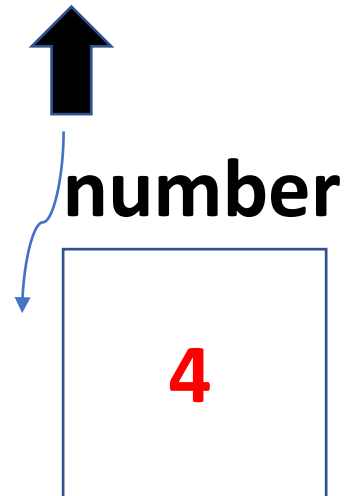
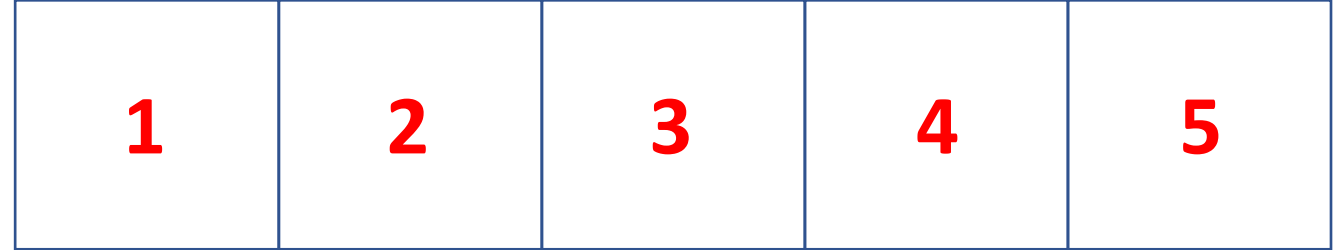
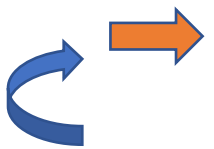


### 3. Basic Concepts

Iterate through a list:

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```

```
for number in list:  
    print(number)
```



**Result:**

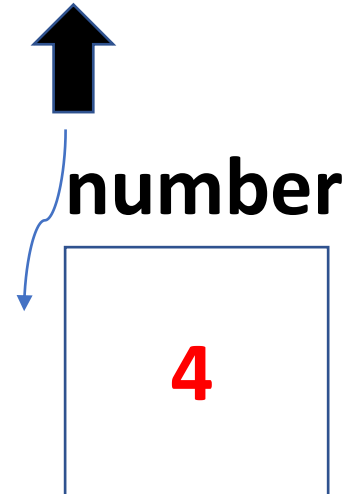
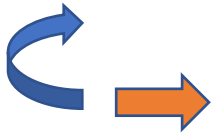
1  
2  
3



### 3. Basic Concepts

Iterate through a list:

```
list = [1, 2, 3, 4, 5]
for number in list:
    print(number)
```



**Result:**

1  
2  
3  
4

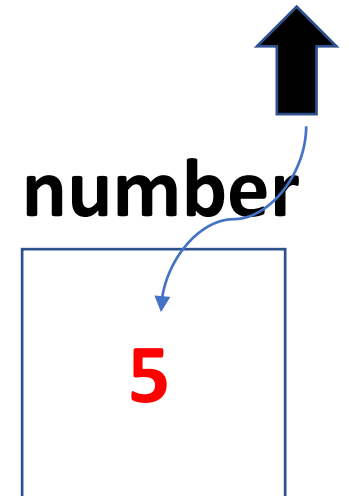
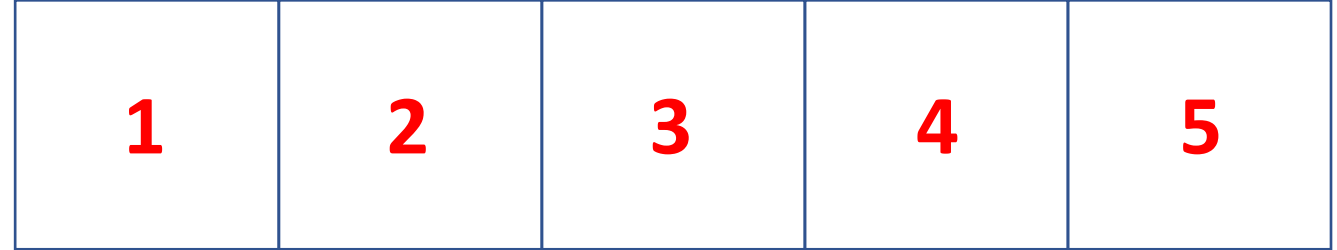


### 3. Basic Concepts

Iterate through a list:

```
list = [1, 2, 3, 4, 5]
```

```
for number in list:  
    print(number)
```



**Result:**

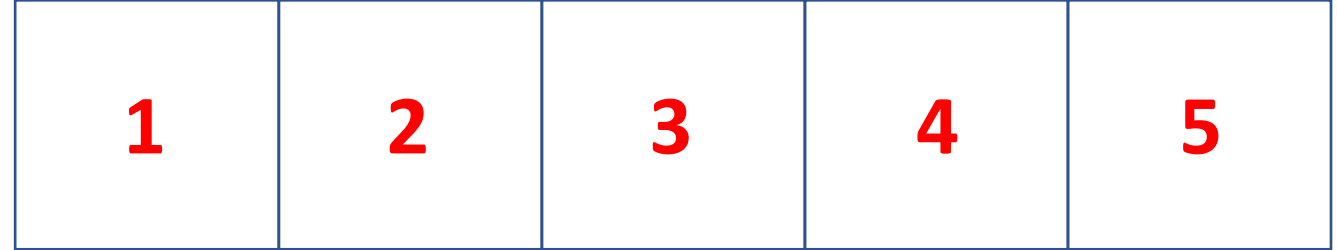
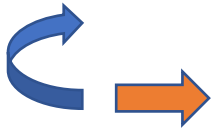
1  
2  
3  
4



### 3. Basic Concepts

Iterate through a list:

```
list = [1, 2, 3, 4, 5]
for number in list:
    print(number)
```



**number**



**Result:**

1  
2  
3  
4  
5

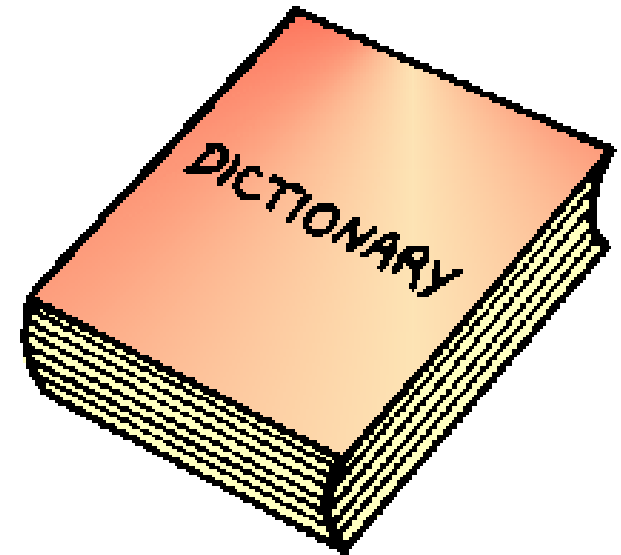


### 3. Basic Concepts

**Dictionary:**



**Word = "python"**



**Meaning =  
"it is a programming language"**



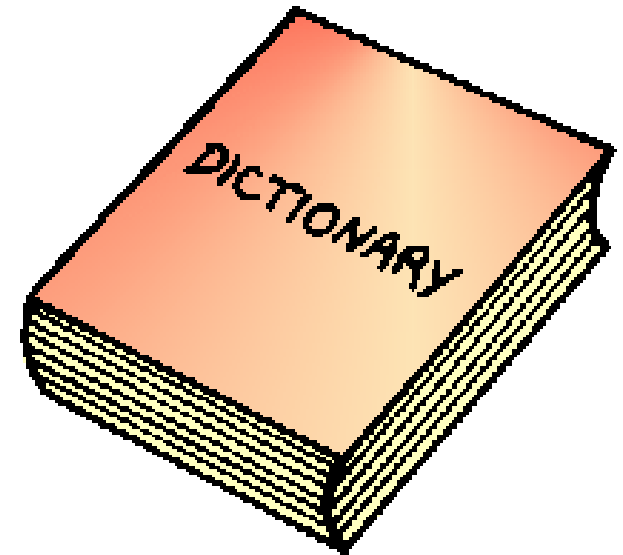


### 3. Basic Concepts

Dictionary:



**KEY** = "python"



**VALUE** =

"it is a programming language"

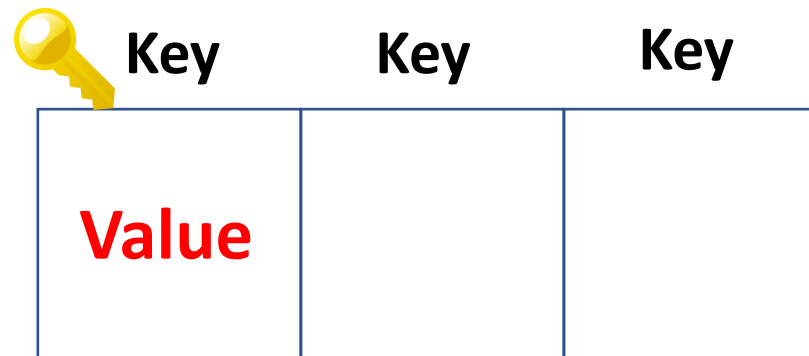


## 3. Basic Concepts

---

### Dictionary:

```
fruits = {"apple": 4, "orange": 5, "banana": 3}
```





### 3. Basic Concepts

---

## Dictionary:

```
fruits = {"apple": 4, "orange": 5, "banana": 3}
```

```
print(fruits["apple"])
```

**Result:**

4

apple	orange	banana
4	5	3



## 3. Basic Concepts

---

### Dictionary:

```
fruits = {"apple": 4, "orange": 5, "banana": 3}
```

```
fruits.items()
```

```
dict_items([('apple', 4), ('orange', 5), ('banana', 3)])
```

apple	orange	banana
4	5	3



1. Review



2. Why Python



**3. Basic Concepts**

---



4. Project

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Introduction to  
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**4. Project**

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**Introduction to  
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## 4. Project

---

# Chatbot

## (Online Shopping Assistant)





## 4. Project

---

1. Greeting with the user
2. Offer our products
3. Let the user choose
4. Take their information
5. Give them a receipt