

# Python Interview Questions

## 1. What is python?

- Python is high level programming language and interpreter language and general-purpose language.

## 2. What is b/t interpreter and compiler?

- The interpreter executes the code line by line in case if their error occurs it is not executing the other line of the code.
- The compiler executes the hole code at a time incase if there are any errors that occur it skips that line and executes the other line.

## 3. Is Python interpreter language? If so, explain?

- Yes, the python is interpreter language because it executes the code line by line.

## 4. What is datatype? What are datatypes in python?

- A variable is a container used to store values, and the kind of value it holds is defined by its data type.
- Primitive Data Types: int,float,str,bool,None.
- Non-Primitive Data Types: list , tuple, dict, set.

## 5. What is list? Give an example of that?

- List is collection of sequence data, and it is denoted by "["].
- Ex: list = ["33","55","99","88","77"]  
print(list)  
print(type(list))

## 6. What is a tuple and example of that?

- The tuple is a collection of sequence of data, and it is denoted with the "()".
- It is immutable.
- Ex: tuple = ("str","are","the","is","A","and")  
print(tuple)  
print(type(tuple))

## 7. What is dict and give example of that?

- It is built in datatype the python is used to store key: value :pairs
- Ex: student = {

```
"name": "Sriram",  
"age": 23,  
"branch": "MCA",  
"is_graduated": False  
}
```

#### 8. Difference Between Mutable and Immutable Data Types?

- A mutable data type can be changed after it is created, and we can modify the data.
- An immutable data type cannot be changed once it is created.

#### 9. Difference Between List and Tuple?

- List: list is mutable, denoted with the “[ ]”.
- Tuple: tuple is immutable, denoted with the “( )”.

#### 10. How do you modify a list?

- We can modify the list by using
- `append()` → Add item at end
- `insert()` → Add item at a specific index
- `extend()` → Add multiple items from another list
- `remove()` → Removes first matching value
- `pop()` → Removes item at index (default: last)
- `clear()` → Empties the entire list
- `sort()`
- `reverse()`

#### 11. Difference between append, Insert, pop and pop(index)?

- `append()` → Add item at end
- `insert()` → Add item at a specific index
- `pop()` → Removes item at index (default: last)
- `pop(i)` → Removes item at given index.

#### 12. How to Update a Dictionary in Python?

- Change the Value of an Existing Key  
Ex: `student = {"name": "Srii", "age": 20}`  
`student["age"] = 21`  
`print(student)` # {'name': 'Srii', 'age': 21}
- Add a New Key-Value Pair  
Ex: `student["college"] = "KL University"`

```

print(student)
# {'name': 'Srii', 'age': 21, 'college': 'KL University'}
○ Using update() Method
Ex: student.update({"age": 22, "branch": "CSE"})
print(student)
# {'name': 'Srii', 'age': 22, 'college': 'KL University', 'branch': 'CSE'}
○ Using Variables with update()
Ex: new_data = {"year": 3, "status": "Active"}
student.update(new_data)

```

### 13. Example of a Nested Dictionary for Electronics?

```

○ Resturents = {
○     "R_name": "Nawabs",
○     "location": "jubilee Hills",
○     "famous": "mutton",
○     "non_veg": {
○         "chicken_items": {
○             "biriyani": ["Dum", "fry", "mugalia", "pot", "france", "egg"],
○             "Starters": ["dragon", "chilli", "lolipop", "chicken65", "tandoori"],
○             "soups": ["soup1", "soup2", "soup3", "soup4", "soup5"]
○         },
○         "muttoon_items": {
○             "biriyani": ["Dum", "fry", "mugalia", "pot", "france", "egg"],
○             "Starters": ["dragon", "chilli", "lolipop", "chicken65", "tandoori"],
○             "soups": ["soup1", "soup2", "soup3", "soup4", "soup5"]
○         }
○     },
○     "fish_items": {
○         "biriyani": ["Dum", "fry", "mugalia", "pot", "france", "egg"],
○         "Starters": ["dragon", "chilli", "lolipop", "chicken65", "tandoori"],
○         "soups": ["soup1", "soup2", "soup3", "soup4", "soup5"]
○     },
○     "france_items": {

```

```

    "biriyani": ["Dum", "fry", "mugalia", "pot", "france", "egg"],
    "Starters": ["dragon", "chilli", "lolipop", "chicken65", "tandoori"],
    "soups": ["soup1", "soup2", "soup3", "soup4", "soup5"]
  }

  },
  "veg": {
    "biriyani": ["mushroom", "paneer", "veg_mix", "veg_palav", "Gobi", "minty_paneer"],
    "Starters": ["paneer_tika", "gobi_manchuria", "stuffed_mushroom", "babycorn", "aloo_tikki"],
    "soups": ["veg_soup", "mushroom", "tomato_shorba", "sweetcorn", "carrot_ginger"]
  },
  "rotis": ["naan", "roti", "butter_roti", "parota", "chapati", "rumali_roti"]
},
{
  "R_name": "shadab",
  "location": "charminar",
  "famous": "mutton",
  "non_veg": {
    "chicken_items": {
      "biriyani": ["Dum", "fry", "mugalia", "pot", "france", "egg"],
      "Starters": ["dragon", "chilli", "lolipop", "chicken65", "tandoori"],
      "soups": ["soup1", "soup2", "soup3", "soup4", "soup5"]
    },
    "mutton_items": {
      "biriyani": ["Dum", "fry", "mugalia", "pot", "france", "egg"],
      "Starters": ["dragon", "chilli", "lolipop", "chicken65", "tandoori"],
      "soups": ["soup1", "soup2", "soup3", "soup4", "soup5"]
    }
  },
  "fish_items": {

```

```

    "biriyanis":["Dum","fry","mugalia","pot","france
    ", "egg"],
    "Starters":["dragon","chilli","lolipop","chicken
    65","tandoori"],
    "soups":["soup1","soup2","soup3","soup4","soup5"
    ]
    },
    "france_items": {
        "biriyanis":["Dum","fry","mugalia","pot","france
        ", "egg"],
        "Starters":["dragon","chilli","lolipop","chicken
        65","tandoori"],
        "soups":["soup1","soup2","soup3","soup4","soup5"
        ]
    }
    },
    "veg":{
        "biriyanis":["mushroom","paneer","veg_mix","veg_palav","
        Gobi","minty_paneer"],
        "Starters":["paneer_tika","gobi_manchuria","stuffed_mush
        room","babycorn","aloo_tikki"],
        "soups":["vegsoup","mushroom","tomato_shorba","sweetcorn
        ","carrot_ginger"]
    },
    "rotis":["naan","roti","butter_roti","parota","chapati","rum
    ali_roti"]
    },
    {
        "R_name":"naidu gari kunda biriyani",
        "location":"kphb",
        "famous":"pot biriyani",
        "non_veg":{
            "chicken_items": {
                "biriyanis":["Dum","fry","mugalia","pot","france","e
                gg"],
                "Starters":["dragon","chilli","lolipop","chicken65",
                "tandoori"],
                "soups":["soup1","soup2","soup3","soup4","soup5"]
            },
            "muttoon_items": {
                "biriyanis":["Dum","fry","mugalia","pot","france
                ", "egg"],

```

```

○         "Starters":["dragon","chilli","lolipop","chicken
65","tandoori"],
○         "soups":["soup1","soup2","soup3","soup4","soup5"
]
○
○     },
○     "fish_items": {
○         "biriyani":["Dum","fry","mugalia","pot","france
", "egg"],
○         "Starters":["dragon","chilli","lolipop","chicken
65","tandoori"],
○         "soups":["soup1","soup2","soup3","soup4","soup5"
]
○     },
○     "france_items": {
○         "biriyani":["Dum","fry","mugalia","pot","france
", "egg"],
○         "Starters":["dragon","chilli","lolipop","chicken
65","tandoori"],
○         "soups":["soup1","soup2","soup3","soup4","soup5"
]
○     }
○
○     },
○     "veg":{
○         "biriyani":["mushroom","paneer","veg_mix","veg_palav","
Gobi","minty_paneer"],
○         "Starters":["paneer_tika","gobi_manchuria","stuffed_mush
room","babycorn","aloo_tikki"],
○         "soups":["vegsoup","mushroom","tomato_shorba","sweetcorn
", "carrot_ginger"]
○
○     },
○     "rotis":["naan","roti","butter_roti","parota","chapati","rum
ali_roti"]
○
○     },
○     {
○         "R_name":"platform 65",
○         "location":"kphb",
○         "famous":"chicken biriyani",
○         "non_veg":{
○             "chicken_items": {
○                 "biriyani":["Dum","fry","mugalia","pot","france","e
gg"],

```

```

○         "Starters":["dragon","chilli","lolipop","chicken65",
○         "tandoori"],
○         "soups":["soup1","soup2","soup3","soup4","soup5"]
○     },
○     "muttoon_items": {
○         "biriyani":["Dum","fry","mugalia","pot","france
○         ", "egg"],
○         "Starters":["dragon","chilli","lolipop","chicken
○         65","tandoori"],
○         "soups":["soup1","soup2","soup3","soup4","soup5"
○         ]
○     },
○     "fish_items": {
○         "biriyani":["Dum","fry","mugalia","pot","france
○         ", "egg"],
○         "Starters":["dragon","chilli","lolipop","chicken
○         65","tandoori"],
○         "soups":["soup1","soup2","soup3","soup4","soup5"
○         ]
○     },
○     "france_items": {
○         "biriyani":["Dum","fry","mugalia","pot","france
○         ", "egg"],
○         "Starters":["dragon","chilli","lolipop","chicken
○         65","tandoori"],
○         "soups":["soup1","soup2","soup3","soup4","soup5"
○         ]
○     }
○ },
○     },
○     "veg":{
○         "biriyani":["mushroom","paneer","veg_mix","veg_palav","
○         Gobi","minty_paneer"],
○         "Starters":["paneer_tika","gobi_manchuria","stuffed_mush
○         room","babycorn","aloo_tikki"],
○         "soups":["vegsoup","mushroom","tomato_shorba","sweetcorn
○         ", "carrot_ginger"]
○     },
○     "rotis":["naan","roti","butter_roti","parota","chapati","rum
○         ali_roti"]
○ },
○     {

```

```

○      "R_name":"paradise",
○      "location":"secunderabad",
○      "famous":"halim",
○      "non_veg":{
○          "chicken_items": {
○              "biriyanis":["Dum","fry","mugalia","pot","france","e
gg"],
○              "Starters":["dragon","chilli","lolipop","chicken65",
"tandoori"],
○              "soups":["soup1","soup2","soup3","soup4","soup5"]
○          },
○          "muttoon_items": {
○              "biriyanis":["Dum","fry","mugalia","pot","france
", "egg"],
○              "Starters":["dragon","chilli","lolipop","chicken
65","tandoori"],
○              "soups":["soup1","soup2","soup3","soup4","soup5"
]
○          },
○          "fish_items": {
○              "biriyanis":["Dum","fry","mugalia","pot","france
", "egg"],
○              "Starters":["dragon","chilli","lolipop","chicken
65","tandoori"],
○              "soups":["soup1","soup2","soup3","soup4","soup5"
]
○          },
○          "france_items": {
○              "biriyanis":["Dum","fry","mugalia","pot","france
", "egg"],
○              "Starters":["dragon","chilli","lolipop","chicken
65","tandoori"],
○              "soups":["soup1","soup2","soup3","soup4","soup5"
]
○          }
○      },
○      "veg":{
○          "biriyanis":["mushroom","paneer","veg_mix","veg_palav","
Gobi","minty_paneer"],
○          "Starters":["paneer_tika","gobi_manchuria","stuffed_mush
room","babycorn","aloo_tikki"],
○          "soups":["vegsoup","mushroom","tomato_shorba","sweetcorn
", "carrot_ginger"]

```



```

○
○         },
○         "rotis":["naan","roti","butter_roti","parota","chapati","rum
ali_roti"]
○
○     }
○
○ print(Resturents)
○ print(len(Resturents))
○ print(Resturents[0]["R_name"])
○ print(Resturents[1]["R_name"])
○ print(Resturents[2]["R_name"])
○ print(Resturents[3]["R_name"])
○ print(Resturents[4]["R_name"])
○ print(Resturents[0]["location"])
○ print(Resturents[1]["location"])
○ print(Resturents[2]["location"])
○ print(Resturents[3]["location"])
○ print(Resturents[4]["location"])
○ print(Resturents[0]["famous"])
○ print(Resturents[1]["famous"])
○ print(Resturents[2]["famous"])
○ print(Resturents[3]["famous"])
○ print(Resturents[4]["famous"])
○ print(Resturents[0]["non_veg"])
○ print(Resturents[1]["non_veg"])
○ print(Resturents[2]["non_veg"])
○ print(Resturents[3]["non_veg"])
○ print(Resturents[4]["non_veg"])
○ print(Resturents[0]["non_veg"]["chicken_items"])
○ print(Resturents[1]["non_veg"]["chicken_items"])
○ print(Resturents[2]["non_veg"]["chicken_items"])
○ print(Resturents[3]["non_veg"]["chicken_items"])
○ print(Resturents[4]["non_veg"]["chicken_items"])
○ print(Resturents[4]["veg"],["Starters"])
○ print(Resturents[0]["rotis"])
○ print(Resturents[0]["non_veg"]["chicken_items"]["soups"][2])
○ print(Resturents[1]["non_veg"]["chicken_items"]["soups"][2])
○ print(Resturents[2]["non_veg"]["chicken_items"]["soups"][2])
○ print(Resturents[3]["non_veg"]["chicken_items"]["soups"][2])
○ print(Resturents[4]["non_veg"]["chicken_items"]["soups"][2])
○ print(Resturents[1]["veg"]["biriyanis"][1])
○ print(Resturents[0]["veg"]["Starters"][1])
○ print(Resturents[1]["non_veg"]["mutton_items"]["Starters"][2])

```

#### 14. Write a List of dictionaries?

```
Resturents = [  
    {  
        "R_name": "Nawabs",  
        "location": "jubilee Hills",  
        "famous": "mutton",  
        "non_veg": {  
            "chicken_items": {  
                "biriyanis": ["Dum", "fry", "mugalia", "pot", "france", "egg"],  
                "Starters": ["dragon", "chilli", "lolipop", "chicken65",  
                    "tandoori"],  
                "soups": ["soup1", "soup2", "soup3", "soup4", "soup5"]  
            },  
            "muttoon_items": {  
                "biriyanis": ["Dum", "fry", "mugalia", "pot", "france",  
                    "egg"],  
                "Starters": ["dragon", "chilli", "lolipop", "chicken65",  
                    "tandoori"],  
                "soups": ["soup1", "soup2", "soup3", "soup4", "soup5"]  
            }  
        },  
        "fish_items": {  
            "biriyanis": ["Dum", "fry", "mugalia", "pot", "france",  
                "egg"],  
            "Starters": ["dragon", "chilli", "lolipop", "chicken65",  
                "tandoori"],  
            "soups": ["soup1", "soup2", "soup3", "soup4", "soup5"]  
        },  
        "france_items": {  
            "biriyanis": ["Dum", "fry", "mugalia", "pot", "france",  
                "egg"],  
            "Starters": ["dragon", "chilli", "lolipop", "chicken65",  
                "tandoori"],  
            "soups": ["soup1", "soup2", "soup3", "soup4", "soup5"]  
        }  
    },  
    {  
        "veg": {  
            "biriyanis": ["mushroom", "paneer", "veg_mix", "veg_palav",  
                "Gobi", "minty_paneer"],
```

```

○         "Starters":["paneer_tika","gobi_manchuria","stuffed_mush
room","babycorn","aloo_tikki"],
○         "soups":["vegsoup","mushroom","tomato_shorba","sweetcorn
","carrot_ginger"]
○
○     },
○     "rotis":["naan","roti","butter_roti","parota","chapati","rum
ali_roti"]
○
○ },
○ {
○     "R_name":"shadab",
○     "location":"charminar",
○     "famous":"mutton",
○     "non_veg":{
○         "chicken_items": {
○             "biriyanis":["Dum","fry","mugalia","pot","france","e
gg"],
○             "Starters":["dragon","chilli","lolipop","chicken65",
"tandoori"],
○             "soups":["soup1","soup2","soup3","soup4","soup5"]
○         },
○         "muttoon_items": {
○             "biriyanis":["Dum","fry","mugalia","pot","france
","egg"],
○             "Starters":["dragon","chilli","lolipop","chicken
65","tandoori"],
○             "soups":["soup1","soup2","soup3","soup4","soup5"
]
○         },
○         "fish_items": {
○             "biriyanis":["Dum","fry","mugalia","pot","france
","egg"],
○             "Starters":["dragon","chilli","lolipop","chicken
65","tandoori"],
○             "soups":["soup1","soup2","soup3","soup4","soup5"
]
○         },
○         "france_items": {
○             "biriyanis":["Dum","fry","mugalia","pot","france
","egg"],
○             "Starters":["dragon","chilli","lolipop","chicken
65","tandoori"],

```

```

○         "soups":["soup1","soup2","soup3","soup4","soup5"
○     ]
○     }
○
○     },
○     "veg":{
○         "biriyanis":["mushroom","paneer","veg_mix","veg_palav","
Gobi","minty_paneer"],
○         "Starters":["paneer_tika","gobi_manchuria","stuffed_mush
room","babycorn","aloo_tikki"],
○         "soups":["vegsoup","mushroom","tomato_shorba","sweetcorn
","carrot_ginger"]
○     },
○     "rotis":["naan","roti","butter_roti","parota","chapati","rum
ali_roti"]
○
○     },
○     {
○         "R_name":"naidu gari kunda biriyani",
○         "location":"kphb",
○         "famous":"pot biriyani",
○         "non_veg":{
○             "chicken_items": {
○                 "biriyanis":["Dum","fry","mugalia","pot","france","e
gg"],
○                 "Starters":["dragon","chilli","lolipop","chicken65",
"tandoori"],
○                 "soups":["soup1","soup2","soup3","soup4","soup5"]
○             },
○             "muttoon_items": {
○                 "biriyanis":["Dum","fry","mugalia","pot","france
","egg"],
○                 "Starters":["dragon","chilli","lolipop","chicken
65","tandoori"],
○                 "soups":["soup1","soup2","soup3","soup4","soup5"
]
○             }
○         },
○         "fish_items": {
○             "biriyanis":["Dum","fry","mugalia","pot","france
","egg"],
○             "Starters":["dragon","chilli","lolipop","chicken
65","tandoori"],

```

```

○         "soups":["soup1","soup2","soup3","soup4","soup5"
○     ]
○     },
○     "france_items": {
○         "biriyani":["Dum","fry","mugalia","pot","france
○     ", "egg"],
○         "Starters":["dragon","chilli","lolipop","chicken
○     65","tandoori"],
○         "soups":["soup1","soup2","soup3","soup4","soup5"
○     ]
○     }
○
○     },
○     "veg":{
○         "biriyani":["mushroom","paneer","veg_mix","veg_palav","
○     Gobi","minty_paneer"],
○         "Starters":["paneer_tika","gobi_manchuria","stuffed_mush
○     room","babycorn","aloo_tikki"],
○         "soups":["vegsoup","mushroom","tomato_shorba","sweetcorn
○     ", "carrot_ginger"]
○     },
○     "rotis":["naan","roti","butter_roti","parota","chapati","rum
○     ali_roti"]
○
○     },
○     {
○         "R_name":"platform 65",
○         "location":"kphb",
○         "famous":"chicken biriyani",
○         "non_veg":{
○             "chicken_items": {
○                 "biriyani":["Dum","fry","mugalia","pot","france","e
○             gg"],
○                 "Starters":["dragon","chilli","lolipop","chicken65",
○             "tandoori"],
○                 "soups":["soup1","soup2","soup3","soup4","soup5"]
○             },
○             "muttoon_items": {
○                 "biriyani":["Dum","fry","mugalia","pot","france
○             ", "egg"],
○                 "Starters":["dragon","chilli","lolipop","chicken
○             65","tandoori"],
○                 "soups":["soup1","soup2","soup3","soup4","soup5"
○             ]

```

```

    },
    "fish_items": {
        "biriyanis": ["Dum", "fry", "mugalia", "pot", "france", "egg"],
        "Starters": ["dragon", "chilli", "lolipop", "chicken65", "tandoori"],
        "soups": ["soup1", "soup2", "soup3", "soup4", "soup5"]
    },
    "france_items": {
        "biriyanis": ["Dum", "fry", "mugalia", "pot", "france", "egg"],
        "Starters": ["dragon", "chilli", "lolipop", "chicken65", "tandoori"],
        "soups": ["soup1", "soup2", "soup3", "soup4", "soup5"]
    }
},
"veg": {
    "biriyanis": ["mushroom", "paneer", "veg_mix", "veg_palav", "Gobi", "minty_paneer"],
    "Starters": ["paneer_tika", "gobi_manichuria", "stuffed_mushroom", "babycorn", "aloo_tikki"],
    "soups": ["veg_soup", "mushroom", "tomato_shorba", "sweetcorn", "carrot_ginger"]
},
"rotis": ["naan", "roti", "butter_roti", "parota", "chapati", "rumali_roti"]
},
{
    "R_name": "paradise",
    "location": "secunderabad",
    "famous": "halim",
    "non_veg": {
        "chicken_items": {
            "biriyanis": ["Dum", "fry", "mugalia", "pot", "france", "egg"],
            "Starters": ["dragon", "chilli", "lolipop", "chicken65", "tandoori"],
            "soups": ["soup1", "soup2", "soup3", "soup4", "soup5"]
        },

```

```

○         "muttoon_items": {
○             "biriyanis":["Dum","fry","mugalia","pot","france
○ ", "egg"],
○             "Starters":["dragon","chilli","lolipop","chicken
65","tandoori"],
○             "soups":["soup1","soup2","soup3","soup4","soup5"
○ ]
○         },
○         "fish_items": {
○             "biriyanis":["Dum","fry","mugalia","pot","france
○ ", "egg"],
○             "Starters":["dragon","chilli","lolipop","chicken
65","tandoori"],
○             "soups":["soup1","soup2","soup3","soup4","soup5"
○ ]
○         },
○         "france_items": {
○             "biriyanis":["Dum","fry","mugalia","pot","france
○ ", "egg"],
○             "Starters":["dragon","chilli","lolipop","chicken
65","tandoori"],
○             "soups":["soup1","soup2","soup3","soup4","soup5"
○ ]
○         }
○     },
○     "veg":{
○         "biriyanis":["mushroom","paneer","veg_mix","veg_palav","
Gobi","minty_paneer"],
○         "Starters":["paneer_tika","gobi_manchuria","stuffed_mush
room","babycorn","aloo_tikki"],
○         "soups":["vegsoup","mushroom","tomato_shorba","sweetcorn
","carrot_ginger"]
○     },
○     "rotis":["naan","roti","butter_roti","parota","chapati","rum
ali_roti"]
○ }
○ ]
○ print(Resturents)
○ print(len(Resturents))
○ print(Resturents[0]["R_name"])
○ print(Resturents[1]["R_name"])

```

```

○ print(Resturents[2][ "R_name" ])
○ print(Resturents[3][ "R_name" ])
○ print(Resturents[4][ "R_name" ])
○ print(Resturents[0][ "location" ])
○ print(Resturents[1][ "location" ])
○ print(Resturents[2][ "location" ])
○ print(Resturents[3][ "location" ])
○ print(Resturents[4][ "location" ])
○ print(Resturents[0][ "famous" ])
○ print(Resturents[1][ "famous" ])
○ print(Resturents[2][ "famous" ])
○ print(Resturents[3][ "famous" ])
○ print(Resturents[4][ "famous" ])
○ print(Resturents[0][ "non_veg" ])
○ print(Resturents[1][ "non_veg" ])
○ print(Resturents[2][ "non_veg" ])
○ print(Resturents[3][ "non_veg" ])
○ print(Resturents[4][ "non_veg" ])
○ print(Resturents[0][ "non_veg" ][ "chicken_items" ])
○ print(Resturents[1][ "non_veg" ][ "chicken_items" ])
○ print(Resturents[2][ "non_veg" ][ "chicken_items" ])
○ print(Resturents[3][ "non_veg" ][ "chicken_items" ])
○ print(Resturents[4][ "non_veg" ][ "chicken_items" ])
○ print(Resturents[4][ "veg" ], [ "Starters" ])
○ print(Resturents[0][ "rotis" ])
○ print(Resturents[0][ "non_veg" ][ "chicken_items" ][ "soups" ][ 2 ])
○ print(Resturents[1][ "non_veg" ][ "chicken_items" ][ "soups" ][ 2 ])
○ print(Resturents[2][ "non_veg" ][ "chicken_items" ][ "soups" ][ 2 ])
○ print(Resturents[3][ "non_veg" ][ "chicken_items" ][ "soups" ][ 2 ])
○ print(Resturents[4][ "non_veg" ][ "chicken_items" ][ "soups" ][ 2 ])
○ print(Resturents[1][ "veg" ][ "biriyanis" ][ 1 ])
○ print(Resturents[0][ "veg" ][ "Starters" ][ 1 ])
○ print(Resturents[1][ "non_veg" ][ "muttoon_items" ][ "Starters" ][ 2 ])

```

## 15. What is an operator?

- An operator is a special symbol or keyword that is used to perform operations on values or variables.

Types of operators:

- Arithmetic (math) → (+, -, \*, /, %)
- Comparison (true/false) → (==, !=, >, <)
- Assignment (store value) → (=, +=, -=, etc.)
- Logical decisions (and/or) → (and, or, not)



- Bit-level operations → Topic is pending.....
- Membership/identity checks → (in, not in)

## 16. What are Arithmetic Operators? Why are They Used?

The arithmetic operators:

- Addition (+) → Adds two values
- Subtraction (-) → Subtracts second from first
- Multiplication (\*) → Multiplies two values
- Division (/) → Divides and gives float
- Exponentiation (\*\*) → Raises to the power

Ex: a = 15

b = 4

```
print(a + b) # 19
print(a - b) # 11
print(a * b) # 60
print(a / b) # 3.75
print(a // b) # 3
print(a % b) # 3
print(a ** b) # 50625
```

## 17. What are Comparison Operators? Why are they used?

Comparison Operators:

- Equal to (==) → Returns True if both values are equal
- Not equal to (!=) → Returns True if values are not equal
- Greater than (>) → Returns True if the left value is greater
- Less than (<) → Returns True if the left value is smaller
- Greater than or equal to (>=) → Returns True if left value is greater or equal
- Less than or equal to (<=) → Returns True if left value is smaller or equal

Ex: a = 10

b = 20

```
print(a == b) # False
print(a != b) # True
print(a > b) # False
print(a < b) # True
print(a >= 10) # True
print(b <= 15) # False
```

