

INSTRUSTOR: Sir Ayub

ID: 14258

NAME: Syed Muhammad Ali

SUBJECT: Data Science

SEM & COURSE: 5th – BS(SE)

Q1. What type of errors do occur in Python, write the a program with different types of errors as well as write separate correction code?

ANSWER

Following are the types of errors;

Syntax Error

Syntax errors are errors in code that the computer cannot interpret. In Python these are

- Spelling errors
- The omission of important character (e.g. semicolon)
- Wrong indentation

```
In [24]: i = (did you had your dinner?)  
print("yes")
```

```
File "<ipython-input-24-73a4ae712b0a>", line 1  
    i = (did you had your dinner?)  
          ^  
SyntaxError: invalid syntax
```

```
In [25]: i = ("did you had your dinner?")  
print("yes")
```

```
yes
```

Runtime Error

These are the errors that are not detected until runtime.

These are caused by

- It can't find some data because it doesn't exist
- It can't perform an action on the data it has been given because it is an invalid type of data

```
In [6]: model= input("what model car do you have?")
        if model<2005:
            print("you cant put your car in careem")

what model car do you have?2004

-----
TypeError                                Traceback (most recent call last)
<ipython-input-6-fcf71022283a> in <module>
      1 model= input("what model car do you have?")
----> 2 if model<2005:
      3     print("you cant put your car in careem")

TypeError: '<' not supported between instances of 'str' and 'int'
```

```
In [7]: model= input("what model car do you have?")
        model= int (model)
        if model<2005:
            print("you cant put your car in careem")

what model car do you have?2004
you cant put your car in careem
```

Logical Error

These are the errors in the that do not throw an error at all, but simply do not do what you intended the code to do. These are the most difficult to find because they can only be found through full and extensive testing.

```
In [5]: friends=['ali','qazi','omar','najeeb']
        print("print your best two freinds name=")
        for dost in friends[:4]:
            print(dost.title())

print your best two freinds name=
Ali
Qazi
Omar
Najeeb
```

```
In [ ]: |
```

```
In [6]: friends=['ali','qazi','omar','najeed']
print("print your best two freinds name=")
for dost in friends[:2]:
    print(dost.title())
```

```
print your best two freinds name=
Ali
Qazi
```

```
In [ ]: |
```

Q2. What are Boolean String test, write the code for each Boolean string test code?

ANSWER

A string in Python can be tested for truth value. The return type will be in Boolean value (True or False)

```
In [4]: name=input("what is your name=")
print(name.isalpha())

what is your name=ali
True

In [5]: name.title()
Out[5]: 'Ali'

In [8]: name.islower()
Out[8]: True

In [9]: print("cricket".isupper())
False

In [17]: "123456".isdigit()
Out[17]: True

In [18]: print("ali")
"3".isalnum()
ali
Out[18]: True

In [19]: "my name is ali".istitle()
Out[19]: False

In [20]: "MY NAME IS ALI".istitle()
Out[20]: False

In [23]: "My Name Is Ali".istitle()
Out[23]: True

In [24]: "I LOVE CRICKET".islower()
Out[24]: False
```

Q3. What is formatting string input mean in Python, write a program in which formatting string input is used?

ANSWER

Format () method of the string class allows you to do variable substitutions and value formatting. This lets you concatenate elements together within a string through positional formatting

In this case we are using Three types

- Lower
- Upper
- Capitalize

```
In [67]: Favourite_car= input("which is your favourite car?:")  
print (Favourite_car)
```

```
which is your favourite car?:corolla  
corolla
```

```
In [1]: fav_car= input("what is your faourite car?:").lower()  
print(fav_car)
```

```
what is your faourite car?:Civic  
civic
```

```
In [2]: fav_car= input("what is your faourite car?:").upper()  
print(fav_car)
```

```
what is your faourite car?:passo  
PASSO
```

```
In [3]: fav_car= input("what is your faourite car?:").capitalize()  
print(fav_car)
```

```
what is your faourite car?:evolution  
Evolution
```
