

# python ka chilla with Sarfraz

## How to use Jupyter Note Book

## Basic of Python

### 01- My first program

```
In [112... print(2+3)
print("Hello World")
print("We are learning with Sarfraz2")

5
Hello World
We are learning with Sarfraz2
```

### 02-operators

```
In [113... print(2+1)
print(3-1)
print(6/2)
print(2*3)
print(13%2)
print(6//2)
print(2**3)

print(3**2/2*3/3+6-4)

3
2
3.0
6
1
3
8
6.5
```

**PEMDAS** parenthesis Exponents Multiply Divide Addition Subtraction left to right sequence for M D & A S

### 03-Strings

```
In [114... print("Hello World")
print("We are learning with Sarfraz2")
print('Test for single quotes')
print("Test for double quotes")
print('\'Test for tripple quotes\'')
print("What's up? ")
```

```
Hello World
We are learning with Sarfraz2
Test for single quotes
Test for double quotes
Test for tripple quotes
What's up?
```

## 04-comments in python

The Shorcut key to comments is **ctrl+/\*\***

```
In [115... print("How are you?")      #press these to comment out (ctrl+/**)
print("We are learning python with Sarfraz2") #print a string
print(2+3) # print operators function with numbers
```

```
How are you?
We are learning python with Sarfraz2
5
```

```
In [116... ### **05-variable in python**
```

```
In [117... # variables: objects containing specfic values
x = 5 #numeric or integer variable
print(x)

y="We are learning python with Sarfraz" #string variable
print(y)

x= x+10 #or x=15
print(x)

#types/class of variables
type(x)
print(type(x))

print(type(y))

#print_type_class

# Rules to assign a variable
# 1- The variable should Letters, number or underscore
# 2- Do not start with numbers
# 3- Spaces are not allowed
# 4- Do not use keywords used in functions (break, mean, media, test, etc,)
# 5- Short and descriptive
# 6- Case sensitivity (Lowercase, uppercase Letters Lower case Letters should be use

fruit_basket= 8
fruit_basket= "Apples"
print(type(fruit_basket))
print(fruit_basket)
```

```
5
We are learning python with Sarfraz
15
<class 'int'>
<class 'str'>
<class 'str'>
Apples
```

In [118... *### \*\*06-input\_variable in python\*\**

```
#fruit_basket="Mangoes"
#print(fruit_basket)

#input-function
fruit_basket=input("Which is your favrourite fruit?")
print(fruit_basket)

#input-function 2nd stage
#name= input("What is your name? ")
#greetings= "Hello"

#3rd stage input functin
name= input("What is your name? ")
age= input("How old are you? ")
greetings="Hello!"

print(greetings, name, ",You are still young")

print(greetings, name)
```

Which is your favrourite fruit?apple  
apple  
What is your name? hamand  
How old are you? 5  
Hello! hamand ,You are still young  
Hello! hamand

In [120... *### \*\*07-conditional\_Logics in python\*\**

```
#Logical operators are either "true or false" or "yes or no" or "o or 1"
# equal to ==
# not equal to !=
# less than <
# greater than >
# less than and equal to <=
# greater than and equal to >=

#is 4 equal to 4?
#print(4==4)
#print(4!=4)
#print(4>3)
#print(4<4)
#print(3<=5)
#print(3>=5)

# aplication of logical operators
#hamand_age=5
#age_at_school=5
#print(hamand_age==age_at_school)

#input operator logical
age_at_school=5
hamand_age=input("How old is hamand? ") #input function
hamand_age=int(hamand_age)
print(type(hamand_age))
print(hamand_age==age_at_school) #logical operator

#convert input
```

```
How old is hamand? 2
<class 'int'>
False
```

In [122... *### \*\*08-type\_conversion in python\*\**

```
In [123... x = 10 #integer
y = 10.2 #float
z = "Hell0" #string

#implicit type conversion
#x= x+y
#print(x, "type of x is:", type(x))

#explicit type conversion
#age=input("What is your age? ")
#age=int(age)
#print(type(age))

#name
name=input("What is your name? ")
name=str(name)
print(name, type(name))

#type_conversion
```

```
What is your name? sarfraz
sarfraz <class 'str'>
```

In [124... *### \*\*09-if\_else\_elif in python\*\**

```
In [125... hamand_age=2
required_age_at_school=5

#question: can hamand if go to school?
if hamand_age==required_age_at_school:
    print("Congratulations! Hamand can join the school.")
elif hamand_age > required_age_at_school:
    print("Hamand should join higher secondary school!")
elif hamand_age == 2:
    print("You should take care of Hamand, he is still a baby!")
else:
    print("Hamand can not go to school")

# if, elif, else statement clear
```

```
You should take care of Hamand, he is still a baby!
```

In [126... *### \*\*10-function in python\*\**

```
In [127... #print("We are Learning with sarfraz")
# defining # function

# 2
#

# 3
#def print_codanics(text):
#    print(text)
#    print(text)
#    print(text)
```

```

#print_codanics("We are Learnig python with sarfraz")

# defining a function with if, elif, and else statement

#def school_calculator(age, text):
    #if age==5:
        #print("Hamand can join the school")
    #elif age>5:
        #print("Hamand should go to higher school")
    #else:
        #print("Hamand is still a baby")

#school_calculator(2,"Hamand")

# defining a function of future

def future_age(age):
    new_age=age+20
    return new_age

future_predicted_age=future_age(18)
print(future_predicted_age)

#i understand function really well

```

38

In [128... **### \*\*11-loops in python\*\***

```

#while and For Loops
#while Loops

#x=0
#while (x<5):
    #print(x)
    #x=x+1

#for Loops

#for x in range(5, 11):
    #print(x)

# array
days = ["Mon", "Tue", "Wed", "Thu", "Fri", "Sat", "Sun"]
for d in days:
    if (d=="fri"):break
    print(d)

```

Mon  
Tue  
Wed  
Thu  
Fri  
Sat  
Sun

In [130... **### \*\*12-import\_Libraries in python\*\***

```

#if you want to print value of pi
import math
print("The value of pi is ", math.pi)

```

```
import statistics
x = [150, 250, 350, 450]
print(statistics.mean(x))
```

*#numpy #pandas*

The value of pi is 3.141592653589793  
300

In [132... *### \*\*13-trouble\_shooting in python\*\**

In [133... *# print("We are learning python with Sarfraz") #syntax error*  
*# print(25/o) #runtime error*

```
name= "Sarfraz"
print("Hello", name)
```

*#trouble shooting is easy*

Hello Sarfraz

In [ ]: