Python ka Chilla with baba Aammar

How to use Jupyter Note Book

Basics of Python

01- My first programme in python

In [1]:
```
print(2+3)
print("Usman Khan Jadoon")
print("we are learning python from Aammar in this winter")
```

```
5
Usman Khan Jadoon
we are learning python from Aammar in this winter
```

02- operators

In [2]:
```
print(2+2**2/4)
print(15%2)
print(6/2)
print(6//2)
```

```
3.0
1
3.0
3
```

03- Strings

In [3]:
```
print("we are muslims")
print('how are you?')
print('''Allhamdulillah''')
```

```
we are muslims
how are you?
Allhamdulillah
```

04- comments in python

In [4]:
```
print('we are learning with Aammar')
print('we are learning how to code in python') #this operation is like MATLAB
```

```
we are learning with Aammar
we are learning how to code in python
```

05- variables

In [5]:
```
x='usman'
```

```
y='haris'
print(x,y)
x=5
print(x)
print(x+10)
type(x)
print(type(x))

#rules to assign variables
#1-the variables should contain letters, underscore
#2-do not start with numbers
#3-spaces are not allowed
#4-donot use keywords
#5-short and descriptive
#6-lower and upper case letter sensitive (lower case recommended)

fruit_baskit="mangoes","oranges",'apples'
# del fruit_baskit
# fruit_baskit=8
print(fruit_baskit)
```

```
usman haris
5
15
<class 'int'>
('mangoes', 'oranges', 'apples')
```

05- input_variables

In [6]:

```
fruit_baskit="mangoes"
#iput_variables
# fruit_baskit=input("which one is your favourite fruit? ")
# print(fruit_baskit)

#input function of 2nd stage
# name=input("what is your name? ")
# Greetings="hello!"
# print(Greetings,name)

# #another way of stage 2 input function
# name=input("what is your name? ")
# #Greetings="hello!"
# print('Hello!',name)

#3rd stage input function
name=input("what is your name? ")
age=input('how old are you? ')
greetings="hello!"
print(greetings,name, "you are still young")
```

```
what is your name? Usman Khan
how old are you? 29
hello! Usman Khan you are still young
```

07- conditional_logics

In [7]:

```
#equal to ==
#greater than >
```

```
#less than <
#not equal to !=

#is 4 equal to 4
print(4==4,4!=4)

#application of logical operators
# harris_age=4
# age_at_school=5
# print(harris_age==age_at_school)

#input operators and logicals
age_at_school=5
harris_age=input("how old is Hammad ")
#harris_age=int(harris_age)
print(type(harris_age))
print(harris_age==age_at_school)
```

```
True False
how old is Hammad 5
<class 'str'>
False
```

08- type_conversion

In [8]:

```
x=10
y=10.3
z="hello"

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

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

```
20.3 type of x is <class 'float'>
what is your name? usman
usman <class 'str'>
```

09- else_elif_else

In [9]:

```
required_age_at_school=5
harris_age=18
#can harris go to school
if harris_age==required_age_at_school:
    print("harris can join the school")
elif harris_age<=3:
    print("haris needs more time to be cared")
elif harris_age==14:
    print("harris should join the FA/FSc")
elif harris_age>=23:
    print("haris needs to go for MS")
#else:
 #   print("harris can not join the school")
```

10- else_elif_else

In [10]:

```
print("we are learning python with Aammar") #what if you need to print it multiple time
#defining a function
def print_mani(): #you can define any function on your own with print
    print("we are learning with Aammar")
    print("we are learning with Aammar")
    print("we are learning with Aammar")
    print("we are learning with Aammar")
    print("we are learning with Aammar")
    print("we are learning with Aammar")
print_mani()
 #2nd way of defining function
def print_fari():
     text="we are learning with a lot of people"
     print(text)
     print(text)
print_fari()
#3rd way of defining function

def print_fari(text):
    print(text)
    print(text)
    print(text)
print_fari("we are learning python from codanics")

# defining a function with else elif else

def school_calculator(age):
    if age==5:
        print("harris can join the school")
    elif age>=5:
        print("haris can join the higher seconfdary school")
    else:
        print("haris is still a baby")
school_calculator(2)

def future_age(age):
    new_age=age+20
    return new_age
    print("new_age")
future_pridicted_age=future_age(18)
print(future_pridicted_age)
```

```
we are learning python with Aammar
we are learning with Aammar
we are learning with Aammar
we are learning with Aammar
we are learning with Aammar
we are learning with Aammar
we are learning with Aammar
we are learning with a lot of people
we are learning with a lot of people
we are learning python from codanics
we are learning python from codanics
we are learning python from codanics
haris is still a baby
38
```

11- Loops

In [11]:
```
#while loops and for loops
x=0
while (x<5):
    print(x)
    x=x+1
#for loop
for x in range(5,10):
    print(x)
#array

days=["monday","tuesday","wednesday","thursday","friday","saturday","sunday"]
for d in days:
    if (d=="friday"): break #loop stops
    if (d=="friday"): continue #skips friday
    print(d)
```

```
0
1
2
3
4
5
6
7
8
9
monday
tuesday
wednesday
thursday
```

12- import_libraries

In [12]:
```
# if you want to print the value of pi

import math
print("the value of pi is ",math.pi)

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

```
the value of pi is  3.141592653589793
300
```

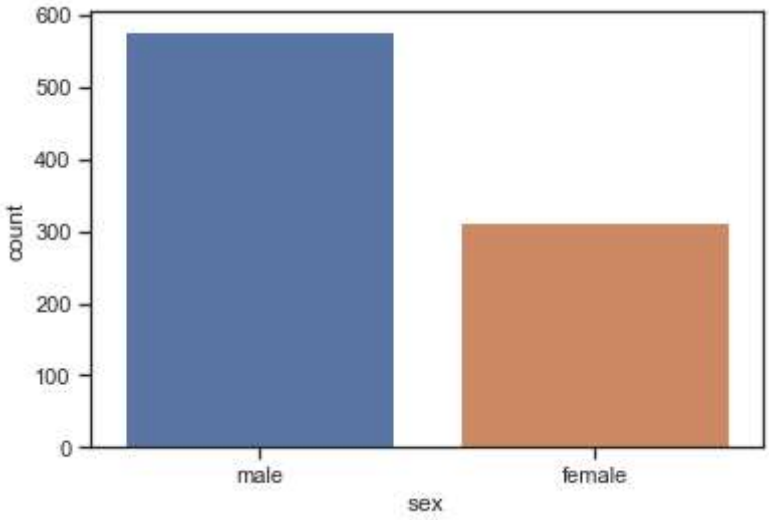
13- trouble_shooting

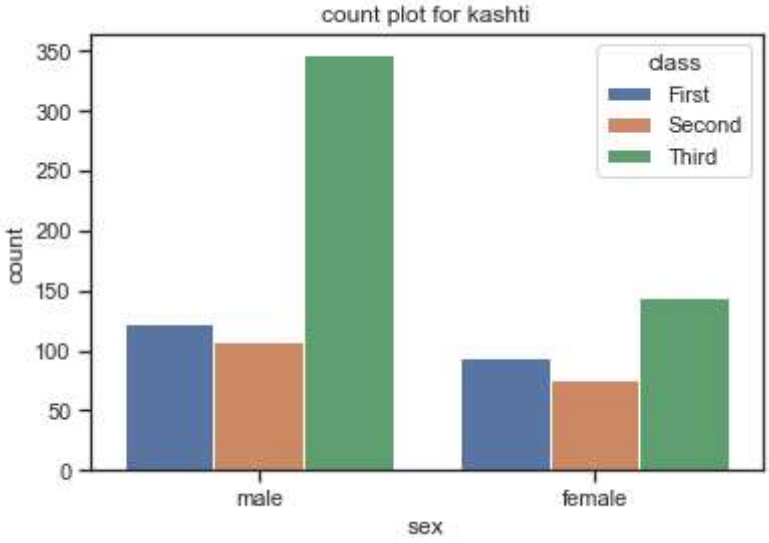
In [13]:
```
#syntax error
#print (25/0) #runtime error
#symantix error
```

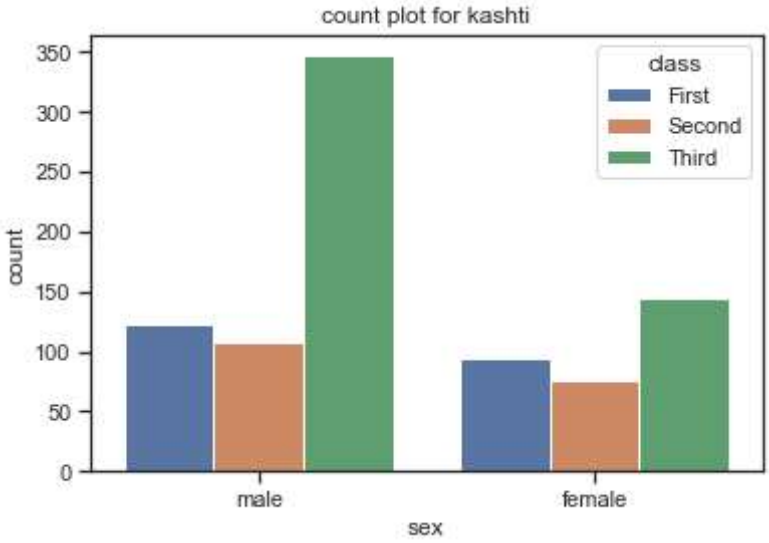
14- data_viz

In [14]:
```
#import libraries
import seaborn as sns
import matplotlib.pyplot as plt

#setup-2 set a theme
sns.set_theme(style="ticks",color_codes=True)

#setup-3
kashti=sns.load_dataset("titanic")
print(kashti)

#setup-4
p=sns.countplot(x="sex",data=kashti)
plt.show()

#step-5 plot basic graph with 2 variables
p=sns.countplot(x="sex",data=kashti,hue="class")
p.set_title("count plot for kashti")
plt.show()



#step-6 plot basic graph with 2 variable (count plot) with titles
p=sns.countplot(x="sex",data=kashti,hue="class")
p.set_title("count plot for kashti")
plt.show()
```

```
     survived  pclass     sex   age  sibsp  parch     fare embarked   class  \
0           0       3    male  22.0      1      0   7.2500        S   Third
1           1       1  female  38.0      1      0  71.2833        C   First
2           1       3  female  26.0      0      0   7.9250        S   Third
3           1       1  female  35.0      1      0  53.1000        S   First
4           0       3    male  35.0      0      0   8.0500        S   Third
..        ...     ...     ...   ...    ...    ...      ...      ...     ...
886         0       2    male  27.0      0      0  13.0000        S  Second
887         1       1  female  19.0      0      0  30.0000        S   First
888         0       3  female   NaN      1      2  23.4500        S   Third
889         1       1    male  26.0      0      0  30.0000        C   First
890         0       3    male  32.0      0      0   7.7500        Q   Third

       who  adult_male deck  embark_town alive  alone
0      man        True  NaN  Southampton    no  False
1    woman       False    C    Cherbourg   yes  False
2    woman       False  NaN  Southampton   yes   True
3    woman       False    C  Southampton   yes  False
4      man        True  NaN  Southampton    no   True
..     ...         ...  ...          ...   ...    ...
886    man        True  NaN  Southampton    no   True
887  woman       False    B  Southampton   yes   True
888  woman       False  NaN  Southampton    no  False
889    man        True    C    Cherbourg   yes   True
890    man        True  NaN   Queenstown    no   True

[891 rows x 15 columns]
```


600
500
400
300
200
100
0
count
male
female
sex


count plot for kashti
class
First
Second
Third
350
300
250
200
150
100
50
0
count
male
female
sex


count plot for kashti
class
First
Second
Third
350
300
250
200
150
100
50
0
count
male
female
sex