Functions

```
In [1]:  #8-1
         def display_msg():
             print("In this chapter i am learning about functions.")
         display_msg()
```

In this chapter i am learning about functions.

```
In [2]:  #8-2

         def favourite_book(name):
             print("My Favourite book is " + name.title())
         favourite_book("Rich dad Poor dad")
```

My Favourite book is Rich Dad Poor Dad

```
In [3]:  #8-3

         def make_shirt(size,text):
             print("My T-shirt size is " + size + " I want to write on it, " + text)
         make_shirt("5" , "Hello")
```

My T-shirt size is 5 I want to write on it, Hello

```
In [4]:  make_shirt(size = "7" , text = "Rolls Royce")
```

My T-shirt size is 7 I want to write on it, Rolls Royce

```
In [5]:  #8-4
         # Task = Make default size = large.
         def make_shirt(text , size = "Large"):
             print("My T-shirt size is " + size + " I want to write on it, " + text)
         make_shirt("I love python")
```

My T-shirt size is Large I want to write on it, I love python

```
In [6]:  # Task = Make default message = I love Python.

         def make_shirt(size,text = "I love Python"):
             print("My T-shirt size is " + size + " I want to write on it, " + text)
         make_shirt("Large")
         make_shirt("Medium")
```

My T-shirt size is Large I want to write on it, I love Python
My T-shirt size is Medium I want to write on it, I love Python

In [7]:
```python
#8-5

def describe_city(city,country = "Pakistan"):
    print(city + " is in  " + country)
describe_city("Karachi")
describe_city("Lahore")
describe_city("Delhi")
```

```
Karachi is in  Pakistan
Lahore is in  Pakistan
Delhi is in  Pakistan
```

In [8]:
```python
#8-6

def city_country(city,country):
    full =  city+" " +country
    return full
city_country("Islamabad" ,"Pakistan")
```

Out[8]: `'Islamabad Pakistan'`

In [9]:
```python
city_country("lahore" ,"Pakistan")
```

Out[9]: `'lahore Pakistan'`

In [10]:
```python
city_country("Karachi" ,"Pakistan")
```

Out[10]: `'Karachi Pakistan'`

In [11]:
```python
#8-7
def make_album(artist_name,artist_title):
    artist =  {"Artist Name":artist_name , "Atist Title":artist_title}
    return artist
make_album("Atif Aslam" , "Pyar")
```

Out[11]: `{'Artist Name': 'Atif Aslam', 'Atist Title': 'Pyar'}`

In [12]:
```python
make_album("Ali Zafar" , "PSL")
```

Out[12]: `{'Artist Name': 'Ali Zafar', 'Atist Title': 'PSL'}`

In [13]:
```python
make_album("Honey Singh" , "Punjabi")
```

Out[13]: `{'Artist Name': 'Honey Singh', 'Atist Title': 'Punjabi'}`

In [14]:
```python
#Make one optional parameter
def make_album(artist_name,artist_title,artist_age = ''):
    artist = {"Artist Name":artist_name , "Atist Title":artist_title}
    if artist_age:
        artist["Artist Age"] = artist_age
    return artist
make_album("Atif Aslam" , "Pyar" )
```

Out[14]: {'Artist Name': 'Atif Aslam', 'Atist Title': 'Pyar'}

In [15]:
```python
make_album("Atif Aslam" , "Pyar" ,"27" )
```

Out[15]: {'Artist Name': 'Atif Aslam', 'Atist Title': 'Pyar', 'Artist Age': '27'}

In [16]:
```python
#8-8
def get_formated(first_name,last_name):
    full_name = first_name + ' '+ last_name
    return ("Hello " + full_name + " how are you.")

while True:
    print("\n Enter first and last name")
    print("enter q at any time you want to quit")
    f_name = input("First Name:")
    if f_name == "q":
        break
    l_name = input("Last Name:")
    if l_name == "q":
        break
    formated_name = get_formated(f_name,l_name)
    print(formated_name)
```

```
 Enter first and last name
enter q at any time you want to quit
First Name:arif
Last Name:ali
Hello arif ali how are you.

 Enter first and last name
enter q at any time you want to quit
First Name:q
```

In [17]:
```python
#8-9
magicians = ["Ali" , "Hamza" , "Farooq"]

def show_megicians(magicians):
    for i in magicians:
        print("Hello " + i)
show_megicians(magicians)
```

```
Hello Ali
Hello Hamza
Hello Farooq
```

```python
In [26]: #8-10
         magicians = ["Ali" , "Hamza" , "Farooq"]
         completed = []
         def make_great(magicians,completed):
             while magicians:
                 current = magicians.pop()
                 print("Great " + current)
                 completed.append("Great " + current)

         def show_magicians(completed_magicians):
             for i in completed_magicians:
                 print(i)

         make_great(magicians,completed)

         show_magicians(completed)
```

```
Great Farooq
Great Hamza
Great Ali
Great Farooq
Great Hamza
Great Ali
```

```python
In [27]: completed
```

```
Out[27]: ['Great Farooq', 'Great Hamza', 'Great Ali']
```

```python
In [28]: magicians
```

```
Out[28]: []
```

```
In [30]: #8-11
         magicians = ["Ali" , "Hamza" , "Farooq"]
         completed = []
         def make_great(magicians,completed):
             while magicians:
                 current = magicians.pop()
                 print("Great " + current)
                 completed.append("Great " + current)

         def show_magicians(completed_magicians):
             for i in completed_magicians:
                 print(i)

         make_great(magicians[:],completed)

         show_magicians(completed)
```

```
Great Farooq
Great Hamza
Great Ali
Great Farooq
Great Hamza
Great Ali
```

```
In [31]: magicians
```

```
Out[31]: ['Ali', 'Hamza', 'Farooq']
```

```
In [32]: completed
```

```
Out[32]: ['Great Farooq', 'Great Hamza', 'Great Ali']
```

```
In [35]: #8-12
         def items(*sandwitch):
             print("Summary of sandwitches")
             print(sandwitch)
         items("Chicken Sandwitch")
         items("Chicken Sandwitch" ,"Egg Sandwitch" ,"Seafood Sandwitch" )
```

```
Summary of sandwitches
('Chicken Sandwitch',)
Summary of sandwitches
('Chicken Sandwitch', 'Egg Sandwitch', 'Seafood Sandwitch')
```

In [36]:
```python
#8-13

def build_profile(f_name,l_name,**user_info):
    print("User Profile")
    profile = {}
    profile["First_Name"] = f_name
    profile["Last_Name"] = l_name
    for key,value in user_info.items():
        profile[key] = value
    return profile

user_profile = build_profile("Arif","Soomro" , Age = "23" , Education = "BSCS"
print(user_profile)
```

```
User Profile
{'First_Name': 'Arif', 'Last_Name': 'Soomro', 'Age': '23', 'Education': 'BSC
S', 'University': 'Karachi University'}
```

In [37]:
```python
#8-14

def car_profile(company,model,**other_info):
    print("Car Profile")
    profile = {}
    profile["Manufacturer"] = company
    profile["Model Name"] = model
    for key,value in other_info.items():
        profile[key] = value
    return profile

car = car_profile("saburu","outbrake" , color = "blue" , tow_package = True)
print(car)
```

```
Car Profile
{'Manufacturer': 'saburu', 'Model Name': 'outbrake', 'color': 'blue', 'tow_pa
ckage': True}
```

In [ ]: