In [14]:
```
# Shallow and deep copy

a={"proj_1":"A","proj_2":"B","proj_3":"C"}
b={"proj_5":"E","proj_6":"F","proj_7":"G"}
c={"proj_a":"excel","proj_b":"word","proj_c":"ppt"}
a=b #shallow copy
a["proj_4"]="D"
print(a)
print(b)
d=c.copy()# deep copy
c["proj_d"]="AI"
print(c)
print(d)
```

```
{'proj_5': 'E', 'proj_6': 'F', 'proj_7': 'G', 'proj_4': 'D'}
{'proj_5': 'E', 'proj_6': 'F', 'proj_7': 'G', 'proj_4': 'D'}
{'proj_a': 'excel', 'proj_b': 'word', 'proj_c': 'ppt', 'proj_d': 'AI'}
{'proj_a': 'excel', 'proj_b': 'word', 'proj_c': 'ppt'}
```

In [2]:
```
#libraray records
membership_input=input("Enter the input of membership:")
count_of_books=int(input("Enter the count of books:"))
if membership_input=="regular":
    if count_of_books<=3:
        print(" The membership for regular is eligible")
    else:
        print(" The membership for regular is not eligible")
elif membership_input=="premium":
    if count_of_books<=10:
        print(" The membership for premium is eligible")
    else:
        print(" The membership for premium is not eligible")
elif membership_input=="Guest":
    print(" Guest member cannot avail books")
```

```
The membership for premium is not eligible
```

In [3]:
```
# Highest populated city
a=("chennai",3000,3)
b=("Bangalore",6000,2)
x,y,z=a
i,j,k=b
population_chennai=(y//z)
population_Bangalore=(j//k)
print(population_chennai)
print(population_Bangalore)
if population_chennai>=population_Bangalore:
    print("chennai has highest population")
else:
    print("Banglore has highest population")
```

```
1000
3000
Banglore has highest population
```

In [38]:
```python
# finding average mark in student records.
Name={"19946":"KALAI","19947":"komathi","19948":"Geetha"}
mark_1={"19946":95,"19947":80,"19948":70}
mark_2={"19946":[95, 80],"19947":[80,50],"19948":[80,60]}
print(Name.keys())
print(Name.values())
print(mark_1.values())
print(mark_2.values())
mark_2["19946"]=(95+80)/2
print(mark_2["19946"])
mark_2["19947"]=(80+50)/2
print(mark_2["19947"])
mark_2["19948"]=(80+60)/2
print(mark_2["19948"])
student_mark={"KALAI":87.5,"komathi":65.0,"Geetha":70.0}
key_max=max(zip(student_mark.values(),student_mark.keys()))[1]
print(key_max)
```

```
dict_keys(['19946', '19947', '19948'])
dict_values(['KALAI', 'komathi', 'Geetha'])
dict_values([95, 80, 70])
dict_values([[95, 80], [80, 50], [80, 60]])
87.5
65.0
70.0
KALAI
```

In [56]:
```python
# deletion and updation of course data of student enrollment
course_data={"course1":"SQL","course2":"python","course3":"excel"}
student_enrolled={"course1":["kalai","komi","geetha"],"course2":["ravi","padma","si
student_enrolled[("course3")][0] = "mohan"
print('updated_student_enrollement:',student_enrolled)
student_enrolled={"course1":["kalai","komi","geetha"],"course2":["ravi","padma","si
student_enrolled[("course1")]=["swetha","enoch","preethi"]
print('updated_student_enrollement:',student_enrolled)
student_enrolled={"course1":["kalai","komi","geetha"],"course2":["ravi","padma","si
del student_enrolled["course3"]
print(student_enrolled)
key_max=max(zip(student_enrolled.values(),student_enrolled.keys()))[1]
print(key_max)
```

```
updated_student_enrollement: {'course1': ['kalai', 'komi', 'geetha'], 'course2': ['r
avi', 'padma', 'sidu', 'velu', 'sathish', 'kowsalya'], 'course3': ['mohan', 'balaj
i', 'karthi']}
updated_student_enrollement: {'course1': ['swetha', 'enoch', 'preethi'], 'course2':
['ravi', 'padma', 'sidu', 'velu', 'sathish', 'kowsalya'], 'course3': ['raji', 'balaj
i', 'karthi']}
{'course1': ['kalai', 'komi', 'geetha'], 'course2': ['ravi', 'padma', 'sidu', 'vel
u', 'sathish', 'kowsalya']}
course2
```