------Question 1

select a.\*,b.name\_c,b.city,b.commision

from #customer a Join #salesman b on a.salesmanid=b.salesmanid

where a.grade >100

and b.commision > 0.14;

--output

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| #customerid | custname | city | grade | first\_puchase | salesmanid | name\_c | city | commision |
| 3007 | Brad Davis | New York | 200 | 11/10/2020 | 5001 | James Hoog | New York | 0.15 |

----Question 2

select \* from #customer where custname like '%brad%';

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| #customerid | custname | city | grade | first\_puchase | salesmanid |
| 3007 | Brad Davis | New York | 200 | 11/10/2020 | 5001 |
| 3001 | BRAD Guzan | London | 100 | 11/29/2020 | 5005 |
| 3006 | brad Guzan | London | 100 | 6/20/2020 | 5005 |

---Question 3

select top 1 \* from #customer order by first\_puchase desc;

--output

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| #customerid | custname | city | grade | first\_puchase | salesmanid |
| 3009 | Geoff Cameron | Berlin | 100 | 12/30/2020 | 5003 |

---Question 4

select \* from #salesman

select city ,COUNT(salesmanid)

from #salesman

group by city;

--output

|  |  |
| --- | --- |
| city | (No column name) |
| London | 1 |
| New York | 1 |
| Paris | 2 |

--Question 5

select b.city, count(a.#customerid) as num\_records

from #customer a join #salesman b on a.salesmanid=b.salesmanid

where b.city='New York'

group by b.city;

|  |  |
| --- | --- |
| city | num\_records |
| New York | 2 |

--Question 6 here rownum to make sure that it is the first purchase only

select a.\*,b.name\_c,b.city,b.commision

from

(

select \*,

ROW\_NUMBER() over (partition by #customerid,first\_puchase order by first\_puchase) as rownum

from #customer

) a join #salesman b on a.salesmanid=b.salesmanid

where a.rownum=1

and month(a.first\_puchase)=11

;

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| #customerid | custname | city | grade | first\_puchase | salesmanid | rownum | name\_c | city | commision |
| 3007 | Brad Davis | New York | 200 | 11/10/2020 | 5001 | 1 | James Hoog | New York | 0.15 |
| 3001 | BRAD Guzan | London | 100 | 11/29/2020 | 5005 | 1 | Pit Alex | London | 0.11 |

**PYTHON**

**Ans 1**

s = ['sun','mon','tue']

list\_string = ' '.join([str(x) for x in s])

print(list\_string)

**Ans 2**

dict={1:10,2:20}

def check\_key(x):

if x in dict:

print(True)

else:

print(False)

check\_key(1)

check\_key(2)

check\_key(3)

**Ans 3**

s=[1, 2, 2, 1, 3, 4]

def remove\_dup(x):

output\_list = []

for num in x:

if num not in output\_list:

output\_list.append(num)

return output\_list

print(remove\_dup(s))

**Ans 4**

s=[8, 16, 20, 30, 80, 60]

output\_list =[n for n in s if '6' in str(n)]

print(output\_list)

**Ans 5**

s=0

for i in range(1,500):

if (i%3==0) or (i%5==0):

s+=i

print(s)

**Ans 6**

product= lambda x,y : x\*y

print(product(15,10))

**Ans 7**

divisble= lambda x,y : (x%y) ==0

print(divisble(4,2))

**Ans 8**

inner\_merge= pd.merge(df1, df2, left\_on='worker',right\_on='employee', how='inner')

inner\_join\_df

**Ans 9**

import pandas as pd

users = pd.read\_table('https://raw.githubusercontent.com/justmarkham/DAT8/master/data/u.user', sep='|')

users.head()

users.head()

output=users.groupby('occupation').agg(['mean','max'])

print(output)