SOLUTION 01

```
 1 def doMath(inp, n1,n2):
 2     print("Choosed :"+inp)
 3 
 4     switcher = {
 5         '1': n1+n2,
 6         '2': n1-n2,
 7         '3': n1/n2,
 8         '4': n1*n2
 9     }
10 
11 n=3
12 for i in range(1, 5):
13     print(' '*n,end='')
14     print('* '*(i))
15     n-=1
16     return print("Ans :",switcher.get(inp,"error value "),"\n==========================
17 
18 while (True):
19     print("====================================\n")
20     print("1.add \n2.sub \n3.div \n4.mul \n5.Quit")
21     inp = input("\n>Enter choice :")
22     n1= int(input("Enter Num 1:"))
23     n2= int(input("Enter Num 2:"))
24 
25     l1 = ['1','2','3','4']
26     l2 = ['add','sub','div','mul']
27     lf = l1+l2
28 
29     if (inp in l1):
30         doMath(inp, n1,n2)
31 
32     elif (inp in l2):
33         doMath(l1(inp-1),n1,n2)
34 
35 
36     else:
37         print("Closing application")
38 
```

==========

SOLUTION 02

```
def getFacto(n):
    if(n==1):
        return n
    elif (n<1):
        return ("Invalid")
    else:
        return n*getFacto(n-1)


s= 0
x = int(input("input x : "))
n = int(input('input n :'))

for i in range(1,n):
    s += (x**i)/getFacto(i+1)
print("ANS :",s+1)
```

==========

SOLUTION 03

```
n=3
for i in range(1, 5):
    print(' '*n,end='')
    print('* '*(i))
    n-=1
```

==========

SOLUTION 04

```
n = int(input("Enter number of people :"))
fare = 0
l18 = 0
```

```
l5_17 = 0
for i in range (0,n):
    age = int(input("Enter age for passenger : "+str(i+1)+" : "))
    if(age>=18):
        l18+=1
        fare+=50
    elif(age>=5 and age<18):
        l5_17+=1
        fare+=20
    else:
        continue

print("Age 18 or more :",l18)
print("Age less than 18 and greater than 5:", l5_17)
print("Total fare collected :",fare)
```

==========

SOLUTION 05

```
import random

pscr1 =0
pscr2 =0


while(True):
    input("====================\nPlayer1 Chance : Press Enter")
    n1 = random.randrange(1,6)
    pscr1 += n1
    print("Dice :",n1)
    print("Player1 Score :",pscr1)

    input("\nPlayer2 Chance : Press Enter")
    n2 = random.randrange(1,6)
    pscr2 += n2
    print("Dice :",n2)
    print("Player2 Score :",pscr2,"\n========================>")

    if(pscr1 >=20 ):
```

```
        print("\n=======>Player1 WON!<=======")
        break

    elif(pscr2 >=20 ):
        print("=======>Player2 WON!<=======")
        break

    elif(pscr1>=20 and pscr2>=20):
        print("DRAW!")
        break
```

==========

SOLUTION 06

```
def checklast(n):
    if(n%10==5):
        return 1
    else:
        return 0
l = [102,105,11,15,235,3425,4,5]
l2 = []
for i in l:
    l2.append(checklast(i))
print(l2)
```

==========

SOLUTION 07

```
a = (1,2,42,0,3,-1,4,5,24)
max = a[0]
min = a[0]

for i in a:
    if max<i:
        max = i
    elif min>i:
        min = i
```

```
10
11 print("max :",max)
12 print("min :",min)
```

==========

SOLUTION 08

```
 1 print("=========================>\n\n1.Create File \n2.Search occurrences of a word \n
 2 inp= int(input("Enter your Choice :"))
 3
 4 if (inp ==1):
 5     name = input("Enter file name :")
 6     file = open(name ,'x')
 7     print("File Created.")
 8     file.close()
 9
10 if (inp ==2):
11     name = input('Enter file name :')
12     file= open(name,"r")
13     inp = input("Input the word to count the occurrences : ")
14     count = 0
15
16     for line in file:
17         line.replace('\n',"")
18         l = line.split(" ")
19         for i in l:
20             if(i==inp):
21                 count+=1
22
23
24     print("Total occurence of "+inp+" :",count)
25
26 if (inp ==3):
27     name = input('Enter file name :')
28     file= open(name,"r")
29     inp = input("Input the letter to count the occurrences : ")
30     count = 0
31
32     for line in file:
33         for letter in line:
34             if(letter == inp):
35                 count+=1
36 if (inp ==4):
37     print("Closing application...")
```

==========

SOLUTION 09

```
print("=========================>\n\n1.Create File \n2.Add appilicant \n3.Search Appli

inp= int(input("Enter your Choice :"))

if (inp ==1):
    name = input("Enter file name :")
    file = open(name ,'x')
    print("File Created.")
    file.close()

if (inp ==2):
    name = input('Enter file name :')
    file= open('data.dat',"a")
    aId = input("Enter application id : ")
    aName = input("Enter application name : ")
    aQual = input("Enter Qualification : ")

    file.writelines("\n"+aId+","+aName+","+aQual)
    file.close()

if (inp ==3):
    name = input('Enter file name :')
    file= open(name,"r")
    inp = input("Input Qualification :")
    l = []
    lfinal = []
    for line in file:

        line = line.rstrip()
        l=line.split(",")

        if(l[2]==inp):
            lfinal.append(l[1])
    print("Applicants with matching Qualifications :",lfinal)



if (inp ==4):
    name = input('Enter file name :')
```

```
41      fileOld= open(name,"r")
42      fileUpdated= open("updated"+name,"w")
43      inp = input("Input Application id to modify details :")
44      aName = input("Enter new application name  : ")
45      aQual = input("Enter new Qualification : ")
46
47
48      for line in fileOld.readlines():
49
50          if not(line.startswith(inp)):
51              fileUpdated.write(line)
52      fileUpdated.write("\n"+inp+","+aName+","+aQual)
53      fileOld.close()
54      fileUpdated.close()
55
56  if(inp==5):
57      print(">Quit")
```

==========

SOLUTION 10

```
 1  import csv
 2
 3  def creatfile(name):
 4      open(name,'x')
 5      print("File Created! :",name)
 6
 7  def addfriend(name):
 8      with open(name,'a') as file:
 9          cfile = csv.writer(file)
10
11          fname = input("Friend's name :")
12          pno = input("Phone number :")
13          email = input("EMail id :")
14          adrs = input("Address :")
15
16          row = [fname,pno,email,adrs]
17
18          cfile.writerow(row)
19          print("Friend Added!")
20
21  def searchfriend(name):
22
```

```
    with open(name,'r') as file:
        cfile = csv.DictReader(file)
        fname = input("Enter Name of your Friend to search :")
        count= 0
        for row in cfile:
            d = dict(row)
            if (fname== d.get("Name")):
                count +=1
                print('A Friend Found :\n Details -> ', d,"\n----------------------")

        print("Total Matches :",count)




def menu():
    print("1.Create File \n2.Add Friend\n3.Search Friend\n4.Quit")
    inp = int(input("Choose(1,2,3,4):"))

    if (inp==1):
        name = input("Enter name of file :")
        creatfile(name)
    elif (inp==2):
        name = input("Enter name of file :")
        addfriend(name)
    elif(inp==3):
        name = input("Enter name of file :")
        searchfriend(name)
    elif(inp==4):
        quit()




menu()
```

==========

SOLUTION 11

```
def PUSH(l):
    ll = savelist.l
    ll.append(l)
    savelist(ll)
    return ll


def POP():
    ll = savelist.l
    if not(l.__len__() == 0):
        ll.pop()
        savelist(ll)
        return ll
    else:
        print("Can't Pop, No Items in the list.")



def PEEK(n):
    ll = savelist.l
    return print("Value at ",n," : ",ll[n])

def TRAVESE():
    ll = savelist.l
    return ll




def savelist(ll):
    savelist.l = ll


l = []
savelist(l)

while(True):
    print("==============================\nLIST =>\n",savelist.l,"\n==================
    print("1.PUSH\n2.POP\n3.PEEK\n4.TRAVERSE\n5.QUIT")
    inp = int(input("Choose(1,2,3,4) :"))
    if(inp == 1):
```

```
        bid = input("Enter id :")
        bn = input("Enter name :")
        ba = input("Enter author :")
        bp = input("Enter publisher :")
        bprice = input("Enter price :")
        l = [bid,bn,ba,bp,bprice]
        lpushed = PUSH(l)


    if (inp==2):
        lpop = POP()
        print(lpop)

    if (inp ==3):
        n = int(input("Enter index :"))
        PEEK(n)

    if (inp==4):
        print(TRAVESE())

    if (inp==5):
        quit()
```

==========

SOLUTION 12

(a) SELECT *FROM STUDENT1 WHEREStream='Nonmedical':

(b) SELECT Name FROM STUDENT1 WHERE Class LIKE '12_'ORDER BY Stipend;
ORDER BY is used to sort according to Stipend, '12'matches all '12A', '12B
and '12C

(c)SELECT * FROM STUDENT1 ORDER BY AvgMarkDESC;
DESC is used to sort in descending order.

(d)SELECTName, Stipend, Stream, Stipend*12 AS 'Annual_stipend'
FROM STUDENT1;

==========

SOLUTION 13

```
(a) SELECT *FROM STUDENT1 WHEREStream='Nonmedical':

(b) SELECT Name FROM STUDENT1 WHERE Class LIKE '12_'ORDER BY Stipend;
ORDER BY is used to sort according to Stipend, '12'matches all '12A', '12B
and '12C

(c)SELECT * FROM STUDENT1 ORDER BY AvgMarkDESC;
DESC is used to sort in descending order.

(d)SELECTName, Stipend, Stream, Stipend*12 AS 'Annual_stipend' FROM STUDENT1;
```

==========

SOLUTION 14

```
(i) select COUNT (distinct SPORTS)from CLUB;
Ans: 4
(ii) select MIN(AGE) from CLUB where SEX =”F”;
Ans: 34
(iii) select AVG(PAY) fromCLUB where SPORTS = “KARATE”;
Ans: 1100
(iv) select SUM(PAY) from CLUB where DATAOFAPP>{31/01/98};
Ans: 7800
```

==========

SOLUTION 15

```
import mysql.connector as sqltor

obj = sqltor.connect(host = "localhost", user = "root", passwd = "Mypass",
    database = "menagerie")# create the object
cursor = obj.cursor()# create the cursor# Search criteria

col = input("Enter column name :")
val = input('Enter value :')

cursor.execute("SELECT * FROM Empl WHERE {}='{}'".format(col, val)) # execute the query

data = cursor.fetchall()
print(data)
```

==========

SOLUTION 16

```
#add friends , modify friends details , search friends details : details => name , pno.
import pymysql.cursors
connector = pymysql.connect(host='localhost',user='root',password='')
cursor = connector.cursor()

#friends table  desc >  name (varchar) , password(varchar)
#cursor.execute("create database fdb")
cursor.execute("use fdb")
#sql_command = """CREATE TABLE friends (name VARCHAR(30),pno VARCHAR(10) );"""
#cursor.execute(sql_command)


def addf(name,pno):
    sql = "INSERT INTO `friends` (`name`,`pno`) VALUES (%s,%s)"
    cursor.execute(sql,(name,pno))
    connector.commit()

def modifyf():
    pno = input("Enter Pno. of your friend :")
    sql = "SELECT `name` FROM `friends` WHERE `pno`=%s"
    cursor.execute(sql,pno)
```

```
    result = cursor.fetchone()
    print("Name :",result[0])
    if result[0] is None:
        print("Friend not found!")
    else:
        inp = int(input("Input what to change : \n1.Name \n2.Phone Number"))
        if (inp==1):
            name= input("Enter the new name :")
            sql = "UPDATE friends SET name = %s WHERE pno = %s;"
            value = (name,pno)
            cursor.execute(sql,value)
            connector.commit()
        if (inp==2):
            pno = input("Enther the new Phone Number :")
            sql = "UPDATE friends SET pno = %s WHERE name = %s;"
            value = (pno,result[0])
            cursor.execute(sql,value)
            connector.commit()

def searchf(name):
    sql = "SELECT pno FROM friends WHERE name=%s;"
    value = (name)
    cursor.execute(sql,value)
    connector.commit()
    result = cursor.fetchone()
    if (result != None):
        print("Name :"+name+" Phone no. :",result[0])
    else:
        print("Friend Not Found")

while(True):
    inp = int(input("\n 1:Add Friend \n 2:Modify Details \n 3:Search Details \n 4:Quit
    if(inp==1):
        name = input("Name:")
        phone = input("Pno.:")
        addf(name,phone)
    elif(inp==2):
        modifyf()
    elif(inp==3):
        name = input("Name:")
        searchf(name)

    elif(inp==4):
        quit()
```

==========

SOLUTION 17

(i) Display FL_NO and NO_FLIGHTS from "KANPUR" TO "BANGALORE" from the table FLIGHTS.
Ans: Select FL_NO, NO_FLIGHTS from FLIGHTS where Starting="KANPUR" AND ENDING="BANGALOR
(ii) Arrange the contents of the table FLIGHTS in the ascending order of FL_NO.
Ans: (Children, Try this as an assignment)
(iii) Display the FL_NO and fare to be paid for the flights from DELHI to MUMBAI using
FARES, where the fare to paid = FARE+FARE+TAX%/100.
Ans: Select FL_NO, FARE+FARE+(TAX%/100) from FLIGHTS, FARES where Starting="DELHI" AND
Ending="MUMBAI"
(iv) Display the minimum fare "Indian Airlines" is offering from the tables FARES.
Ans: Select min(FARE) from FARES Where AIRLINES="Indian Airlines"
v) Select FL_NO,NO_FLIGHTS,AIRLINES from FLIGHTS, FARES Where STARTING = "DELHI" AND
FLIGHTS.FL_NO = FARES.FL_NO
Ans: FL_NO NO_FLIGHTS AIRLINES IC799 2 Indian Airlines(vi) SELECT count (distinct ENDIN
Ans: (Children, Try this answer as an assignment)

==========

SOLUTION 18

(i) Display NAME of all doctors who are in "MEDICINE" having more than 10 years experience from the Table
DOCTOR.

Ans: Select Name from Doctor where Dept="Medicine" and Experience>10

(ii) Display the average salary of all doctors working in "ENT"department using the tables. DOCTORS and SALARY
Salary =BASIC+ALLOWANCE.
Ans: Select avg(basic+allowance) from Doctor,Salary where Dept="Ent" and Doctor.Id=Salary.Id

(iii) Display the minimum ALLOWANCE of female doctors.
Ans: Select min(Allowance) from Doctro,Salary where Sex="F" and Doctor.Id=Salary.Id

(iv) Display the highest consultation fee among all male doctors.
Ans: Select max(Consulation) from Doctor,Salary where Sex="M" and Doctor.Id=Salary.Id

(v) SELECT count (*) from DOCTOR where SEX = "F"
Ans: 4

(vi) SELECT NAME, DEPT , BASIC from DOCTOR, SALRY Where DEPT = "ENT" AND
DOCTOR.ID =
SALARY.ID
Ans: Name
Dept Basic
Jonah Ent
12000

==========

SOLUTION 19

(i) To display Firstname, Lastname, Address and City of all employees living in Paris from the table EMPLOYEES.

Ans. Select Firstname,Lastname,Address,City from Employees where City="Paris"

(ii) To display the content of EMPLOYEES table in descending order of FIRSTNAME.

Ans. Select * from Employees Order By Firstname Desc

(iii) To display the Firstname, Lastname, and Total Salary of all managers from the tables, where Total Salary is
calculated as Salary+Benifts.

Ans. Select Firstname,Lastname,Salary+Benefits from Employees, Empsalary where Designation="Manager" and
Employees.EmpId=EmpSalary.EmpId

(iv) To display the Maximum salary among Managers and Clerks from the table EMPSALARY.

Ans. Select Designation,max(Salary) from EmpSalary where Designation="Manager" or Designation="Clerk"

(v) SELECT FIRSTNAME,SALARY FROM EMPLOYEES,EMPSALARY WHERE DESTINATION
='Salesman'AND EMPOLYEES.EMPID=EMPSALARY.EMPID;

Ans. Firstname Salary Rachel 32000 Peter 28000

(vi) SELECT COUNT (DISTINT DESIGNATION) FROM EMPSALARY

Ans. 4

(vii) SELECT DESIGNATION , SUM(SALARY) FROM EMPSALARY GROUP BY DESIGNATION HAVING

COUNT(*)>2;Ans. Designation Sum(Salary) Manager 215000 Clerk 135000

(viii) SELECT SUM (BENEFITS) FROM EMPSALARY WHERE DESIGNATION='Clerk';

Ans. 32000

==========

SOLUTION 20

Q1.To display GCODE and DESCRIPTION of each GARMENT in descending order of GCOD

A1.SELECT GCODE, DESCRIPTION FROM GARMENT ORDER BY GCODE DESC;

Q2.To display the details of all the GARMENTs, which have READYDATE in between 08-DEC-07 and 16-JUN-08
(inclusive of both the dates).

A2.SELECT * FROM GARMENTWHERE READYDATE BETWEEN '08-DEC-07'AND '16-JUN-08';

Q3.To display the average PRICE of all the GARMENTs, which are made up of FABRIC with FCODE as F03.

A3.SELECT AVG(PRICE) FROM GARMENTWHERE FCODE = 'F03';

Q4.To display FABRICwise highest and lowest price of GARMENTs from GARMENT table. (Display FCODE of each
GARMENT along with highest and lowest price).

A4.SELECT FCODE, MAX(PRICE), MIN(PRICE) FROM GARMENT GROUP BY FCODE

Q5.SELECT SUM(PRICE) FROM GARMENT WHERE FCODE='F01';
SUM(PRICE)

A5.2600

Q6.SELECT DESCRIPTION, TYPE FROM GARMENT, FABRIC WHERE GARMENT.FCODE
=FABRIC.FCODE AND GARMENT.PRICE > = 1260;

A6.DESCRIPTION TYPE
INFORMAL SHIRT COTTON
INFORMAL PANT COTTON

FORMAL PANT TERELENE

Q7.SELECT MAX(FCODE) FROM FABRIC;

A7.MAX(FCODE)
F04

Q8.SELECT COUNT (DISTINCT PRICE) FROM GARMENT;
A8. COUNT(DISTINCT PRICE)

==========

SOLUTION 21

```
import pymysql.cursors
connector = pymysql.connect(host='localhost',user='root',password='')
cursor = connector.cursor()

#cursor.execute("create database students ")
cursor.execute("use students")
cursor.execute("""CREATE TABLE STest1 (
                    Nos int NOT NULL AUTO_INCREMENT,
                    Name varchar(100) NOT NULL,
                    Stipend int NOT NULL,
                    Stream varchar(100) NOT NULL,
                    AvgMark float(3,1) NOT NULL,
                    Grade char(1) NOT NULL,
                    Class varchar(4) NOT NULL,
                    PRIMARY KEY(Nos)
                    );""")

#inputs :
name = input("Name:")
sti = input("Stipend :")
stream = input("Stream:")
avg = input("avg:")
grade = input("grd:")
clss = input("class:")

cursor.execute("INSERT INTO STest1 (Name,Stipend,Stream,AvgMark,Grade,Class)
VALUES(%s,%s,%s,%s,%s,%s)",
               (name,sti,stream,avg,grade,clss))
connector.commit()

print("1 ROW INSERTED....")
```

==========

SOLUTION 22

```
import pymysql.cursors

connector = pymysql.connect(host = 'localhost',user='root',password='')

cursor = connector.cursor()

#cursor.execute("create database club1")
cursor.execute("use club1")
sql = """create table ctable2 (COACHID int AUTO_INCREMENT NOT NULL,
COACHNAME varchar(100) NOT NULL, AGE int NOT NULL, SPORTS varchar(100) NOT
NULL ,
DATEOFAPP DATE NOT NULL , PAY int NOT NULL, SEX char(1), PRIMARY
KEY(COACHID));"""

#cursor.execute(sql)
cursor.execute("INSERT INTO ctable2 (COACHNAME,AGE,SPORTS,DATEOFAPP,PAY,SEX)
VALUE('test1',20,'Football','2001-03-02',4000,'M');")
connector.commit()
cursor.execute("INSERT INTO ctable2 (COACHNAME,AGE,SPORTS,DATEOFAPP,PAY,SEX)
VALUE('test2',40,'Baseball','2001-03-02',4000,'M');")
connector.commit()
cursor.execute("SELECT * FROM ctable2")
result = cursor.fetchall()
j = 0
for i in result:
    print
    print(result[j],"\n-----------------------------------------")
    j = j+1
```

==========<END>==========