INDIAN SCHOOL, AL GHUBRA

COMPUTER SCIENCE NEW(083)

PROJECT REPORT
2020-21

Name: ……………………………..... CBSE Roll No:……………

Class:………………………………… Section:………………………..

CERTIFICATE

It is hereby certified that ………………………………………………………………………

of Class ………………………. *Section* ………………….. *has carried out the*

necessary project work as per the syllabus prescribed by the Central Board of

Secondary Education , New Delhi, for the year 2020-2021.

Internal Examiner   School Seal   External Examiner

<u>Acknowledgement</u>

It is my humble pleasure to acknowledge heartfelt gratitude to my Computer Science teacher Mrs. Minna Anil for her invaluable support; constant help and guidance at each and every stage without which this project would not have been successful.

I would also like to thank my Principal, Mrs. Papri Ghosh and my parents for their endless support without which I could not have completed this project on time.

Problem Description

This project uses the concept of SQL, SQL-Python Connectivity and User defined functions which is taught in class 11 and class 12.

The project uses the office database to make changes to the table employee stored in the office database using python shell.

At first, the user has to go through a security check-in in order to prevent theft of private details. The user has been given three chances to enter password correctly.

Then, a menu driven program is encountered from where we can choose to insert a new record containing the details of a new employee who joined the office, delete the details of an employee who resigned from the office, update the salary of an employee who received promotion, update the designation of an employee who received promotion or display the details of any employee who you want to select.

In order to prevent errors the whole program is placed in a try-except block and messages relevant are printed.

Source Code

```python
def addrecord():
    empid=int(input("Enter the employee Id:"))
    First_Name=input("Enter the first name of the employee:")
    Last_Name=input("Enter the last name of the employee:")
    Salary=int(input("Enter the Salary of the employee:"))
    Designation=input("Enter the designation post of the employee:")
    DOJ=input("Enter the date the employee joined the office in year-
    month-day format:")
    mycursor.execute("insert into employee
    values(%s,%s,%s,%s,%s,%s)",(empid,First_Name,Last_Name,Salary
    ,Designation,DOJ))
    mydb.commit()
    print("Record added")

def delrecord():
    EMPIN=int(input("Enter the employee Id to be deleted:"))
    try:
        mycursor.execute("delete from employee where
        EMPID=%s",(EMPIN,))
        mydb.commit()
```

```python
        print("Record Deleted")
    except:
        print("Record not found")

def updatesal():
    EMPIN=int(input("Enter the employee Id whose salary you want to
    update:"))
    Amount=int(input("Enter the amount by which the salary should
    increase:"))
    try:
        mycursor.execute("update employee set salary = salary + %s where
        EMPID=%s",(Amount,EMPIN,))
        mydb.commit()
        print("Record Updated")
    except:
        print("Record not found")

def updatepos():
    EMPIN=int(input("Enter the employee Id who you want to
    promote:"))
    NewPos=input("Enter the the new designation of the employee:")
    try:
        mycursor.execute("update employee set Designation = %s where
```

```python
            EMPID=%s",(NewPos,EMPIN,))
        mydb.commit()
        print("Record Updated")
    except:
        print("Record not found")


def fetchrecord():
    EMPIN=int(input("Enter the employee Id whose record you want to
     see:"))
    try:
        mycursor.execute("Select * from employee where EMPID =
        %s",(EMPIN,))
        Record=mycursor.fetchall()
        print(Record)
    except:
        print("Record not found")


import sys
import mysql.connector

print("Enter the password for entering the office database")
n=3
for I in range(n):
```

```python
        passwd=input()
        if passwd=="CS":
            print("Correct password")
            print("Greetings")
            print("\n")
            break
        else:
            print("Wrong password,")
            n=n-1
            print(n,"Chance remaining")
    else:
        print("\n")
        print("Security alert!")
        print("Database closed")
        sys.exit()


mydb=mysql.connector.connect(host="localhost",user="root",passwd="i
sgsql")
mycursor=mydb.cursor()
mycursor.execute("use office")
print("The details of the employees in this office are:")
mycursor.execute("select * from employee")
for I in mycursor.fetchall():
```

```
    print(I)


print("\n")
print("\n")
print("1: Add the details of a new employee who joined the office")
print("2: Remove the details of the employee who resigned the office")
print("3: Update the salary of the the employee who recieved
promotion")
print("4: Update the title of the employe who recieved promotion")
print("5: Display the details of all the employees")
print("6: Process finished for now")
print("\n")
print("\n")


while True:
    try:
        ch=int(input("What is your choice from the above:"))
        if ch==1:
            addrecord()
            print("\n")
        elif ch==2:
            delrecord()
            print("\n")
```

```python
        elif ch==3:
            updatesal()
            print("\n")
        elif ch==4:
            updatepos()
            print("\n")
        elif ch==5:
            fetchrecord()
            print("\n")
        elif ch==6:
            print("Have a great day!")
            sys.exit()
        else:
            print("Wrong choice")
            print("\n")
    except:
        if ch==6:
            break
        else:
            print("Wrong input! Please try again")
            continue
```

Screenshots of Output

The table is:

```
mysql> select * from employee;
+-------+-----------+----------+--------+-----------------+------------+
| EMPID | FirstName | LastName | Salary | Designation     | DOJ        |
+-------+-----------+----------+--------+-----------------+------------+
|   102 | Ayush     | Ganguly  | 120100 | Senior HR       | 2008-01-09 |
|   103 | Manav     | Chauhan  | 134000 | General Manager | 2009-07-29 |
|   106 | Rounak    | Ghosh    | 135000 | HR              | 2012-05-19 |
|   107 | Sam       | Sengupta | 114000 | Junior Officer  | 2013-12-02 |
|   108 | Mary      | Jones    | 102000 | Junior Officer  | 2013-11-14 |
|   104 | Mohammad  | Khuroo   | 210034 | General Manager | 2004-01-23 |
|   105 | Mohammad  | Numair   | 100000 | HR              | 2010-12-03 |
|   101 | Jake      | Peralta  | 150000 | Chairman        | 2004-05-19 |
+-------+-----------+----------+--------+-----------------+------------+
8 rows in set (0.00 sec)
```

Password Process:

Wrong password input,

```
Python 3.7.3 Shell
File  Edit  Shell  Debug  Options  Window  Help
Python 3.7.3 (v3.7.3:ef4ec6ed12, Mar 25 2019, 21:26:53) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
======= RESTART: C:\Users\DELL\Documents\CS\CS Class 12\CS Project.py =======
Enter the password for entering the office database
cs
Wrong password,
2 Chance remaining
css
Wrong password,
1 Chance remaining
csa
Wrong password,
0 Chance remaining


Security alert!
Database closed
>>>
```

Correct Password input,

File   Edit   Shell   Debug   Options   Window   Help

```
Python 3.7.3 (v3.7.3:ef4ec6ed12, Mar 25 2019, 21:26:53) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
======= RESTART: C:\Users\DELL\Documents\CS\CS Class 12\CS Project.py =======
Enter the password for entering the office database
CS
Correct password
Greetings


The details of the employees in this office are:
(102, 'Ayush', 'Ganguly', 120100, 'Senior HR', datetime.date(2008, 1, 9))
(103, 'Manav', 'Chauhan', 134000, 'General Manager', datetime.date(2009, 7, 29))
(106, 'Rounak', 'Ghosh', 135000, 'HR', datetime.date(2012, 5, 19))
(107, 'Sam', 'Sengupta', 114000, 'Junior Officer', datetime.date(2013, 12, 2))
(108, 'Mary', 'Jones', 102000, 'Junior Officer', datetime.date(2013, 11, 14))
(104, 'Mohammad', 'Khuroo', 210034, 'General Manager', datetime.date(2004, 1, 23))
(105, 'Mohammad', 'Numair', 100000, 'HR', datetime.date(2010, 12, 3))
(101, 'Jake', 'Peralta', 150000, 'Chairman', datetime.date(2004, 5, 19))




1: Add the details of a new employee who joined the office
2: Remove the details of the employee who resigned the office
3: Update the salary of the the employee who recieved promotion
4: Update the title of the employe who recieved promotion
5: Display the details of all the employees
6: Process finished for now



What is your choice from the above:
```

Choice 1,

```
What is your choice from the above:1
Enter the employee Id:109
Enter the first name of the employee:James
Enter the last name of the employee:Rex
Enter the Salary of the employee:122000
Enter the designation post of the employee:Junior Officer
Enter the date the employee joined the office in year-month-day format:2013-02-10
Record added
```

```
mysql> select * from employee;
+-------+-----------+----------+--------+-----------------+------------+
| EMPID | FirstName | LastName | Salary | Designation     | DOJ        |
+-------+-----------+----------+--------+-----------------+------------+
|   102 | Ayush     | Ganguly  | 120100 | Senior HR       | 2008-01-09 |
|   103 | Manav     | Chauhan  | 134000 | General Manager | 2009-07-29 |
|   106 | Rounak    | Ghosh    | 135000 | HR              | 2012-05-19 |
|   107 | Sam       | Sengupta | 114000 | Junior Officer  | 2013-12-02 |
|   108 | Mary      | Jones    | 102000 | Junior Officer  | 2013-11-14 |
|   104 | Mohammad  | Khuroo   | 210034 | General Manager | 2004-01-23 |
|   105 | Mohammad  | Numair   | 100000 | HR              | 2010-12-03 |
|   101 | Jake      | Peralta  | 150000 | Chairman        | 2004-05-19 |
|   109 | James     | Rex      | 122000 | Junior Officer  | 2013-02-10 |
+-------+-----------+----------+--------+-----------------+------------+
9 rows in set (0.00 sec)

mysql>
```

Choice 2:

```
What is your choice from the above:2
Enter the employee Id to be deleted:108
Record Deleted
```

```
mysql> select * from employee;
+-------+-----------+-----------+--------+-----------------+------------+
| EMPID | FirstName | LastName  | Salary | Designation     | DOJ        |
+-------+-----------+-----------+--------+-----------------+------------+
|   102 | Ayush     | Ganguly   | 120100 | Senior HR       | 2008-01-09 |
|   103 | Manav     | Chauhan   | 134000 | General Manager | 2009-07-29 |
|   106 | Rounak    | Ghosh     | 135000 | HR              | 2012-05-19 |
|   107 | Sam       | Sengupta  | 114000 | Junior Officer  | 2013-12-02 |
|   104 | Mohammad  | Khuroo    | 210034 | General Manager | 2004-01-23 |
|   105 | Mohammad  | Numair    | 100000 | HR              | 2010-12-03 |
|   101 | Jake      | Peralta   | 150000 | Chairman        | 2004-05-19 |
|   109 | James     | Rex       | 122000 | Junior Officer  | 2013-02-10 |
+-------+-----------+-----------+--------+-----------------+------------+
8 rows in set (0.00 sec)
```

Choice 3,

```
What is your choice from the above:3
Enter the employee Id whose salary you want to update:102
Enter the amount by which the salary should increase:10000
Record Updated
```

```
mysql> select * from employee;
+-------+-----------+-----------+--------+-----------------+------------+
| EMPID | FirstName | LastName  | Salary | Designation     | DOJ        |
+-------+-----------+-----------+--------+-----------------+------------+
|   102 | Ayush     | Ganguly   | 130100 | Senior HR       | 2008-01-09 |
|   103 | Manav     | Chauhan   | 134000 | General Manager | 2009-07-29 |
|   106 | Rounak    | Ghosh     | 135000 | HR              | 2012-05-19 |
|   107 | Sam       | Sengupta  | 114000 | Junior Officer  | 2013-12-02 |
|   104 | Mohammad  | Khuroo    | 210034 | General Manager | 2004-01-23 |
|   105 | Mohammad  | Numair    | 100000 | HR              | 2010-12-03 |
|   101 | Jake      | Peralta   | 150000 | Chairman        | 2004-05-19 |
|   109 | James     | Rex       | 122000 | Junior Officer  | 2013-02-10 |
+-------+-----------+-----------+--------+-----------------+------------+
8 rows in set (0.08 sec)
```

Choice 4,

```
What is your choice from the above:4
Enter the employee Id who you want to promote:105
Enter the the new designation of the employee:Managing Director
Record Updated
```

```
mysql> select * from employee;
+-------+-----------+----------+--------+-------------------+------------+
| EMPID | FirstName | LastName | Salary | Designation       | DOJ        |
+-------+-----------+----------+--------+-------------------+------------+
|   102 | Ayush     | Ganguly  | 130100 | Senior HR         | 2008-01-09 |
|   103 | Manav     | Chauhan  | 134000 | General Manager   | 2009-07-29 |
|   106 | Rounak    | Ghosh    | 135000 | HR                | 2012-05-19 |
|   107 | Sam       | Sengupta | 114000 | Junior Officer    | 2013-12-02 |
|   104 | Mohammad  | Khuroo   | 210034 | General Manager   | 2004-01-23 |
|   105 | Mohammad  | Numair   | 100000 | Managing Director | 2010-12-03 |
|   101 | Jake      | Peralta  | 150000 | Chairman          | 2004-05-19 |
|   109 | James     | Rex      | 122000 | Junior Officer    | 2013-02-10 |
+-------+-----------+----------+--------+-------------------+------------+
8 rows in set (0.00 sec)
```

Choice 5,

```
What is your choice from the above:5
Enter the employee Id whose record you want to see:104
[(104, 'Mohammad', 'Khuroo', 210034, 'General Manager', datetime.date(2004, 1, 23))]
```

Full program output

File   Edit   Shell   Debug   Options   Window   Help

```
======= RESTART: C:\Users\DELL\Documents\CS\CS Class 12\CS Project.py =======
Enter the password for entering the office database
CS
Correct password
Greetings


The details of the employees in this office are:
(102, 'Ayush', 'Ganguly', 120100, 'Senior HR', datetime.date(2008, 1, 9))
(103, 'Manav', 'Chauhan', 134000, 'General Manager', datetime.date(2009, 7, 29))
(106, 'Rounak', 'Ghosh', 135000, 'HR', datetime.date(2012, 5, 19))
(107, 'Sam', 'Sengupta', 114000, 'Junior Officer', datetime.date(2013, 12, 2))
(108, 'Mary', 'Jones', 102000, 'Junior Officer', datetime.date(2013, 11, 14))
(104, 'Mohammad', 'Khuroo', 210034, 'General Manager', datetime.date(2004, 1, 23))
(105, 'Mohammad', 'Numair', 100000, 'HR', datetime.date(2010, 12, 3))
(101, 'Jake', 'Peralta', 150000, 'Chairman', datetime.date(2004, 5, 19))




1: Add the details of a new employee who joined the office
2: Remove the details of the employee who resigned the office
3: Update the salary of the the employee who recieved promotion
4: Update the title of the employe who recieved promotion
5: Display the details of all the employees
6: Process finished for now




What is your choice from the above:1
Enter the employee Id:109
Enter the first name of the employee:James
Enter the last name of the employee:Rex
Enter the Salary of the employee:122000
Enter the designation post of the employee:Junior Officer
Enter the date the employee joined the office in year-month-day format:2013-02-10
Record added
```

```
What is your choice from the above:2
Enter the employee Id to be deleted:108
Record Deleted


What is your choice from the above:3
Enter the employee Id whose salary you want to update:102
Enter the amount by which the salary should increase:10000
Record Updated


What is your choice from the above:4
Enter the employee Id who you want to promote:105
Enter the the new designation of the employee:Managing Director
Record Updated


What is your choice from the above:5
Enter the employee Id whose record you want to see:104
[(104, 'Mohammad', 'Khuroo', 210034, 'General Manager', datetime.date(2004, 1, 23))]


What is your choice from the above:6
Have a great day!
>>> |
```

Final Table

```
mysql> select * from employee;
+-------+-----------+----------+--------+------------------+------------+
| EMPID | FirstName | LastName | Salary | Designation      | DOJ        |
+-------+-----------+----------+--------+------------------+------------+
|   102 | Ayush     | Ganguly  | 130100 | Senior HR        | 2008-01-09 |
|   103 | Manav     | Chauhan  | 134000 | General Manager  | 2009-07-29 |
|   106 | Rounak    | Ghosh    | 135000 | HR               | 2012-05-19 |
|   107 | Sam       | Sengupta | 114000 | Junior Officer   | 2013-12-02 |
|   104 | Mohammad  | Khuroo   | 210034 | General Manager  | 2004-01-23 |
|   105 | Mohammad  | Numair   | 100000 | Managing Director| 2010-12-03 |
|   101 | Jake      | Peralta  | 150000 | Chairman         | 2004-05-19 |
|   109 | James     | Rex      | 122000 | Junior Officer   | 2013-02-10 |
+-------+-----------+----------+--------+------------------+------------+
8 rows in set (0.00 sec)

mysql>
```

<u>Bibliography</u>

- <u>Class 12 Computer Science with Python – Preeti Arora</u>
- <u>Class 11 Computer Science- Saraswati</u>
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