

Computer Science Project:-

Employee Database Management using MySQL connector:-

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Source code:-

```
1 import mysql.connector as m
2 from time import sleep
3 con=m.connect(user="root",password="258000",host="localhost")
4 cur=con.cursor()
5 cur.execute('show databases like "aditya0923";')
6 if cur.fetchall()==[]:
7     cur.execute("create database aditya0923;use aditya0923;create table
details(id int primary key,name varchar(50) not null,basic_salary int
default 0,HRA int default 0,CA int
default 0);")
8     con=m.connect(user="root",password="258000",host="localhost",database="ad
itya0923")
9     cur=con.cursor()
10 else:
11     con=m.connect(user="root",password="258000",host="localhost",database="ad
itya0923")
12     cur=con.cursor()
13 def validate_id():
14     while True:
15         try:
16             e_id=int(input("Employee_ID: "))
17             cur.execute(f"select id from details where id={e_id};")
18             if cur.fetchall()==[]:
19                 return False,e_id
20             else:
21                 return True,e_id
22         except:
23             print("<Employee_ID must be numeric and cannot be left
empty>".center(80,"-"))
24 def add():
25     while True:
26         f,e_id=validate_id()
27         if f:
28             print("<This Employee_ID already exists>".center(80,"-"))
29             while True:
30                 choice=input("Continue with a different Id?[Y/N]:- ").lower()
31                 if choice=="y":
32                     xd=0
33                     break
34                 elif choice=="n":
35                     xd=1
36                     break
37             else:
38                 print("<Invalid Choice>".center(80,"-"))
39                 continue
40         if xd==1:
41             break
```

```

42     else:
43         while True:
44             name=input("Name: ").title()
45             if not name=="":
46                 break
47             else:
48                 print("<Name cannot be left empty>".center(80,"-"))
49         while True:
50             try:
51                 basic_salary=int(input("Basic_Salary: "))
52                 break
53             except:
54                 print("<Basic_Salary must be numeric and cannot be left
empty>".center(80,"-"))
55         while True:
56             try:
57                 HRA=int(input("House-Rent_Allowance: "))
58                 break
59             except:
60                 print("<House-Rent_Allowance must be numeric and
cannot be left empty>".center(80,"-"))
61         while True:
62             try:
63                 CA=int(input("Conveyance_Allowance: "))
64                 break
65             except:
66                 print("<Conveyance_Allowance must be numeric and
cannot be left empty>".center(80,"-"))
67         cur.execute(f"insert into details
values({e_id}, '{name}', {basic_salary}, {HRA},
{CA});")
68         con.commit()
69         print('\n', "<Added>".center(80,"-"), sep="")
70         while True:
71             choice=input("More Employees? [Y/N]:- ").lower()
72             if choice=="y":
73                 xd=0
74                 break
75             elif choice=="n":
76                 xd=1
77                 break
78             else:
79                 print("<Invalid Choice>".center(80,"-"))
80                 continue
81         if xd==1:
82             break
83     def search_id():
84         f,e_id=validate_id()
85         if f:
86             cur.execute(f"select * from details where id={e_id}")
87             t=cur.fetchone()

```

```

88         print(f"{'ID':<6}{'Name':<20}{'Basic  

Salary':<20}{'HRA':<10}{'CA':<10}", "-  

".center(65, "-"), sep="\n")
89         print(f"{'t[0]:<6}{'t[1]:<20}{'t[2]:<20}{'t[3]:<10}{'t[4]:<10}")
90     else:
91         print("<This Employee ID does not exists>".center(80, "-"))
92 def search_name():
93     name=input("Name: ").title()
94     cur.execute(f"select * from details where name like '{name}';")
95     t=cur.fetchall()
96     if not t==[]:
97         print(f"Potential Matches:-")
98         print(f"{'ID':<6}{'Name':<20}{'Basic  

Salary':<20}{'HRA':<10}{'CA':<10}", "-  

".center(65, "-"), sep="\n")
99         t1=0
100        for i in t:
101            print(f"{'t[t1][0]:<6}{'t[t1][1]:<20}{'t[t1][2]:<20}{'t[t1][3]:<10}{'t[t1  

][4]:<10}")
102            t1+=1
103        else:
104            print("<No matches found>".center(80, "-"))
105 def total_salary():
106     f,e_id=validate_id()
107     if f:
108         cur.execute(f"select * from details where id='{e_id}';")
109         t=cur.fetchone()
110         print("Total Salary=",t[2]+t[3]+t[4])
111     else:
112         print("<This Employee ID does not exists>".center(80, "-"))
113 def total_allowance():
114     f,e_id=validate_id()
115     if f:
116         cur.execute(f"select * from details where id='{e_id}';")
117         t=cur.fetchone()
118         print("Total allowance=",t[3]+t[4])
119     else:
120         print("<This Employee ID does not exists>".center(80, "-"))
121 while True:
122     print('', "Main Menu".center(80, "-"), "1: Add Employee", "2: Search with  

ID", "3: Search with Name", "4: Total Salary", "5: Total Allowance", "6:  

Exit", sep="\n")
123     while True:
124         try:
125             choice=int(input("Your_Choice: "))
126             if choice>6:
127                 print("<Invalid Choice>".center(80, "-"))
128                 continue
129             break
130         except:
131             print("<Invalid Choice>".center(80, "-"))
132             continue

```

```
133     if choice==1:
134         add()
135     elif choice==2:
136         search_id()
137     elif choice==3:
138         search_name()
139     elif choice==4:
140         total_salary()
141     elif choice==5:
142         total_allowance()
143     elif choice==6:
144         con.close()
145         print('\n', "<Program has ended>".center(80, "-"), sep="")
146         sleep(1)
147         break
```

Execution: -

-----Main Menu-----

- 1: Add Employee
- 2: Search with ID
- 3: Search with Name
- 4: Total Salary
- 5: Total Allowance
- 6: Exit

Your_Choice: 1

Employee_ID: 144

Name: aditya singh

Basic_Salary: 55555

House-Rent_Allowance: 3000

Conveyance_Allowance: 2000

-----<Added>-----

More Employees? [Y/N]:- y

Employee_ID: 145

Name: harsh

Basic_Salary: 44444

House-Rent_Allowance: 3500

Conveyance_Allowance: 2000

-----<Added>-----

More Employees? [Y/N]:- n

-----Main Menu-----

- 1: Add Employee
- 2: Search with ID
- 3: Search with Name
- 4: Total Salary
- 5: Total Allowance

6: Exit

Your_Choice: 1

Employee_ID: 144

-----<This Employee_ID already exists>-----

Continue with a different Id?[Y/N]:- y

Employee_ID: 146

Name: aditya

Basic_Salary: 45455

House-Rent_Allowance: 3000

Conveyance_Allowance: 2000

-----<Added>-----

More Employees? [Y/N]:- n

-----Main Menu-----

1: Add Employee

2: Search with ID

3: Search with Name

4: Total Salary

5: Total Allowance

6: Exit

Your_Choice: 2

Employee_ID: 144

ID	Name	Basic Salary	HRA	CA
144	Aditya Singh	55555	3000	2000

-----Main Menu-----

1: Add Employee

2: Search with ID

3: Search with Name

4: Total Salary

5: Total Allowance

6: Exit

Your_Choice: 1

Employee_ID: 144

-----<This Employee_ID already exists>-----

Continue with a different Id?[Y/N]:- n

-----Main Menu-----

- 1: Add Employee
- 2: Search with ID
- 3: Search with Name
- 4: Total Salary
- 5: Total Allowance
- 6: Exit

Your_Choice: 2

Employee_ID: 143

-----<This Employee ID does not exists>-----

-----Main Menu-----

- 1: Add Employee
- 2: Search with ID
- 3: Search with Name
- 4: Total Salary
- 5: Total Allowance
- 6: Exit

Your_Choice: 3

Name: aditya

Potential Matches:-

ID	Name	Basic Salary	HRA	CA
1	Aditya	100	50	25
146	Aditya	45455	3000	2000

-----Main Menu-----

- 1: Add Employee
- 2: Search with ID
- 3: Search with Name
- 4: Total Salary

5: Total Allowance

6: Exit

Your_Choice: 4

Employee_ID: 144

Total Salary= 60555

-----Main Menu-----

1: Add Employee

2: Search with ID

3: Search with Name

4: Total Salary

5: Total Allowance

6: Exit

Your_Choice: 5

Employee_ID: 144

Total allowance= 5000

-----Main Menu-----

1: Add Employee

2: Search with ID

3: Search with Name

4: Total Salary

5: Total Allowance

6: Exit

Your_Choice: 6

-----<Program has ended>-----