

File Edit View Navigate Code Refactor Run Tools VCS Window Help Loan_management - ServiceProvider.py

Loan_management > DAO > ServiceProvider.py

Project

Loan_management C:\Users\sa... DAO ServiceProvider.py Entity CarLoan.py Customer.py HomeLoan.py Loan.py Exception myException.py UTIL DBConnUtil.py DBPropertyUtil.py venv library root loan_management_system main.py External Libraries Scratches and Consoles

Structure

Favorites

ServiceProvider.py x myException.py x CarLoan.py x HomeLoan.py x DBPropertyUtil.py x DBConnUtil.py x loan_management_system.sql x

6 13 2

```
import mysql.connector as connection
from UTIL.DBConnUtil import DBConnection
from Entity.Loan import Loan
from Entity.Customer import Customer

class LoanRepository(DBConnection):
    def __init__(self):
        pass

    def getCustomerByID(self, cid):
        try:
            self.open()
            self.c.execute(f"Select * From Customer Where customer_id = {cid}")
            cust = self.c.fetchone()
        except Exception as e:
            print(e)
        finally:
            self.close()
        return False if cust is None or cust == [] else cust

    def getLoanByID(self, lid):
        +...
```

Run: main x

Run TODO Problems Terminal Python Packages Python Console

Packages installed successfully: Installed packages: 'mysql-connector-python' (24 minutes ago)

23:1 CRLF UTF-8 4 spaces Python 3.9 (Loan_management) 1 Event Log

File Edit View Navigate Code Refactor Run Tools VCS Window Help Loan management - ServiceProvider.py

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ServiceProvider.py x myException.py x CarLoan.py x HomeLoan.py x DBPropertyUtil.py x DBConnUtil.py x loan_management_system.sql x C

Project

Loan_management C:\Users\s... DAO ServiceProvider.py Entity CarLoan.py Customer.py HomeLoan.py Loan.py Exception myException.py UTIL DBConnUtil.py DBPropertyUtil.py venv library root loan_management_system main.py External Libraries Scratches and Consoles

Structure

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Packages installed successfully: Installed packages: 'mysql-connector-python' (24 minutes ago)

Event Log 1

```
def getLoanByID(self, lid):
    try:
        self.open()
        self.c.execute(f"Select * From Loan Where loan_id = {lid}")
    except Exception as e:
        print(e)
    else:
        flag = True
        try:
            if self.c.rowcount == 0:
                flag = False
                raise Exception('InvalidLoanException: No such Loan Record found in the database')
        except Exception as e:
            print(e)
        else:
            l = self.c.fetchone()
    finally:
        self.close()
        if flag:
            return Loan(*l)

def applyLoan(self, loan):
    try:
        print("\nLoan Details are : ")
```

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ServiceProvider.py

myException.py CarLoan.py HomeLoan.py DBPropertyUtil.py DBConnUtil.py loan_management_system.sql

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Loan management

DAO

ServiceProvider.py

Entity

CarLoan.py Customer.py HomeLoan.py Loan.py

Exception

myException.py

UTIL

DBConnUtil.py DBPropertyUtil.py

venv library root

loan_management_system

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External Libraries

Scratches and Consoles

Structure

Favorites

Run: main

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Packages installed successfully: Installed packages: 'mysql-connector-python' (24 minutes ago)

Event Log

```
47     print("\nLoan Details are : ")
48     loan.display_loan_details()
49     conf = input("\nDo you want to continue with the Loan Application?(Y/N) : ").upper()
50     if conf == 'Y':
51         loan.set_loan_status("Pending")
52         loan.insert_new_loan()
53         print(
54             "\nYou have applied for the Loan Successfully!\nYour Loan Application is 'Pending' from our side.\nIt w
55         else:
56             print('\nLoan Application Cancelled....\n')
57     except Exception as e:
58         print(e)
59
60     def calculateInterest(self, lid):
61         try:
62             loan = self.getLoanByID(lid)
63             loan.display_loan_details()
64             interest = (float(loan.principal_amount) * loan.interest_rate * (loan.loan_term / 12)) / 100
65             return interest
66         except Exception as e:
67             print(e)
68             return None
69
70     def loanStatus(self, lid):
```

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Project

ServiceProvider.py

myException.py

CarLoan.py

HomeLoan.py

DBPropertyUtil.py

DBConnUtil.py

loan_management_system.sql

A 6 A 13 X 2 ^

try:

loan = self.getLoanByID(lid)

loan.display_loan_details()

cid = loan.get_customer_id()

c = self.getCustomerByID(cid)

cscore = Customer(*c).get_credit_score()

if cscore <= 650:

status = 'Pending'

print('\nYour Loan Application is "Pending" because you have a Low Credit Score\n')

else:

status = 'Approved'

print('\nYour Loan was Sanctioned and the Interest Period is Ongoing.\n')

self.open()

self.c.execute(f"Update Loan Set loan_status = '{status}' Where loan_id = {lid}")

self.mydb.commit()

except Exception as e:

print(e)

finally:

self.close()

def calculateEMI(self, lid):

try:

loan = self.getLoanByID(lid)

loan.display_loan_details()

Run: main

Run TODO Problems Terminal Python Packages Python Console

Packages installed successfully: Installed packages: 'mysql-connector-python' (24 minutes ago)

23:1 CRLF UTF-8 4 spaces Python 3.9 (Loan_management)

Event Log

Structure

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Favorites

ServiceProvider.py x myException.py x CarLoan.py x HomeLoan.py x DBPropertyUtil.py x DBConnUtil.py x loan_management_system.sql x

91 def calculateEMI(self, lid):
92 try:
93 loan = self.getLoanByID(lid)
94 loan.display_loan_details()
95 monthly_interest_rate = (loan.interest_rate / 12) / 100
96 emi_numerator = float(loan.principal_amount) * monthly_interest_rate * (
97 pow((1 + monthly_interest_rate), loan.loan_term))
98 emi_denominator = pow((1 + monthly_interest_rate), loan.loan_term) - 1
99 emi = emi_numerator / emi_denominator
100 return emi
101 except Exception as e:
102 print(e)
103
104 def loanRepayment(self, lid, amount):
105 try:
106 emi = self.calculateEMI(lid)
107 num = int(amount // emi)
108 if num < 1:
109 print('\nSorry...The amount is too low to pay even a Single EMI\n')
110 else:
111 print(f"\nYou have paid {num} EMIs from the amount {amount} and now - ")
112 loan = self.getLoanByID(lid)
113 remaining_loan_term = loan.get_loan_term() - num
114 remaining_loan_amount = loan.get_principal_amount() - (num * emi)

LoanRepository

Run: main x

Run TODO Problems Terminal Python Packages Python Console

Packages installed successfully: Installed packages: 'mysql-connector-python' (25 minutes ago)

23:1 CRLF UTF-8 4 spaces Python 3.9 (Loan_management)

Event Log 1

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Loan_management C:\Users\s... DAO ServiceProvider.py Entity CarLoan.py Customer.py HomeLoan.py Loan.py Exception myException.py UTIL DBConnUtil.py DBPropertyUtil.py venv library root loan_management_system main.py External Libraries Scratches and Consoles

Structure

Favorites

ServiceProvider.py x myException.py x CarLoan.py x HomeLoan.py x DBPropertyUtil.py x DBConnUtil.py x loan_management_system.sql x

106 emi = self.calculateEMI(lid)
107 num = int(amount // emi)
108 if num < 1:
109 print('\nSorry...The amount is too low to pay even a Single EMI\n')
110 else:
111 print(f"\nYou have paid {num} EMIs from the amount {amount} and now - ")
112 loan = self.getLoanByID(lid)
113 remaining_loan_term = loan.get_loan_term() - num
114 remaining_loan_amount = loan.get_principal_amount() - (num * emi)
115 self.open()
116 self.c.execute(
117 f"Update Loan Set loan_term = {remaining_loan_term}, principal_amount = {remaining_loan_amount} Where l...
118 self.mydb.commit()
119 self.close()
120 self.getLoanByID(lid).display_loan_details()
121 if remaining_loan_term <= 0 or remaining_loan_amount <= 0:
122 print("\nLoan fully repaid. Congratulations!\n")
123 except Exception as e:
124 print(e)

Run: main x

Run TODO Problems Terminal Python Packages Python Console

Packages installed successfully: Installed packages: 'mysql-connector-python' (25 minutes ago)

23:1 CRLF UTF-8 4 spaces Python 3.9 (Loan_management) 1 Event Log

File Edit View Navigate Code Refactor Run Tools VCS Window Help Loan_management - CarLoan.py

Loan_management

Project

Structure

Favorites

Run: main

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Packages installed successfully: Installed packages: 'mysql-connector-python' (27 minutes ago)

main

ServiceProvider.py myException.py CarLoan.py HomeLoan.py DBPropertyUtil.py DBConnUtil.py loan_management_system.sql

CarLoan.py

```
from Loan import Loan

class CarLoan(Loan):
    def __init__(self, loan_id, customer_id, principal_amount, interest_rate, loan_term, loan_status, car_model, car_value):
        super().__init__(loan_id, customer_id, principal_amount, interest_rate, loan_term, "CarLoan", loan_status)
        self.car_model = car_model
        self.car_value = car_value

    def get_car_model(self):
        return self.car_model

    def set_car_model(self, car_model):
        self.car_model = car_model

    def get_car_value(self):
        return self.car_value

    def set_car_value(self, car_value):
        self.car_value = car_value

    def display_loan_details(self):
        super().display_loan_details()
        print(f"Car Model: {self.car_model}")
        print(f"Car Value: {self.car_value}")
```

CarLoan > set_car_model()

Event Log

File Edit View Navigate Code Refactor Run Tools VCS Window Help Loan management - Customer.py

Loan management > Entity > Customer.py

P vider.py x myException.py x CarLoan.py x HomeLoan.py x DBPropertyUtil.py x DBConnUtil.py x loan_management_system.sql x Customer.py x

Project

Loan management C:\Users\s... DAO ServiceProvider.py Entity CarLoan.py Customer.py HomeLoan.py Loan.py Exception myException.py UTIL DBConnUtil.py DBPropertyUtil.py

venv library root loan_management_system main.py

External Libraries

Scratches and Consoles

Customer > insert_new_customer() > finally

Run: main x

Run TODO Problems Terminal Python Packages Python Console

PEP 8: W292 no newline at end of file

1 Event Log

71:36 CRLF UTF-8 4 spaces Python 3.9 (Loan_management)

```
import mysql.connector as connection
from UTIL.DBConnUtil import DBConnection

class Customer(DBConnection):
    def __init__(self, customer_id=None, name=None, email_address=None, phone_number=None, address=None, credit_score=None):
        self.customer_id = customer_id
        self.name = name
        self.email_address = email_address
        self.phone_number = phone_number
        self.address = address
        self.credit_score = credit_score

    def get_customer_id(self):
        return self.customer_id

    def get_name(self):
        return self.name

    def get_email_address(self):
        return self.email_address

    def get_phone_number(self):
        return self.phone_number
```

File Edit View Navigate Code Refactor Run Tools VCS Window Help Loan management - Customer.py

Loan management > Entity > Customer.py

P... vider.py myException.py CarLoan.py HomeLoan.py DBPropertyUtil.py DBConnUtil.py loan_management_system.sql Customer.py

Project

Loan management C:\Users\s...

- DAO
- ServiceProvider.py

- Entity
- CarLoan.py
- Customer.py
- HomeLoan.py
- Loan.py

- Exception
- myException.py

- UTIL
- DBConnUtil.py
- DBPropertyUtil.py

venv library root

- loan_management_system
- main.py

External Libraries

Scratches and Consoles

Structure

Favorites

```
25     def get_address(self):  
26         return self.address  
27  
28     def get_credit_score(self):  
29         return self.credit_score  
30  
31     def set_customer_id(self, customer_id):  
32         self.customer_id = customer_id  
33  
34     def set_name(self, name):  
35         self.name = name  
36  
37     def set_email_address(self, email_address):  
38         self.email_address = email_address  
39  
40     def set_phone_number(self, phone_number):  
41         self.phone_number = phone_number  
42  
43     def set_address(self, address):  
44         self.address = address  
45  
46     def set_credit_score(self, credit_score):  
47         self.credit_score = credit_score  
48
```

Customer > insert_new_customer() > finally

Run: main

Run TODO Problems Terminal Python Packages Python Console

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Event Log

File Edit View Navigate Code Refactor Run Tools VCS Window Help Loan management - Customer.py

Loan management > Entity > Customer.py

P vider.py myException.py CarLoan.py HomeLoan.py DBPropertyUtil.py DBConnUtil.py loan_management_system.sql Customer.py

Project

Loan management C:\Users\s 49

DAO ServiceProvider.py

Entity CarLoan.py Customer.py HomeLoan.py Loan.py

Exception myException.py

UTIL DBConnUtil.py DBPropertyUtil.py

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External Libraries

Scratches and Consoles

def display_customer_details(self):
 print()
 print(f"Customer ID: {self.customer_id}")
 print(f"Name: {self.name}")
 print(f"Email Address: {self.email_address}")
 print(f"Phone Number: {self.phone_number}")
 print(f"Address: {self.address}")
 print(f"Credit Score: {self.credit_score}")
 print()

def insert_new_customer(self):
 try:
 self.open()
 self.c.execute(f"INSERT INTO Customer (name, email_address, phone_number, address, credit_score) VALUES ('{self.name}', '{self.email_address}', '{self.phone_number}', '{self.address}', {self.credit_score})")
 self.mydb.commit()
 self.customer_id = self.c.lastrowid
 print(f"\nCustomer '{self.name}' added to the database with ID: {self.customer_id}\n")
 except Exception as e:
 print(e)
 finally:
 self.close()
 return self.customer_id

Customer > insert_new_customer() > finally

Run: main

Run TODO Problems Terminal Python Packages Python Console

PEP 8: W292 no newline at end of file

Event Log 1

File Edit View Navigate Code Refactor Run Tools VCS Window Help Loan_management - HomeLoan.py

Loan_management Entity HomeLoan.py

P vider.py myException.py CarLoan.py HomeLoan.py DBPropertyUtil.py DBConnUtil.py loan_management_system.sql Customer.py

Project

Loan_management C:\Users\svidar

- DAO ServiceProvider.py
- Entity CarLoan.py Customer.py HomeLoan.py Loan.py
- Exception myException.py
- UTIL DBConnUtil.py DBPropertyUtil.py

venv library root

- loan_management_system
- main.py

External Libraries

Scratches and Consoles

from Loan import Loan

class HomeLoan(Loan):

def __init__(self, loan_id, customer_id, principal_amount, interest_rate, loan_term, loan_status, property_address, property_value):

super().__init__(loan_id, customer_id, principal_amount, interest_rate, loan_term, "HomeLoan", loan_status)

self.property_address = property_address

self.property_value = property_value

def get_property_address(self):

return self.property_address

def set_property_address(self, property_address):

self.property_address = property_address

def get_property_value(self):

return self.property_value

def set_property_value(self, property_value):

self.property_value = property_value

def display_loan_details(self):

super().display_loan_details()

print(f"Property Address: {self.property_address}")

print(f"Property Value: {self.property_value}")

HomeLoan > display_loan_details()

Run: main

Run TODO Problems Terminal Python Packages Python Console

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24:56 CRLF UTF-8 4 spaces Python 3.9 (Loan_management)

Event Log 1

Parameter property_value of Entity.HomeLoan.HomeLoan.__init__

File Edit View Navigate Code Refactor Run Tools VCS Window Help Loan_management - Loan.py

Loan_management Entity Loan.py

Project

Loan_management C:\Users\PC\PycharmProjects\loan_management_system\Loan.py

DAO ServiceProvider.py

Entity CarLoan.py Customer.py HomeLoan.py Loan.py

Exception myException.py

UTIL DBConnUtil.py DBPropertyUtil.py

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External Libraries

Scratches and Consoles

Run: main

File Edit View Navigate Code Refactor Run Tools VCS Window Help Loan_management - Loan.py

Loan.py × ServiceProvider.py × myException.py × CarLoan.py × HomeLoan.py × DBPropertyUtil.py × DBConnUtil.py × loan_management_system ×

2 5

```
import mysql.connector as connection
from UTIL.DBConnUtil import DBConnection

class Loan(DBConnection):
    def __init__(self, loan_id=None, customer_id=None, principal_amount=None, interest_rate=12, loan_term=None, loan_type=None):
        self.loan_id = loan_id
        self.customer_id = customer_id
        self.principal_amount = float(principal_amount)
        self.interest_rate = interest_rate
        self.loan_term = loan_term
        self.loan_type = loan_type
        self.loan_status = loan_status

    def get_loan_id(self):
        return self.loan_id

    def get_customer_id(self):
        return self.customer_id

    def get_principal_amount(self):
        return float(self.principal_amount)

    def get_interest_rate(self):
        return self.interest_rate
```

Paste

Run: main

TODO Problems Terminal Python Packages Python Console

Packages installed successfully: Installed packages: 'mysql-connector-python' (27 minutes ago)

Event Log 1

File Edit View Navigate Code Refactor Run Tools VCS Window Help Loan_management - Loan.py

Loan_management Entity Loan.py

Project

Loan_management C:\Users\s... DAO ServiceProvider.py Entity CarLoan.py Customer.py HomeLoan.py Loan.py Exception myException.py UTIL DBConnUtil.py DBPropertyUtil.py venv library root loan_management_system main.py External Libraries Scratches and Consoles

Structure

Favorites

Run: main

Run TODO Problems Terminal Python Packages Python Console

Packages installed successfully: Installed packages: 'mysql-connector-python' (27 minutes ago)

Event Log

```
def get_interest_rate(self):
    return self.interest_rate

def get_loan_term(self):
    return self.loan_term

def get_loan_type(self):
    return self.loan_type

def get_loan_status(self):
    return self.loan_status

def set_loan_id(self, loan_id):
    self.loan_id = loan_id

def set_customer_id(self, customer_id):
    self.customer_id = customer_id

def set_principal_amount(self, principal_amount):
    self.principal_amount = float(principal_amount)

def set_interest_rate(self, interest_rate):
    self.interest_rate = interest_rate
```

File Edit View Navigate Code Refactor Run Tools VCS Window Help Loan_management - Loan.py

Loan_management Entity Loan.py

Project

Loan_management C:\Users\s... DAO ServiceProvider.py Entity CarLoan.py Customer.py HomeLoan.py Loan.py Exception myException.py UTIL DBConnUtil.py DBPropertyUtil.py venv library root loan_management_system main.py External Libraries Scratches and Consoles

Structure

Favorites

Run: main

Run TODO Problems Terminal Python Packages Python Console

Packages installed successfully: Installed packages: 'mysql-connector-python' (27 minutes ago)

Event Log

```
def set_loan_term(self, loan_term):
    self.loan_term = loan_term

def set_loan_type(self, loan_type):
    self.loan_type = loan_type

def set_loan_status(self, loan_status):
    self.loan_status = loan_status

def display_loan_details(self):
    print(f'\nThe Current details of your {self.loan_type} with end= " " )
    print(f"Loan ID: {self.loan_id} are - ")
    print(f"Customer ID: {self.customer_id}")
    print(f"Principal Amount: {self.principal_amount}")
    print(f"Interest Rate: {self.interest_rate}")
    print(f"Loan Term: {self.loan_term} months")
    print(f"Loan Type: {self.loan_type}")
    print(f"Loan Status: {self.loan_status}")
    print()

def insert_new_loan(self):
    try:
        self.open()
        self.c.execute(f"INSERT INTO Loan (customer_id, principal_amount, interest_rate, loan_term, loan_type, loan_status) VALUES ({self.customer_id}, {self.principal_amount}, {self.interest_rate}, {self.loan_term}, '{self.loan_type}', '{self.loan_status}')")
    except Exception as e:
        print(f"An error occurred while inserting the new loan: {e}")
        self.close()
```

File Edit View Navigate Code Refactor Run Tools VCS Window Help Loan_management - Loan.py

Loan_management > Entity > Loan.py

Project

Loan.py

ServiceProvider.py myException.py CarLoan.py HomeLoan.py DBPropertyUtil.py DBCConnUtil.py loan_management_system

Loan_management C:\Users\PC\PycharmProjects\loan_management_system\Loan.py

DAO ServiceProvider.py Entity CarLoan.py Customer.py HomeLoan.py Loan.py Exception myException.py UTIL DBCConnUtil.py DBPropertyUtil.py venv library root loan_management_system main.py External Libraries Scratches and Consoles

Structure

Favorites

Run: main

Run TODO Problems Terminal Python Packages Python Console

Packages installed successfully: Installed packages: 'mysql-connector-python' (27 minutes ago)

3:21 CRLF UTF-8 4 spaces Python 3.9 (Loan_management)

1 Event Log

```
print(f"Principal Amount: {self.principal_amount}")
print(f"Interest Rate: {self.interest_rate}")
print(f"Loan Term: {self.loan_term} months")
print(f"Loan Type: {self.loan_type}")
print(f"Loan Status: {self.loan_status}")
print()

def insert_new_loan(self):
    try:
        self.open()
        self.c.execute(f"INSERT INTO Loan (customer_id, principal_amount, interest_rate, loan_term, loan_type, loan_status) VALUES (%s, %s, %s, %s, %s, %s)", (self.customer_id, self.principal_amount, self.interest_rate, self.loan_term, self.loan_type, self.loan_status))
        self.mydb.commit()
        self.loan_id = self.c.lastrowid
        print(f"\nLoan record added to the database with ID: {self.loan_id}\n")
    except Exception as e:
        print(e)
    finally:
        self.close()
```

File Edit View Navigate Code Refactor Run Tools VCS Window Help Loan_management - myException.py

Loan_management > Exception > myException.py

Project

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 DBConnUtil.py
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> venv library root
 loan_management_system
 main.py
> External Libraries
> Scratches and Consoles

Structure

Favorites

myException.py

```
1 class CustomerNotFoundException(Exception):  
2     def __init__(self, message="CustomerNotFoundException"):  
3         self.message = message  
4         super().__init__(self.message)  
5  
6 class LoanNotFoundException(Exception):  
7     def __init__(self, message="LoanNotFoundException"):  
8         self.message = message  
9         super().__init__(self.message)
```

LoanNotFoundException > __init__()

Run: main

Run TODO Problems Terminal Python Packages Python Console

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9:39 CRLF UTF-8 4 spaces Python 3.9 (Loan_management)

Event Log

File Edit View Navigate Code Refactor Run Tools VCS Window Help Loan_management - DBConnUtil.py

Loan_management > UTIL > DBConnUtil.py

Project

DBConnUtil.py

Loan.py ServiceProvider.py myException.py CarLoan.py HomeLoan.py DBPropertyUtil.py DBConnUtil.py loan_management_system

loan_management

DAO

ServiceProvider.py

Entity

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Exception

myException.py

UTIL

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Structure

Favorites

```
from UTIL.DBPropertyUtil import PropertyUtil
import mysql.connector as connection

class DBConnection():
    def __init__(self):
        pass

    def open(self):
        try:
            l = PropertyUtil.getPropertyString()
            self.mydb = connection.connect(host=l[0], database=l[3], username=l[1], password=l[2])
            self.c = self.mydb.cursor(buffered=True)
        except Exception as e:
            print(e)

    def close(self):
        self.c.close()
```

DBConnection > close()

Run: main

Run TODO Problems Terminal Python Packages Python Console

PEP 8: W292 no newline at end of file

19:23 CRLF UTF-8 4 spaces Python 3.9 (Loan_management)

Event Log

an_mangment › UTIL › DBPropertyUtil.py

 main

Run TODO Problems Terminal Python Packages Python Consol

6:22 CRLF UTF-8 4 spaces Python 3.9 (Loan management) 2

File Edit View Navigate Code Refactor Run Tools VCS Window Help Loan management - loan_management_system.sql

Loan management > loan_management_system.sql

P ServiceProvider.py myException.py CarLoan.py HomeLoan.py DBPropertyUtil.py DBConnUtil.py loan_management_system.sql

*.sql files are supported by IntelliJ IDEA Ultimate Try IntelliJ IDEA Ultimate Do not suggest Ultimate Ignore extension

Project

Loan management C:\Users\SAI~1\OneDrive\Desktop\loan management\loan management System

- DAO
- Entity
- Exception
- UTIL

venv library root

loan management_system

main.py

External Libraries

Scratches and Consoles

Structure

Favorites

```
1 create database loan_management_system;
2
3 use loan_management_system;
4
5 CREATE TABLE Customer (
6     customer_id INT PRIMARY KEY AUTO_INCREMENT,
7     name VARCHAR(50),
8     email_address VARCHAR(60),
9     phone_number VARCHAR(15),
10    address VARCHAR(150),
11    credit_score INT
12);
13 ALTER TABLE Customer AUTO_INCREMENT=1;
14
15 CREATE TABLE Loan (
16     loan_id INT PRIMARY KEY AUTO_INCREMENT,
17     customer_id INT,
18     FOREIGN KEY (customer_id) REFERENCES Customer(customer_id) on DELETE CASCADE,
19     principal_amount Decimal(10, 2),
20     interest_rate INT,
21     loan_term INT,
22     loan_type VARCHAR(20),
23     loan_status VARCHAR(20)
24);
```

Run: main

Run TODO Problems Terminal Python Packages Python Console

Packages installed successfully: Installed packages: 'mysql-connector-python' (28 minutes ago)

53:47 LF UTF-8 4 spaces Python 3.9 (Loan management)

Event Log

File Edit View Navigate Code Refactor Run Tools VCS Window Help Loan management - loan_management_system.sql

Loan management > loan_management_system.sql

P ServiceProvider.py myException.py CarLoan.py HomeLoan.py DBPropertyUtil.py DBConnUtil.py loan_management_system.sql

Project

Loan management C:\Users*.sql files are supported by IntelliJ IDEA Ultimate Try IntelliJ IDEA Ultimate Do not suggest Ultimate Ignore extension

DAO ServiceProvider.py

Entity CarLoan.py Customer.py HomeLoan.py Loan.py

Exception myException.py

UTIL DBConnUtil.py DBPropertyUtil.py

venv library root

loan_management_system main.py

External Libraries

Scratches and Consoles

ALTER TABLE Loan AUTO_INCREMENT=101;

INSERT INTO Customer (name, email_address, phone_number, address, credit_score) VALUES ('Amit Kumar', 'amit.kumar@example.com', '9988776655', '123 Main St, City', 750), ('Neha Sharma', 'neha.sharma@example.com', '8877665544', '456 Elm St, Town', 800), ('Raj Singh', 'raj.singh@example.com', '7766554433', '789 Oak St, Village', 780), ('Anita Gupta', 'anita.gupta@example.com', '6655443322', '101 Pine St, Suburb', 760), ('Kiran Kapoor', 'kiran.kapoor@example.com', '5544332211', '234 Cedar St, District', 750), ('Rahul Mehra', 'rahul.mehra@example.com', '4433221100', '567 Birch St, County', 760), ('Priya Bansal', 'priya.bansal@example.com', '3322110099', '890 Maple St, State', 800), ('Vikas Reddy', 'vikas.reddy@example.com', '2211009988', '321 Redwood St, Country', 750), ('Meera Kapoor', 'meera.kapoor@example.com', '1100998877', '432 Spruce St, Province', 760), ('Arjun Singh', 'arjun.singh@example.com', '0099887766', '765 Fir St, Territory', 750);

INSERT INTO Loan (customer_id, principal_amount, interest_rate, loan_term, loan_type, loan_status) VALUES (7, 500000, 8, 36, 'CarLoan', 'Approved'), (2, 1000000, 7, 60, 'HomeLoan', 'Pending'), (6, 300000, 9, 24, 'CarLoan', 'Approved'), (4, 800000, 6, 48, 'HomeLoan', 'Approved'), (5, 700000, 8, 36, 'CarLoan', 'Approved'), (1, 1200000, 7, 60, 'HomeLoan', 'Pending'), (2, 400000, 9, 24, 'CarLoan', 'Approved'),

Run: main

Run TODO Problems Terminal Python Packages Python Console

Packages installed successfully: Installed packages: 'mysql-connector-python' (28 minutes ago)

53:47 LF UTF-8 4 spaces Python 3.9 (Loan_management)

Event Log

File Edit View Navigate Code Refactor Run Tools VCS Window Help Loan management - loan_management_system.sql

Loan management > loan_management_system.sql

P... ServiceProvider.py myException.py CarLoan.py HomeLoan.py DBPropertyUtil.py DBConnUtil.py loan_management_system.sql

*.sql files are supported by IntelliJ IDEA Ultimate Try IntelliJ IDEA Ultimate Do not suggest Ultimate Ignore extension

Project

DAO ServiceProvider.py Entity CarLoan.py Customer.py HomeLoan.py Loan.py Exception myException.py UTIL DBConnUtil.py DBPropertyUtil.py venv library root loan_management_system main.py External Libraries Scratches and Consoles

loan_management_system.sql

```
35 ('Vikas Reddy', 'vikas.reddy@example.com', '2211009988', '321 Redwood St, Country', 750),
36 ('Meera Kapoor', 'meera.kapoor@example.com', '1100998877', '432 Spruce St, Province', 760),
37 ('Arjun Singh', 'arjun.singh@example.com', '0099887766', '765 Fir St, Territory', 750);
38
39
40
41 INSERT INTO Loan (customer_id, principal_amount, interest_rate, loan_term, loan_type, loan_status) VALUES
42     (7, 500000, 8, 36, 'CarLoan', 'Approved'),
43     (2, 1000000, 7, 60, 'HomeLoan', 'Pending'),
44     (6, 300000, 9, 24, 'CarLoan', 'Approved'),
45     (4, 800000, 6, 48, 'HomeLoan', 'Approved'),
46     (5, 700000, 8, 36, 'CarLoan', 'Approved'),
47     (1, 1200000, 7, 60, 'HomeLoan', 'Pending'),
48     (2, 400000, 9, 24, 'CarLoan', 'Approved'),
49     (8, 900000, 6, 48, 'HomeLoan', 'Pending'),
50     (9, 600000, 8, 36, 'CarLoan', 'Pending'),
51     (10, 1100000, 7, 60, 'HomeLoan', 'Pending'),
52     (3, 350000, 9, 24, 'CarLoan', 'Approved'),
53     (4, 750000, 6, 48, 'CarLoan', 'Approved');
```

Run: main

Run TODO Problems Terminal Python Packages Python Console

Packages installed successfully: Installed packages: 'mysql-connector-python' (28 minutes ago)

53:47 LF UTF-8 4 spaces Python 3.9 (Loan_management)

Event Log

File Edit View Navigate Code Refactor Run Tools VCS Window Help Loan_management - main.py

Loan_management > main.py

Project

main.py

Loan.py ServiceProvider.py myException.py CarLoan.py HomeLoan.py DBPropertyUtil.py DBConnUtil.py loan_n

1 1 1 1 5 1

1 import mysql.connector as connection
2
3 from Entity.Loan import Loan
4 from Entity.Customer import Customer
5 from DAO.ServiceProvider import LoanRepository
6 class MainModule():
7 def main():
8 lp = LoanRepository()
9 while True:
10 print("\n-----Main Menu-----")
11 print("Press-1 to Apply for a Loan")
12 print("Press-2 to Check Loan Status")
13 print("Press-3 to Calculate Interest")
14 print("Press-4 to Calculate EMI")
15 print("Press-5 to Loan Repayment")
16 print("Press-6 to Exit")
17 ch = int(input())
18 if ch == 1:
19 c = int(input('\nEnter Your Customer ID :'))
20 cust = lp.getCustomerByID(c)
21 if not cust:
22 n = input('Enter Your Name : ')
23 eml = input('Enter Your Email Address : ')
24 pno = input("Enter Your Phone Number : ")
25 add = input('Enter Your Address : ')

Run: main

Run TODO Problems Terminal Python Packages Python Console

1 Event Log

Unused import statement 'import mysql.connector as connection'

File Edit View Navigate Code Refactor Run Tools VCS Window Help Loan_management - main.py

Loan_management > main.py

Project

main.py

Loan.py ServiceProvider.py myException.py CarLoan.py HomeLoan.py DBPropertyUtil.py DBConnUtil.py loan_n

1 A 1 A 5 ✓ 1 ^

Loan_management C:\Users\s... 22 n = input('Enter Your Name : ')
23 eml = input('Enter Your Email Address : ')
24 pno = input("Enter Your Phone Number : ")
25 add = input('Enter Your Address : ')
26 cscore = int(input('Enter Your Credit Score : '))
27 c = Customer(name=n, email_address=eml, phone_number=pno, address=add, credit_score=cscore).insert_new_c
28 pa = int(input('Enter the Principal Amount : '))
29 ltm = int(input('Enter the Loan Term in Months : '))
30 lty = input('Enter the Loan Type (CarLoan/HomeLoan) : ')
31 loan = Loan(customer_id=c, principal_amount=pa, loan_term=ltm, loan_type=lty)
32 lp.applyLoan(loan)
33 elif ch == 2:
34 lid = int(input('\nEnter Your Loan ID : '))
35 lp.loanStatus(lid)
36 elif ch == 3:
37 lid = int(input('\nEnter Your Loan ID : '))
38 print(f"Total Interest of this Loan Amounts to : {lp.calculateInterest(lid)}")
39 elif ch == 4:
40 lid = int(input('\nEnter Your Loan ID : '))
41 print(f"The EMI amounts to : {lp.calculateEMI(lid)}")
42 elif ch == 5:
43 lid = int(input('\nEnter Your Loan ID : '))
44 am = int(input('Enter Your Total Amount : '))
45 lp.loanRepayment(lid, am)

venv library root
loan_management_system
main.py

External Libraries
Scratches and Consoles

Structure

Favorites

Run: main

Run TODO Problems Terminal Python Packages Python Console

1 Event Log

Unused import statement 'import mysql.connector as connection'

1:1 CRLF UTF-8 4 spaces Python 3.9 (Loan_management)

File Edit View Navigate Code Refactor Run Tools VCS Window Help Loan_management - main.py

Loan_management > main.py

Project

main.py

Loan.py ServiceProvider.py myException.py CarLoan.py HomeLoan.py DBPropertyUtil.py DBConnUtil.py loan_n

1 A 1 A 5 X 1 ^

elif ch == 3:
 lid = int(input('\nEnter Your Loan ID : '))
 print(f"Total Interest of this Loan Amounts to : {lp.calculateInterest(lid)}")
elif ch == 4:
 lid = int(input('\nEnter Your Loan ID : '))
 print(f"The EMI amounts to : {lp.calculateEMI(lid)}")
elif ch == 5:
 lid = int(input('\nEnter Your Loan ID : '))
 am = int(input('Enter Your Total Amount : '))
 lp.loanRepayment(lid, am)
elif ch == 6:
 print("\n-----Thank You-----\n")
 break
else:
 print('\nInvalid Choice!!\nPlease Try Again...\n')

if __name__ == "__main__":
 MainModule.main()

Run: main

Run TODO Problems Terminal Python Packages Python Console

1 Event Log

Unused import statement 'import mysql.connector as connection'

1:1 CRLF UTF-8 4 spaces Python 3.9 (Loan_management)

File Edit View Navigate Code Refactor Run Tools VCS Window Help Loan_management - main.py

Loan_management > main.py

Run: main

```
C:\Users\siddh\PycharmProjects\Loan_management\venv\Scripts\python.exe C:/Users/siddh/PycharmProjects/Loan_management/main.py

-----Main Menu-----
Press-1 to Apply for a Loan
Press-2 to Check Loan Status
Press-3 to Calculate Interest
Press-4 to Calculate EMI
Press-5 to Loan Repayment
Press-6 to Exit
1

Enter Your Customer ID :12
Enter Your Name : Ram
Enter Your Email Address : ram@email
Enter Your Phone Number : 1234567890
Enter Your Address : Mumbai, Maharashtra
Enter Your Credit Score : 770

Customer 'Ram' added to the database with ID: 11

Enter the Principal Amount : 1200
Enter the Loan Term in Months : 15
Enter the Loan Type (CarLoan/HomeLoan) : CarLoan

Loan Details are :
```

Run TODO Problems Terminal Python Packages Python Console

1 Event Log

Unused import statement 'import mysql.connector as connection'

73:1 CRLF UTF-8 4 spaces Python 3.9 (Loan_management)

File Edit View Navigate Code Refactor Run Tools VCS Window Help Loan management - main.py

Loan management > main.py

Run: main

Loan Details are :

The Current details of your Carloan with Loan ID: None are -
Customer ID: 11
Principal Amount: 1200.0
Interest Rate: 12
Loan Term: 15 months
Loan Type: Carloan
Loan Status: Pending

Do you want to continue with the Loan Application?(Y/N) : y

Loan record added to the database with ID: 113

You have applied for the Loan Successfully!
Your Loan Application is 'Pending' from our side.
It will be 'Approved' as soon as we Verify your Details.
Thank You...

-----Main Menu-----
Press-1 to Apply for a Loan
Press-2 to Check Loan Status
Press-3 to Calculate Interest

Run TODO Problems Terminal Python Packages Python Console

1 Event Log

Unused import statement 'import mysql.connector as connection'

45:1 CRLF UTF-8 4 spaces Python 3.9 (Loan_management)

File Edit View Navigate Code Refactor Run Tools VCS Window Help Loan management - main.py

Loan management > main.py

Run: main

Press-1 to Apply for a Loan
Press-2 to Check Loan Status
Press-3 to Calculate Interest
Press-4 to Calculate EMI
Press-5 to Loan Repayment
Press-6 to Exit

2

Enter Your Loan ID : 11

InvalidLoanException: No such Loan Record found in the database
'NoneType' object has no attribute 'display_loan_details'

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

Press-1 to Apply for a Loan
Press-2 to Check Loan Status
Press-3 to Calculate Interest
Press-4 to Calculate EMI
Press-5 to Loan Repayment
Press-6 to Exit

6

-----Thank You-----

Process finished with exit code 0

Run TODO Problems Terminal Python Packages Python Console

Unused import statement 'import mysql.connector as connection'

73:1 CRLF UTF-8 4 spaces Python 3.9 (Loan_management)

MySQL Workbench

File Edit View Query Database Server Tools Scripting Help

Schemas

Filter objects

- careerhubdb
- carrentaldb
- cm
- cms
- college
- hmbank
- onlinestore
- petpalsdb
- sakila
- sisdb
- sys
- tbs

Administration Schemas

Information

No object selected

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: | Result Grid | Form Editor |

customer 2 ×

Output

Action Output

Query Completed

Local instance MySQL80 (lo... Local instance MySQL80 Local instance MySQL80

hex 3(2) HEX 2 cc1 cc2 sql 1 CC3 HEX 4 Hex 5 CC4 cc5 CC6 loan_managemnet_system*

44 (6, 300000, 9, 24, 'CarLoan', 'Approved'),
45 (4, 800000, 6, 48, 'HomeLoan', 'Approved'),
46 (5, 700000, 8, 36, 'CarLoan', 'Approved'),
47 (1, 1200000, 7, 60, 'HomeLoan', 'Pending'),
48 (2, 400000, 9, 24, 'CarLoan', 'Approved'),
49 (8, 900000, 6, 48, 'HomeLoan', 'Pending'),
50 (9, 600000, 8, 36, 'CarLoan', 'Pending'),
51 (10, 1100000, 7, 60, 'HomeLoan', 'Pending'),
52 (3, 350000, 9, 24, 'CarLoan', 'Approved'),
53 (4, 750000, 6, 48, 'CarLoan', 'Approved');
54
55 • select * from customer;

customer_id	name	email_address	phone_number	address	credit_score
5	Kiran Kapoor	kiran.kapoor@example.com	5544332211	234 Cedar St, District	750
6	Rahul Mehra	rahul.mehra@example.com	4433221100	567 Birch St, County	760
7	Priya Bansal	priya.bansal@example.com	3322110099	890 Maple St, State	800
8	Vikas Reddy	vikas.reddy@example.com	2211009988	321 Redwood St, Country	750
9	Meera Kapoor	meera.kapoor@example.com	1100998877	432 Spruce St, Province	760
10	Arjun Singh	arjun.singh@example.com	0099887766	765 Fir St, Territory	750
11	Ram	ram@email	1234567890	Mumbai, Maharashtra	770
*	HULL	HULL	HULL	HULL	770