OBJECTIVE

The objective of this project is to design and implement a bank management system using Python and MySQL connectivity. The bank management system is a software application that allows the bank staff to perform various operations such as creating new accounts, depositing and withdrawing money, transferring funds, checking balance, generating statements, and more. The system also provides security features such as authentication, encryption, and logging. The system uses MySQL database to store and retrieve the data of the customers and transactions. The system uses Python as the programming language to create the user interface and the business logic of the application. The system aims to demonstrate the use of Python and MySQL connectivity in developing a real-world software solution.

SOURCE CODE

```
import mysql.connector as x

db=x.connect(host="localhost",user="root", passwd="admin")

c=db.cursor()

c.execute("create database if not exists bank01")

c.execute("use bank01")

c.execute("create table if not exists BANKMASTER001(Acno int primary key,Name varchar(30),City varchar(20),Mobileno varchar(100) ,Balance int)")

c.execute("create table if not exists BANKTRANS003(Acno int ,amount int,Dot date,Ttype varchar(20),foreign key (Acno) references BANKMASTER001(Acno))")

c.execute("create table if not exists EMPLOYEE001(EmployeeID varchar(20) primary key, EmployeeName varchar(30), Age varchar(20), EmployeeSalary varchar(20))")

c.execute("create table if not exists EMPLOYEEATTENDANCE001(EmployeeID int primary key , Name varchar(30), Date date, Status varchar(6))")

db.commit()

# MENU FUNCTION

def menu():

  c=input("DO YOU WANT TO OPEN (Y/N) ")

  while (c=="Y" or "y"):

      print("1=CREATE ACCOUNT")

      print("2=DEPOSIT MONEY")

      print("3=WITHDRAW MONEY")
```

```
        print("4=DISPLAY ACCOUNT")
        print("5=EMPLOYEE ATTENDANCE")
        print("6=ADD NEW EMPLOYEE")
        print("7=EXIT")
        choice=int(input("ENTER YOUR  CHOICE:  "))
        if choice ==1:
          CREATE_ACCOUNT ()
        elif choice ==2:
           DEPOSIT_MONEY ()
        elif choice ==3:
           WITHDRAW ()
        elif choice ==4:
           DISPLAY _ACCOUNT_DETAILS ()
        elif choice ==5:
           EMPLOYEE_ATTENDENCE ()
        elif choice ==6:
           ADD_NEW_EMPLOYEE ()
        elif choice ==7:
            print(“EXIT FROM BANK01”)
            break
  else:
print("WRONG INPUT")
```

```
# CREATE AN ACCOUNT

def CREATE_ACCOUNT ():

    n=int(input(" ENTER HOW MANY ACCOUNTS SHOULD BE ADDED:  "))

    i=0

    while i<n:

      print("ALL INFORMATION PROMPTED ARE MANDATORY TO BE FILLED")

      Acno=str(input("ENTER  YOUR ACCOUNT NUMBER: "))

      Name=input("ENTER AC NAME: ")

      City=str(input("ENTER  YOUR CITY NAME: "))

      Mn=int(input("ENTER YOUR MOBILE NUMBER: "))

      Balance=0

c.execute("insert into BANKMASTER001
values('"+str(Acno)+"','"+Name+"','"+City+"','"+str(Mn)+"','"+str(Balance)+"')")

      i=i+1

    db.commit()

    db.close()

    print("ACCOUNT IS SUCCESSFULLY CREATED!!!")


# DEPOSIT MONEY

def DEPOSIT_MONEY ():

    n=int(input(" ENTER HOW MANY DEPOSIT REQUESTS: "))

    i=0
```

```
    while i<n:
      Acno=str(input("ENTER ACCOUNT NUMBER: "))
      Dp=(input("ENTER AMOUNT TO BE DEPOSITED: "))
      Dot=str(input("ENTER DATE OF TRANSACTION: YYYY-MM-DD  "))
      Ttype="deposit"
c.execute("insert into BANKTRANS003 values('"+Acno+"','"+Dp+"','"+Dot+"','"+Ttype+"')")
c.execute("update BANKMASTER001 set Balance=Balance+ '"+Dp+"' where Acno='"+Acno+"'")
      i=i+1
    db.commit()
    db.close()
    print("MONEY HAS BEEN DEPOSITED SUCCESSULLY!!!")

# WITHDRAW MONEY
def WITHDRAW ():
    n=int(input(" ENTER HOW MANY WITHDRAW REQUESTS: "))
    i=0
    while i<n:
      Acno=str(input("ENTER ACCOUNT NUMBER: "))
      Wd=(input("ENTER AMOUNT TO BE WITHDRAWN:"))
      Dot=str(input("ENTER DATE OF TRANSACTION: YYYY-MM-DD "))
      Ttype="withdraw"
```

```
        c.execute("insert into BANKTRANS003 values('"+Acno+"','"+Wd+"','"+Dot+"','"+Ttype+"')")

        c.execute("update BANKMASTER001 set balance=balance- '"+Wd+"' where Acno='"+Acno+"'")

        i=i+1

    db.commit()

    db.close()

    print("MONEY WITHDRAWAL SUCCESSFULL!!!")


# DISPLAY ACCOUNT DETAILS

def DISPLAY _ACCOUNT_DETAILS ():

    Acno=str(input("ENTER ACCOUNT NUMBER:"))

    c.execute("select * from BANKMASTER001 where Acno='"+Acno+"'")

    result=c.fetchall()

    for x in result:

      print(x)


#   EMPLOYEE ATTENDENCE REGISTER

def EMPLOYEE_ATTENDENCE ():

    print("WELCOME TO EMPLOYEE ATTENDENCE WINDOW")

    n=int(input(" ENTER HOW MANY PERSONS SHOULD BE ADDED: "))

    i=0

    while i<n:
```

```
        EmployeeID=str(input("ENTER EMPLOYEEID: "))
        Name=input("ENTER NAME: ")
        Date=str(input("ENTER DATE: "))
        Status=str(input("ENTER STATUS A\P: "))
        c.execute("insert into EMPLOYEEATTENDANCE001 values('"+EmployeeID+"','"+Name+"','"+Date+"','"+Status+"')")
        i=i+1
    db.commit()
# ADD NEW EMPLOYEE
def ADD_NEW_EMPLOYEE ():
    print("WELCOME TO EMPLOYEE DETAILS WINDOW")
    n=int(input(" ENTER HOW MANY PERSONS SHOULD BE ADDED:  "))
    i=0
    while i<n:
        EmpID=str(input("ENTER EMPLOYEEID:  "))
        Name=input("ENTER NAME:  ")
        Age=str(input("ENTER AGE:  "))
        salary=str(input("ENTER SALARY: "))
c.execute("insert into EMPLOYEE001 values('"+str(EmpID)+"','"+Name+"','"+str(Age)+"','"+str(salary)+"')")
        i=i+1
    db.commit()
menu()
```

OUTPUT

DO YOU WANT TO OPEN (Y/N) y

1=CREATE ACCOUNT

2=DEPOSIT MONEY

3=WITHDRAW MONEY

4=DISPLAY ACCOUNT

5=EMPLOYEE ATTENDANCE

6=ADD NEW EMPLOYEE

7=EXIT

ENTER YOUR CHOICE: 1

ENTER HOW MANY PERSONS SHOULD BE ADDED: 4

ALL INFORMATION PROMPTED ARE MANDATORY TO BE FILLED

ENTER YOUR ACCOUNT NUMBER:102000

ENTER AC NAME: NAVEED

ENTER YOUR CITY NAME: CALICUT

ENTER YOUR MOBILE NUMBER: 9085653241

ALL INFORMATION PROMPTED ARE MANDATORY TO BE FILLED

ENTER YOUR ACCOUNT NUMBER:102021

ENTER AC NAME: UMER

ENTER YOUR CITY NAME: KOCHI

ENTER YOUR MOBILE NUMBER: 9865741236

ALL INFORMATION PROMPTED ARE MANDATORY TO BE FILLED

ENTER YOUR ACCOUNT NUMBER: 102022

ENTER AC NAME: JENNY

ENTER YOUR CITY NAME: MALAPPURAM

ENTER YOUR MOBILE NUMBER: 9587126347

ALL INFORMATION PROMPTED ARE MANDATORY TO BE FILLED

ENTER YOUR ACCOUNT NUMBER:102023

ENTER AC NAME: SHAHANA

ENTER YOUR CITY NAME: KOTTAKAL

ENTE RYOUR MOBILE NUMBER: 9854631485

ACCOUNT IS SUCCESSFULLY CREATED!!!

DO YOU WANT TO OPEN (Y/N) Y

1=CREATE ACCOUNT

2=DEPOSIT MONEY

3=WITHDRAW MONEY

4=DISPLAY ACCOUNT

5=EMPLOYEE ATTENDANCE

6=ADD NEW EMPLOYEE

7=EXIT

ENTER YOUR CHOICE: 2

ENTER HOW MANY DEPOSIT REQUESTS: 3

ENTER ACCOUNT NUMBER: 102021

ENTER AMOUNT TO BE DEPOSITED: 50000

ENTER DATE OF TRANSACTION: YYYY-MM-DD 2022-10-11

ENTER ACCOUNT NUMBER: 102021

ENTER AMOUNT TO BE DEPOSITED: 65000

ENTER DATE OF TRANSACTION: YYYY-MM-DD 2022-11-25

ENTER ACCOUNT NUMBER: 102022

ENTER AMOUNT TO BE DEPOSITED: 85000

ENTER DATE OF TRANSACTION: YYYY-MM-DD 2022-12-24

MONEY HAS BEEN DEPOSITED SUCCESSFULLY!!!

DO YOU WANT TO OPEN (Y/N) Y

1=CREATE ACCOUNT

2=DEPOSIT MONEY

3=WITHDRAW MONEY

4=DISPLAY ACCOUNT

5=EMPLOYEE ATTENDANCE

6=ADD NEW EMPLOYEE

7=EXIT

ENTER YOUR CHOICE: 3

ENTER HOW MANY WITHDRAW REQUESTS: 2

ENTER ACCOUNT NUMBER: 102021

ENTER AMOUNT TO BE WITHDRAWN: 5400

ENTER DATE OF TRANSACTION: YYYY-MM-DD 2023-10-11

ENTER ACCOUNT NUMBER: 102022

ENTER AMOUNT TO BE WITHDRAWN: 6500

ENTER DATE OF TRANSACTION: YYYY-MM-DD 2023-11-14

MONEY WITHDRAWAL SUCCESSFUL!!!

1=CREATE ACCOUNT

2=DEPOSIT MONEY

3=WITHDRAW MONEY

4=DISPLAY ACCOUNT

5=EMPLOYEE ATTENDANCE

6=ADD NEW EMPLOYEE

7=EXIT

ENTER YOUR CHOICE: 4

ENTER ACCOUNT NUMBER: 102022

(102022, 'JENNY', 'MALAPPURAM', '9587126347', 93026)

1=CREATE ACCOUNT

2=DEPOSIT MONEY

3=WITHDRAW MONEY

4=DISPLAY ACCOUNT

5=EMPLOYEE ATTENDANCE

6=ADD NEW EMPLOYEE

7=EXIT

ENTER YOUR CHOICE: 6

WELCOME TO EMPLOYEE DETAILS WINDOW

ENTER HOW MANY PERSONS SHOULD BE ADDED: 4

ENTER EMPLOYEEID: 102030

ENTER NAME: ASHI

ENTER AGE: 18

ENTER SALARY: 52000

ENTER EMPLOYEEID: 102031

ENTER NAME: SHAN

ENTER AGE: 20

ENTER SALARY: 65000

ENTER EMPLOYEEID: 102032

ENTER NAME: KELWIN

ENTER AGE: 24

ENTER SALARY: 25600

ENTER EMPLOYEEID: 102033

ENTER NAME: RAJU

ENTER AGE: 28

ENTER SALARY: 54000

1=CREATE ACCOUNT

2=DEPOSIT MONEY

3=WITHDRAW MONEY

4=DISPLAY ACCOUNT

5=EMPLOYEE ATTENDANCE

6=ADD NEW EMPLOYEE

7=EXIT

ENTER YOUR CHOICE: 5

WELCOME TO EMPLOYEE ATTENDENCE WINDOW

ENTER HOW MANY PERSONS SHOULD BE ADDED: 3

ENTER EMPLOYEEID: 102031

ENTER NAME: SHAN

ENTER DATE: 2023-11-11

ENTER STATUS A\P: A

ENTER EMPLOYEEID: 102032

ENTER NAME: KELWIN

ENTER DATE: 2023-11-12

ENTER STATUS A\P: P

ENTER EMPLOYEEID: 102033

ENTER NAME: RAJU

ENTER DATE: 2023-11-13

ENTER STATUS A\P: A

1=CREATE ACCOUNT

2=DEPOSIT MONEY

3=WITHDRAW MONEY

4=DISPLAY ACCOUNT

5=EMPLOYEE ATTENDANCE

6=ADD NEW EMPLOYEE

7=EXIT

ENTER YOUR CHOICE: 7

EXIT FROM BANK01

SQL TABLES

```
mysql> SELECT * FROM BANKMASTER001;
+--------+---------+-----------+------------+---------+
| Acno   | Name    | City      | Mobileno   | Balance |
+--------+---------+-----------+------------+---------+
| 102000 | NAVEED  | CALICUT   | 9085653241 |       0 |
| 102021 | UMER    | KOCHI     | 9865741236 |       0 |
| 102022 | JENNY   | MALAPPURAM| 9587126347 |       0 |
| 102023 | SHAHANA | KOTTAKAL  | 9854631485 |       0 |
+--------+---------+-----------+------------+---------+
```

```
mysql> SELECT * FROM employeeattendance001;
+------------+--------+------------+--------+
| EmployeeID | Name   | Date       | Status |
+------------+--------+------------+--------+
|     102030 | ASHI   | 2023-11-10 | P      |
|     102031 | SHAN   | 2023-11-11 | A      |
|     102032 | KELWIN | 2023-11-12 | P      |
|     102033 | RAJU   | 2023-11-13 | A      |
+------------+--------+------------+--------+
```

```
mysql> SELECT * FROM EMPLOYEE001;
+------------+--------------+------+----------------+
| EmployeeID | EmployeeName | Age  | EmployeeSalary |
+------------+--------------+------+----------------+
| 102030     | ASHI         | 18   | 52000          |
| 102031     | SHAN         | 20   | 65000          |
| 102032     | KELWIN       | 24   | 25600          |
| 102033     | RAJU         | 28   | 54000          |
+------------+--------------+------+----------------+
```

```
mysql> SELECT * FROM banktrans002;
+--------+--------+------------+---------+
| Acno   | amount | Dot        | Ttype   |
+--------+--------+------------+---------+
| 102000 |  87456 | 2023-11-10 | deposit |
| 102021 |  98562 | 2023-11-12 | deposit |
| 102022 |  14526 | 2023-11-25 | deposit |
| 102023 |  54876 | 2023-11-28 | deposit |
+--------+--------+------------+---------+
```

BIBLIOGRAPHY

The information for this project was collected from reputable sources, including websites such as

1. https://github.com/MarvelousAnkit/Banking-Management-System-using-My-SQL---PYTHON
2. https://cbsepython.in/bank-management-python-project/
3. https://inprogrammer.com/bank-management-project-with-python/

ensuring the reliability and accuracy of the data presented.