Faculty of Computer Applications & Information Technology

Integrated MSc (IT)

Software Experimentation Project

A Project Report on: -

CPYTHON USING CRUD OPERATIONS

Second Year

Submitted By:
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2) MANDALI HARSHIL-A28
3) SUTHAR SAGAR-B58

Project Guide:
Dr.DISHA SHAH

Faculty of Computer Applications & Information Technology

Integrated MSc (IT) PROGRAMME
GLS Campus, Ellis bridge,
Ahmedabad.

CERTIFICATE

This is to certify that
1) SHAH PRIT (A-58)
2) MANDLI HARSHIL (A-28)
3) SUTHAR SAGAR (B-58)

Students of Second Year iMSc(IT), FCAIT have successfully completed the Software Experimentation Project on

"CPYTHON USING CRUD OPERATIONS".

Date of Submission:20/02/2021

Prof. (Dr.Disha shah)	**Prof. Tripti Dodiya**
(Internal Guide)	**(i/c Director)**

Acknowledgement

I would like to express my special thanks of gratitude to Our project Guide Dr. Disha Shah For Guiding us throughout the course of the project

Also, we would like to thank Prof. Tripti Dodiya for providing our group this opportunity for completing this project

Index

Project Introduction

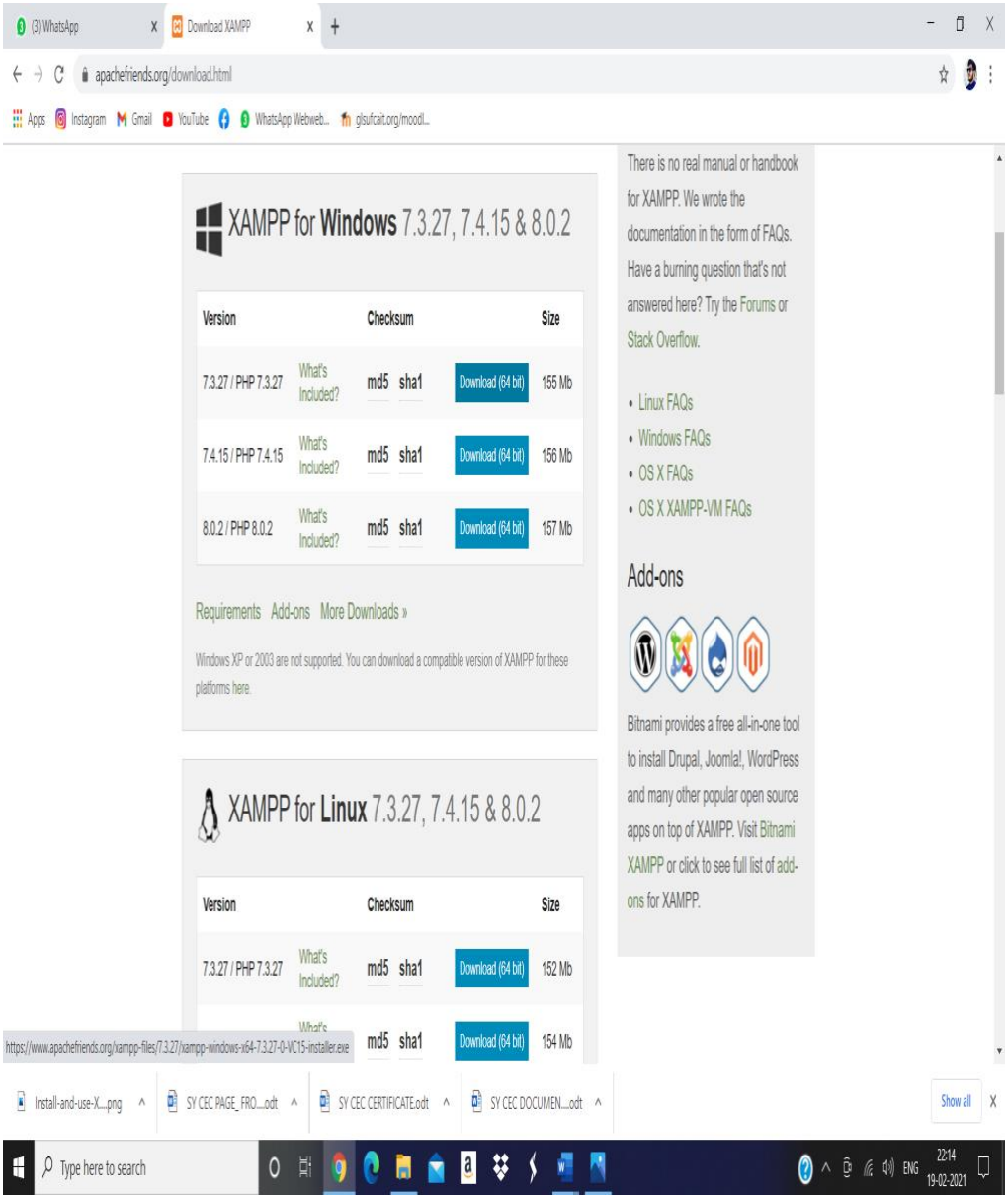
Install CPython and write a program to perform the following operation and display the output. Create the database in SQLite.

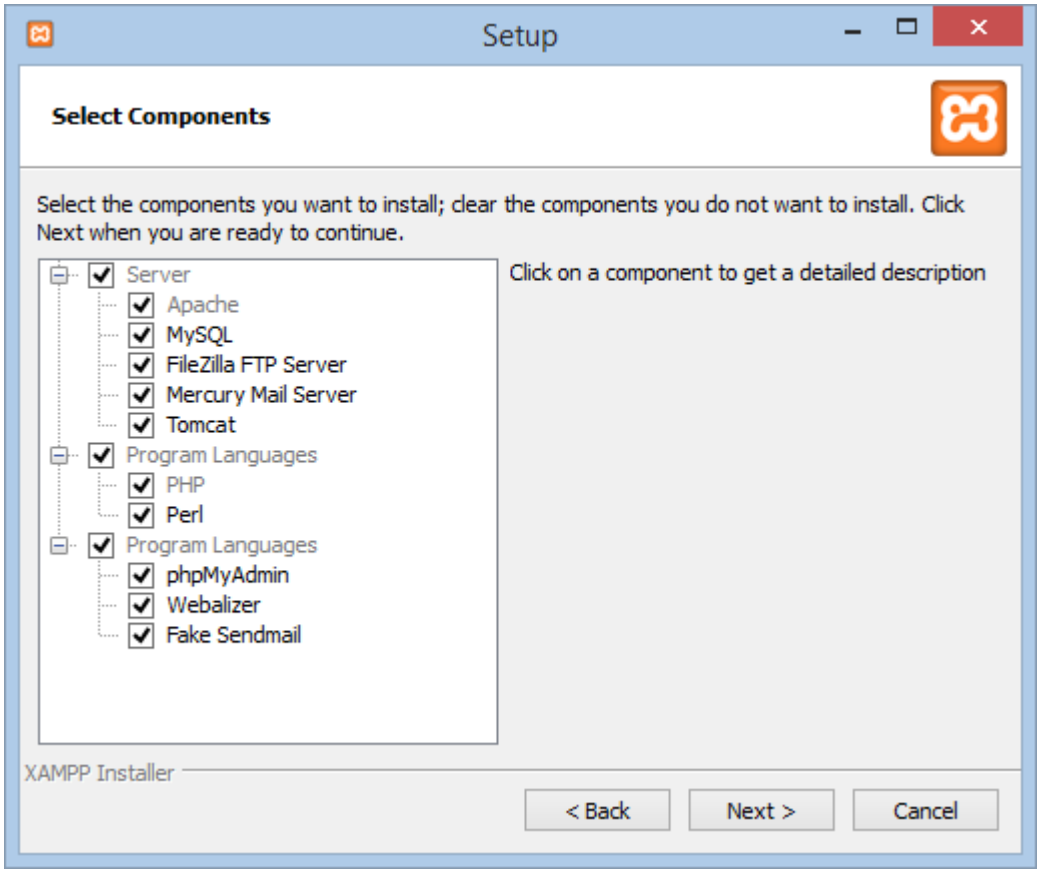
1. Create a database named GLS University.
2. Create tables named courses and departments.
3. Each department can have multiple courses.
4. Insert details and display the details.

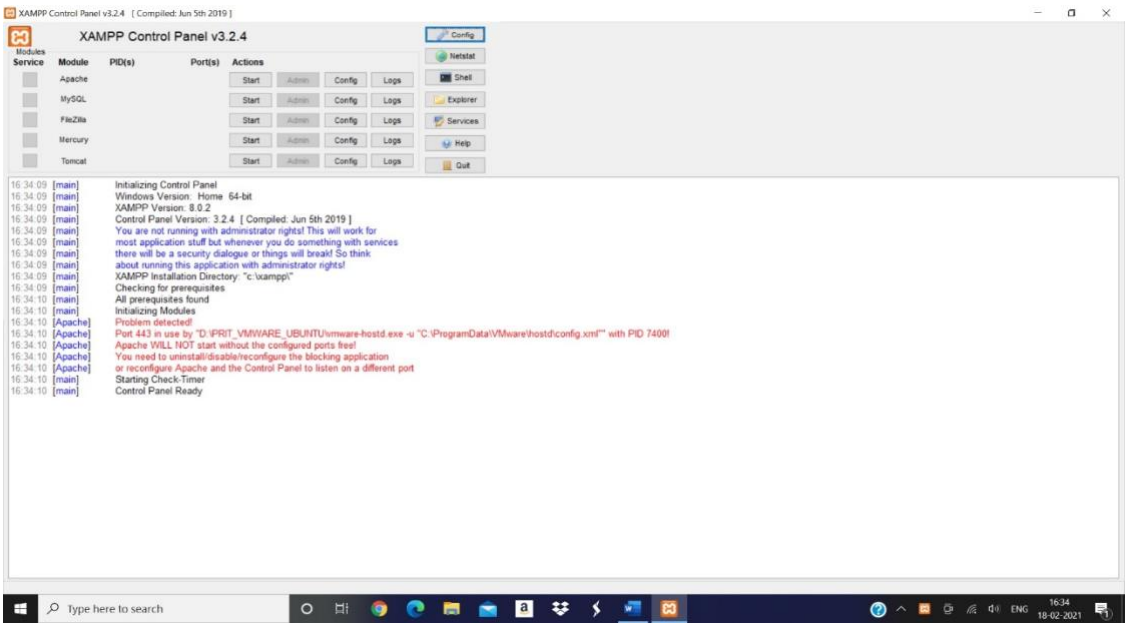
Software Details

1. **XAMPP**
2. **CPYTHON**
3. **MYSQL**

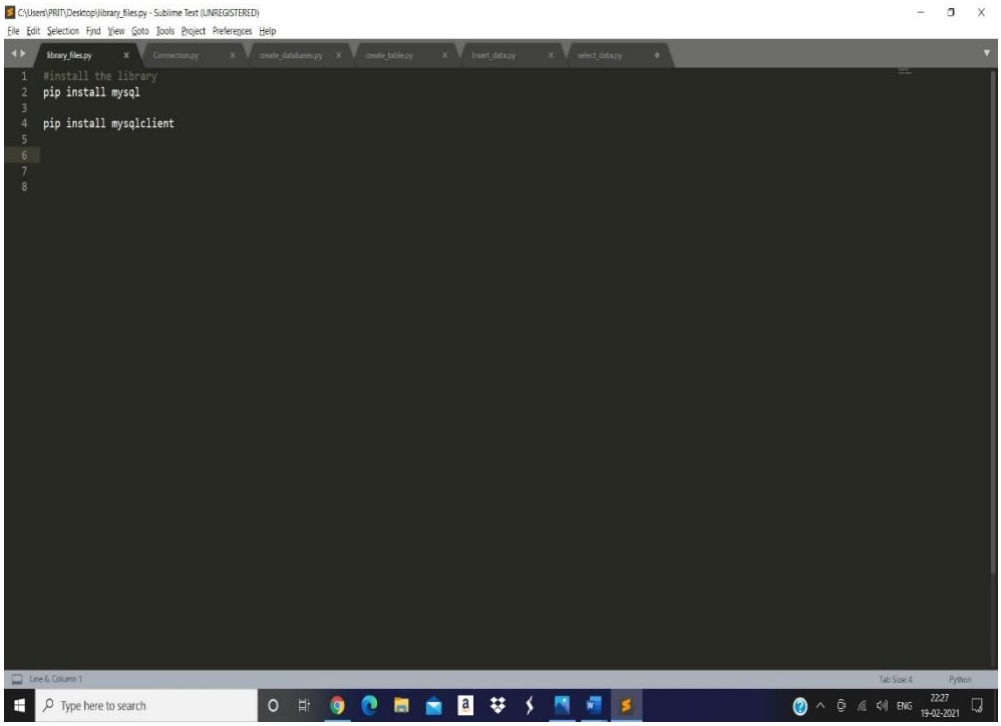
Installation about the software

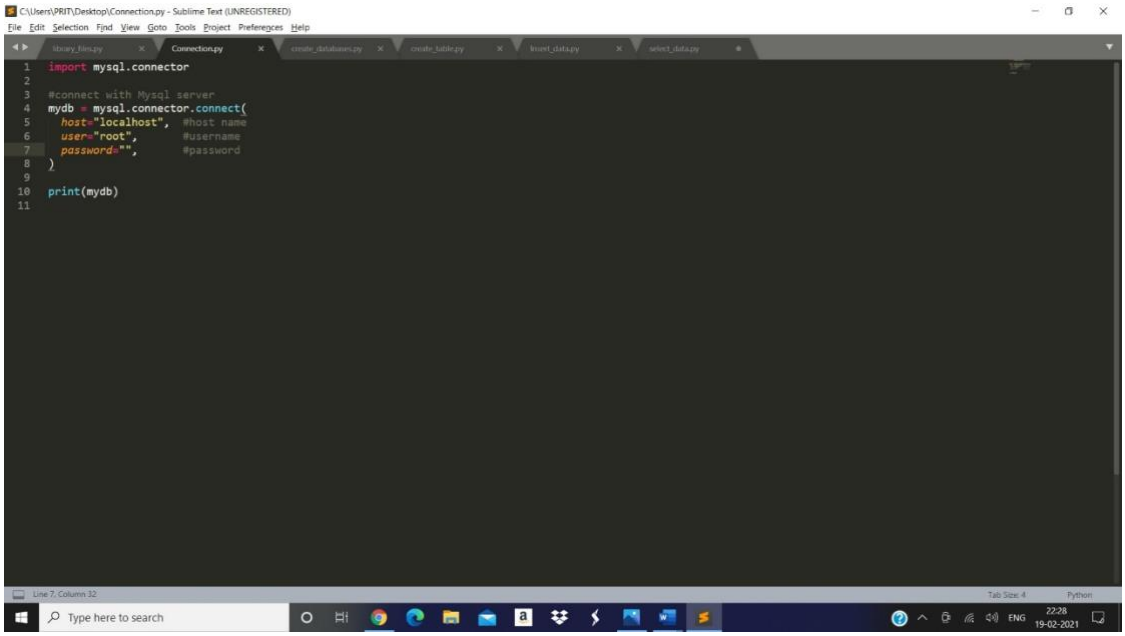


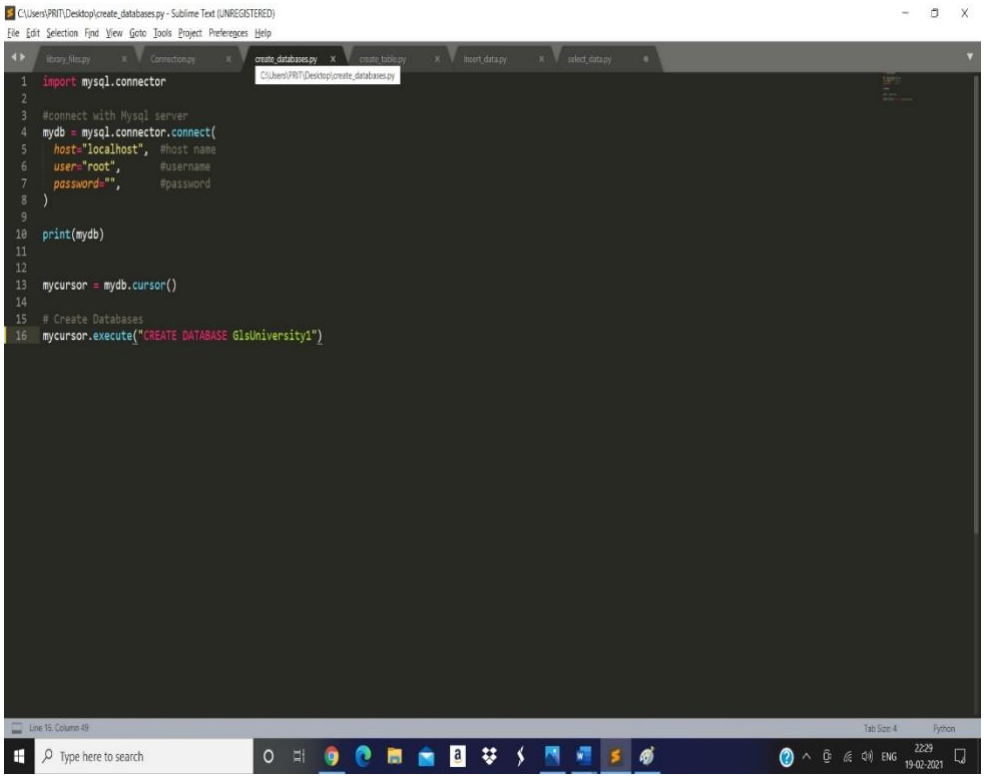

Setup
Select Components
Select the components you want to install; clear the components you do not want to install. Click Next when you are ready to continue.
Server
Apache
MySQL
FileZilla FTP Server
Mercury Mail Server
Tomcat
Program Languages
PHP
Perl
Program Languages
phpMyAdmin
Webalizer
Fake Sendmail
Click on a component to get a detailed description
XAMPP Installer
< Back
Next >
Cancel

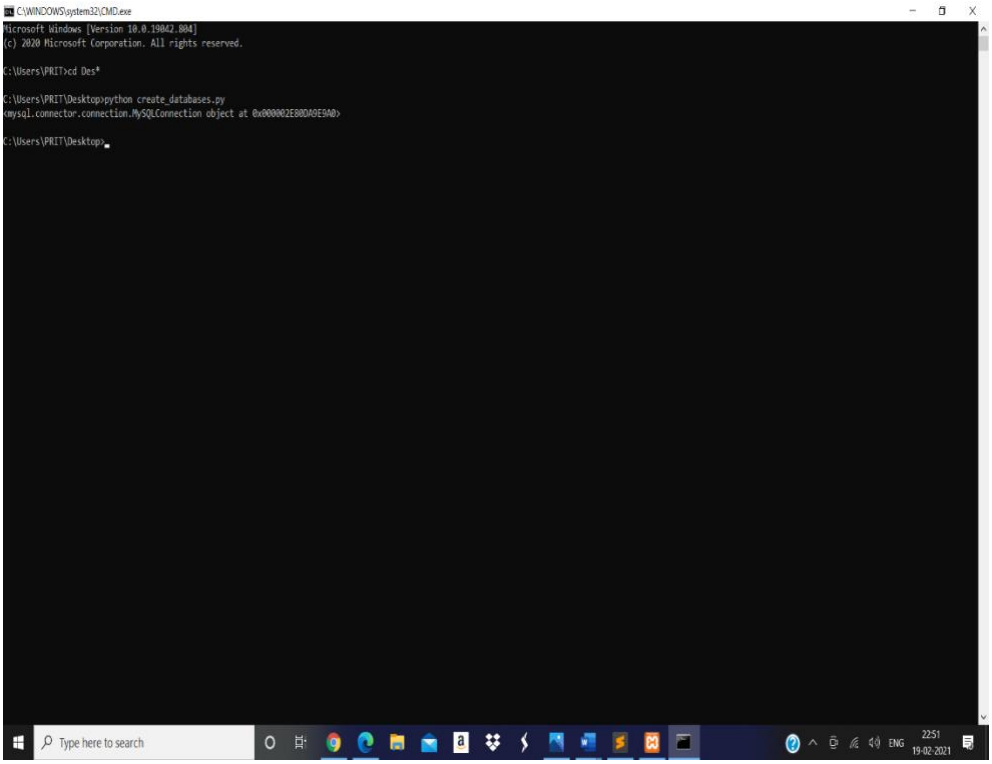

XAMPP Control Panel v3.2.4
Modules
Service
Module
PID(s)
Port(s)
Actions
Apache
MySQL
FileZilla
Mercury
Tomcat
Start
Admin
Config
Logs
Config
Netstat
Shell
Explorer
Services
Help
Quit
Initializing Control Panel
Windows Version: Home 64-bit
XAMPP Version: 8.0.2
Control Panel Version: 3.2.4 [Compiled: Jun 5th 2019]
You are not running with administrator rights! This will work for most application stuff but whenever you do something with services there will be a security dialogue or things will break! So think about running this application with administrator rights!
XAMPP Installation Directory: "c:\xampp\"
Checking for prerequisites
All prerequisites found
Initializing Modules
Problem detected!
Port 443 in use by "D:\PRIT_VMWARE_UBUNTU\vmware-hostd.exe -u "C:\ProgramData\VMware\hostd\config.xml"" with PID 7400!
Apache WILL NOT start without the configured ports free!
You need to uninstall/disable/reconfigure the blocking application
or reconfigure Apache and the Control Panel to listen on a different port
Starting Check-Timer
Control Panel Ready
Type here to search
ENG
16:34
18-02-2021

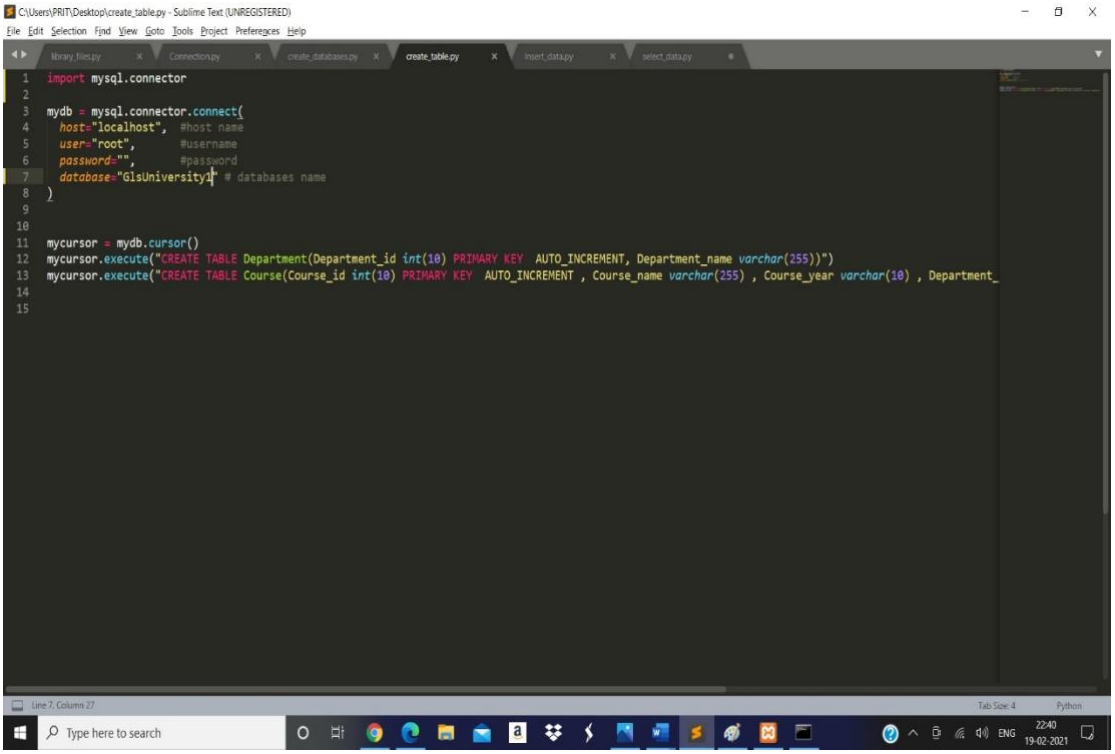
Example Description with Screen layout

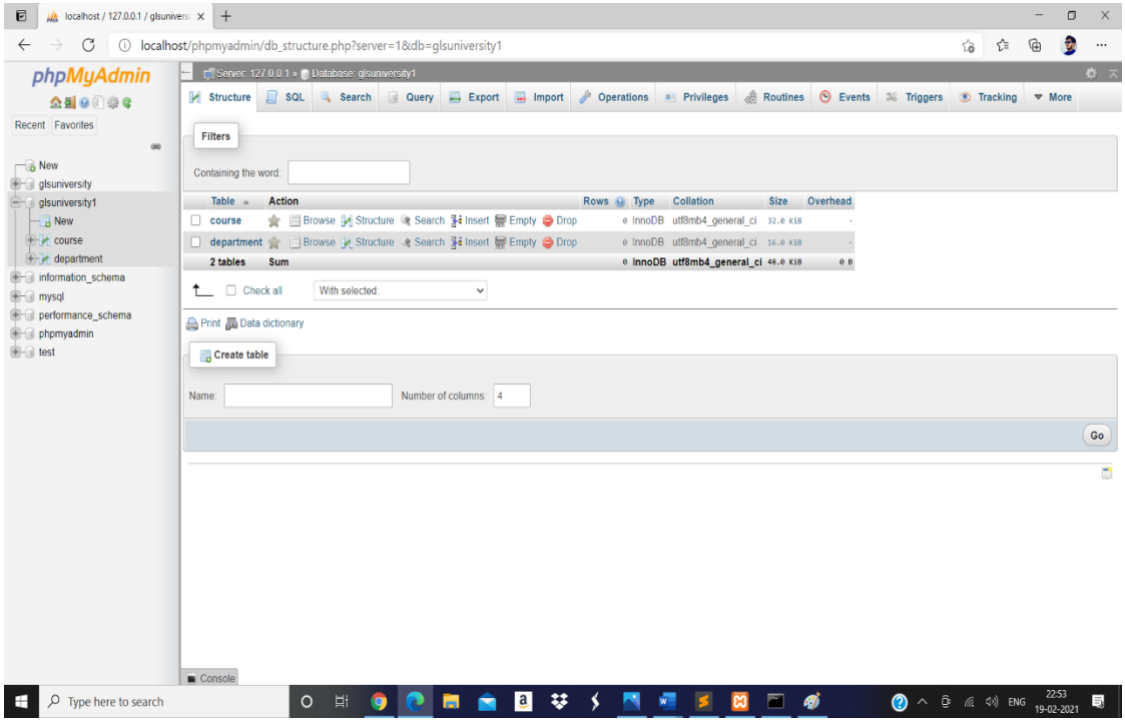


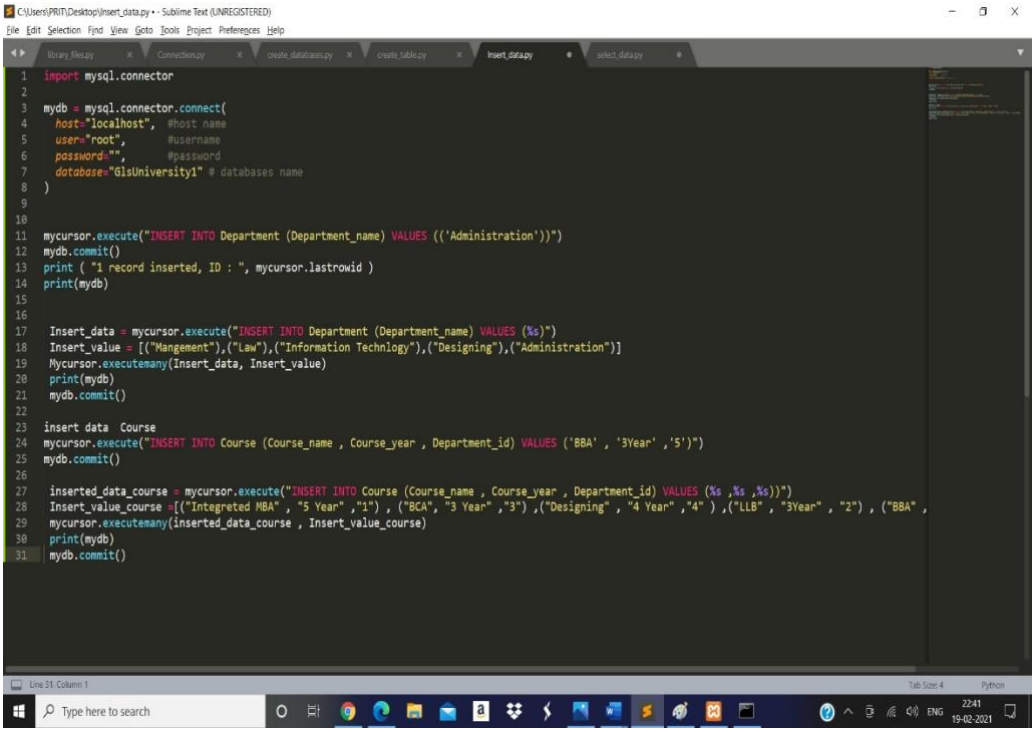


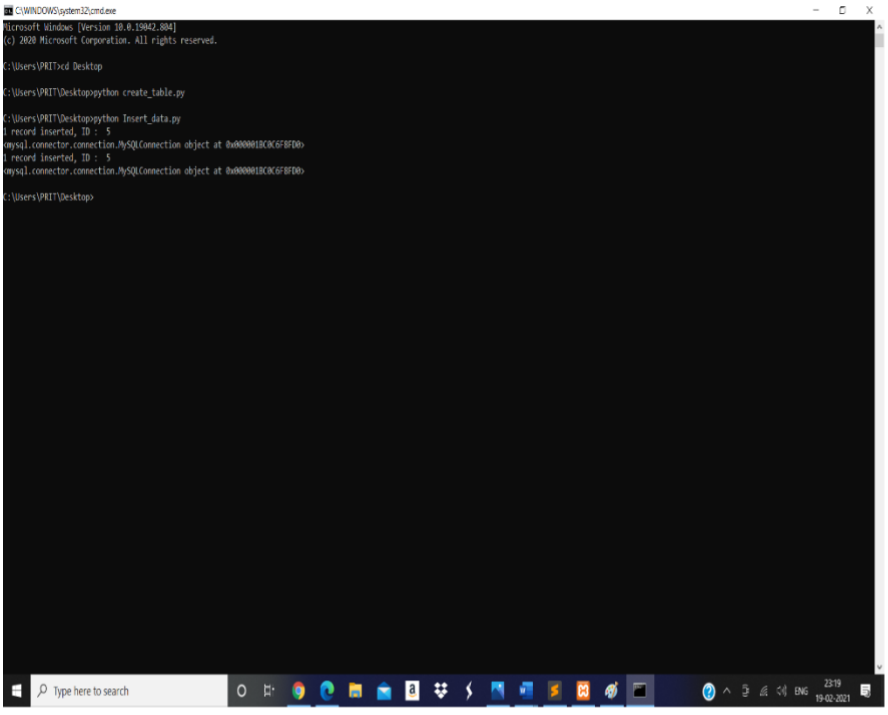

C:\Users\PRIT\Desktop\create_databases.py - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help
library_files.py
Connection.py
create_databases.py
create_table.py
insert_data.py
select_data.py
C:\Users\PRIT\Desktop\create_databases.py
import mysql.connector
#connect with Mysql server
mydb = mysql.connector.connect(
host="localhost", #host name
user="root", #username
password="", #password
)
print(mydb)
mycursor = mydb.cursor()
# Create Databases
mycursor.execute("CREATE DATABASE GlsUniversity1")
Line 16, Column 49
Tab Size: 4
Python
Type here to search
ENG
22:29
19-02-2021

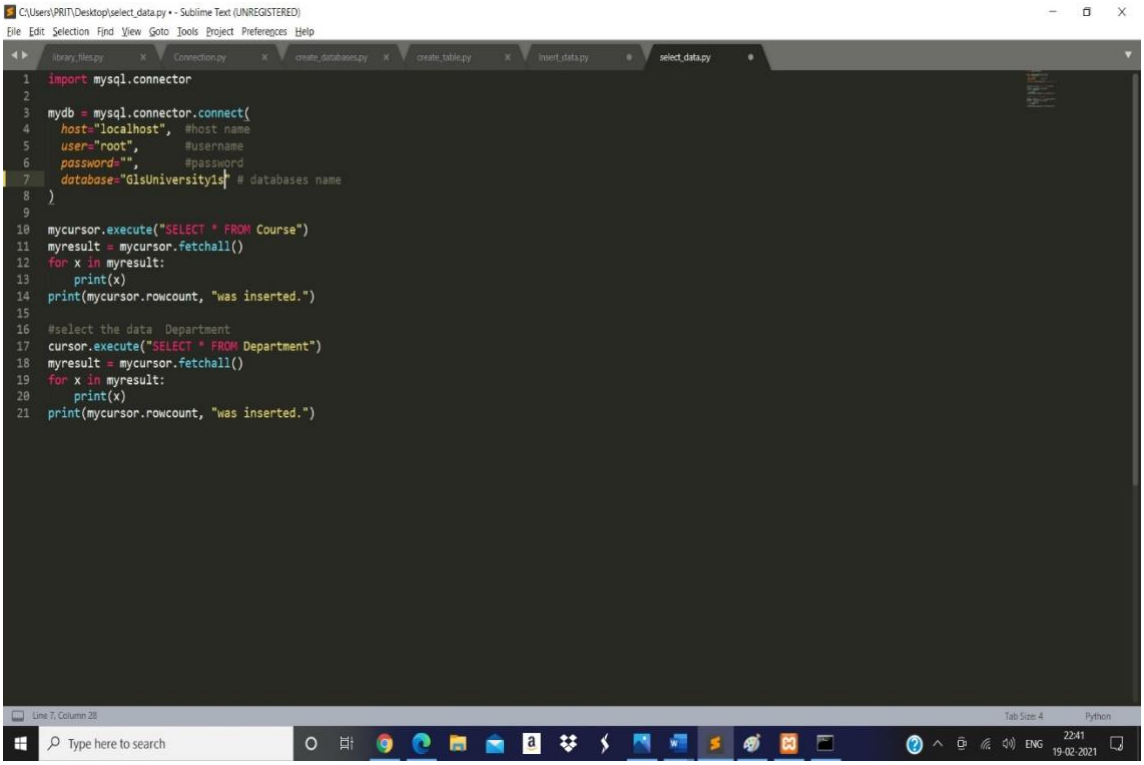

C:\WINDOWS\system32\CMD.exe
Microsoft Windows [Version 10.0.19042.804]
(c) 2020 Microsoft Corporation. All rights reserved.
C:\Users\PRIT>cd Des*
C:\Users\PRIT\Desktop>python create_databases.py
<mysql.connector.connection.MySQLConnection object at 0x000002E80DA9E9A0>
C:\Users\PRIT\Desktop>
Type here to search
ENG
22:51
19-02-2021

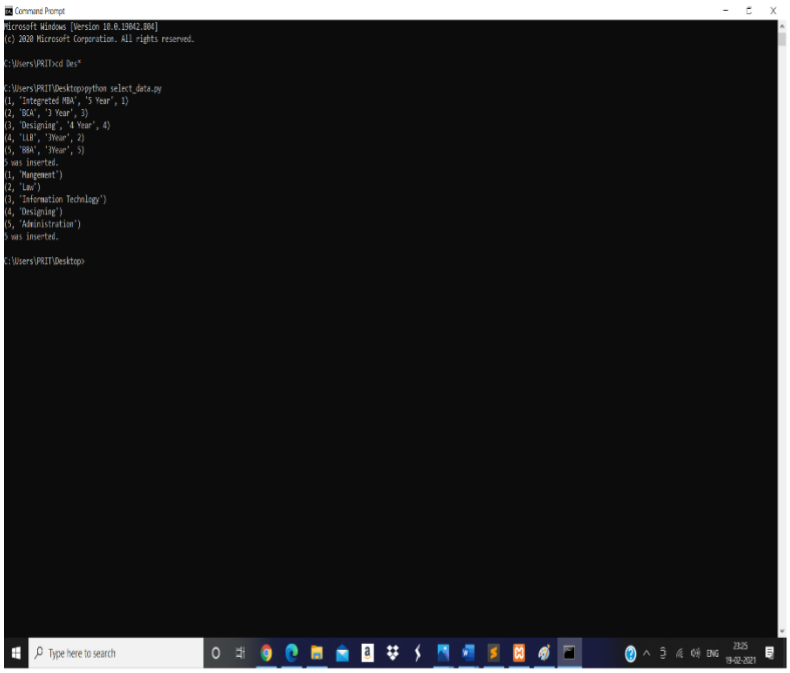

C:\Users\PRIT\Desktop\create_table.py - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help
library_files.py
Connection.py
create_databases.py
create_table.py
insert_data.py
select_data.py
import mysql.connector
mydb = mysql.connector.connect(
host="localhost", #host name
user="root", #username
password="", #password
database="GlsUniversity1" # databases name
)
mycursor = mydb.cursor()
mycursor.execute("CREATE TABLE Department(Department_id int(10) PRIMARY KEY AUTO_INCREMENT, Department_name varchar(255))")
mycursor.execute("CREATE TABLE Course(Course_id int(10) PRIMARY KEY AUTO_INCREMENT , Course_name varchar(255) , Course_year varchar(10) , Department_
Line 7, Column 27
Tab Size: 4
Python
Type here to search
ENG
22:40
19-02-2021


localhost / 127.0.0.1 / glsuniversity1
localhost/phpmyadmin/db_structure.php?server=1&db=glsuniversity1
phpMyAdmin
Recent Favorites
New
glsuniversity
glsuniversity1
New
course
department
information_schema
mysql
performance_schema
phpmyadmin
test
Server: 127.0.0.1 » Database: glsuniversity1
Structure SQL Search Query Export Import Operations Privileges Routines Events Triggers Tracking More
Filters
Containing the word:
Table Action Rows Type Collation Size Overhead
course Browse Structure Search Insert Empty Drop 0 InnoDB utf8mb4_general_ci 32.0 KiB -
department Browse Structure Search Insert Empty Drop 0 InnoDB utf8mb4_general_ci 16.0 KiB -
2 tables Sum 0 InnoDB utf8mb4_general_ci 48.0 KiB 0 B
Check all With selected:
Print Data dictionary
Create table
Name:
Number of columns: 4
Go
Console
Type here to search
ENG
22:53
19-02-2021


C:\Users\PRIT\Desktop\insert_data.py • - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help
library_files.py
Connection.py
create_databases.py
create_table.py
Insert_data.py
select_data.py
import mysql.connector
mydb = mysql.connector.connect(
host="localhost", #host name
user="root", #username
password="", #password
database="GlsUniversity1" # databases name
)
mycursor.execute("INSERT INTO Department (Department_name) VALUES (('Administration'))")
mydb.commit()
print ("1 record inserted, ID : ", mycursor.lastrowid)
print(mydb)
Insert_data = mycursor.execute("INSERT INTO Department (Department_name) VALUES (%s)")
Insert_value = [("Mangement"),("Law"),("Information Technlogy"),("Designing"),("Administration")]
Mycursor.executemany(Insert_data, Insert_value)
print(mydb)
mydb.commit()
insert data Course
mycursor.execute("INSERT INTO Course (Course_name , Course_year , Department_id) VALUES ('BBA' , '3Year' ,'5')")
mydb.commit()
inserted_data_course = mycursor.execute("INSERT INTO Course (Course_name , Course_year , Department_id) VALUES (%s ,%s ,%s))")
Insert_value_course =[("Integreted MBA" , "5 Year" ,"1") , ("BCA", "3 Year" ,"3") ,("Designing" , "4 Year" ,"4") ,("LLB" , "3Year" , "2") , ("BBA" ,
mycursor.executemany(inserted_data_course , Insert_value_course)
print(mydb)
mydb.commit()
Line 31, Column 1
Tab Size: 4
Python
Type here to search
ENG
22:41
19-02-2021


C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.19042.804]
(c) 2020 Microsoft Corporation. All rights reserved.
C:\Users\PRIT>cd Desktop
C:\Users\PRIT\Desktop>python create_table.py
C:\Users\PRIT\Desktop>python Insert_data.py
1 record inserted, ID : 5
<mysql.connector.connection.MySQLConnection object at 0x000001BC0C6FBFD0>
1 record inserted, ID : 5
<mysql.connector.connection.MySQLConnection object at 0x000001BC0C6FBFD0>
C:\Users\PRIT\Desktop>
Type here to search
ENG
23:19
19-02-2021


C:\Users\PRIT\Desktop\select_data.py • - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help
library_files.py
Connection.py
create_databases.py
create_table.py
insert_data.py
select_data.py
import mysql.connector
mydb = mysql.connector.connect(
host="localhost", #host name
user="root", #username
password="", #password
database="GlsUniversity1s" # databases name
)
mycursor.execute("SELECT * FROM Course")
myresult = mycursor.fetchall()
for x in myresult:
print(x)
print(mycursor.rowcount, "was inserted.")
#select the data Department
cursor.execute("SELECT * FROM Department")
myresult = mycursor.fetchall()
for x in myresult:
print(x)
print(mycursor.rowcount, "was inserted.")
Line 7, Column 28
Tab Size: 4
Python
Type here to search
ENG
22:41
19-02-2021


Command Prompt
Microsoft Windows [Version 10.0.19042.804]
(c) 2020 Microsoft Corporation. All rights reserved.
C:\Users\PRIT>cd Des*
C:\Users\PRIT\Desktop>python select_data.py
(1, 'Integrated MBA', '5 Year', 1)
(2, 'BCA', '3 Year', 3)
(3, 'Designing', '4 Year', 4)
(4, 'LLB', '3Year', 2)
(5, 'BBA', '3Year', 5)
5 was inserted.
(1, 'Mangement')
(2, 'Law')
(3, 'Information Technology')
(4, 'Designing')
(5, 'Administration')
5 was inserted.
C:\Users\PRIT\Desktop>
Type here to search
ENG
23:25
19-02-2021

Sample coding

```
 install the library
 pip install mysql
 pip install mysqlclient
 install the xamp server for mysql  server

 import the mysql data and connect
import mysql.connector

connect with Mysql server
mydb = mysql.connector.connect(
  host="localhost",  #host name
  user="root",       #username
  password="",          #password
)

#connect with mysql server and databases
 mydb = mysql.connector.connect(
   host="localhost",  #host name
   user="root",       #username
   password="",                 #password
   database="GlsUniversity" # databases name
 )

 store the databases connection
mycursor = mydb.cursor()

 Create Databases
mycursor.execute("CREATE DATABASE GlsUniversity")

Create table Department and Course
mycursor.execute("CREATE  TABLE  Department(Department_id
int(10)  PRIMARY  KEY   AUTO_INCREMENT,  Department_name
varchar(255))")
mycursor.execute("CREATE  TABLE  Course(Course_id  int(10)
PRIMARY KEY  AUTO_INCREMENT , Course_name
```

```
varchar(255) , Course_year varchar(10) , Department_id int(10),FOREIGN KEY(Department_id) REFERENCES Department(Department_id))")


#insert data  Department
mycursor.execute("INSERT INTO Department (Department_name) VALUES (('Administration'))")
mydb.commit()
print ( "1 record inserted, ID : ", mycursor.lastrowid )
print(mydb)


 Insert_data = mycursor.execute("INSERT INTO Department (Department_name) VALUES (%s)")
 Insert_value = [("Mangement"),("Law"),("Information Technlogy"),("Designing"),("Administration")]
 Mycursor.executemany(Insert_data, Insert_value)
 print(mydb)
 mydb.commit()

insert data  Course
mycursor.execute("INSERT INTO Course (Course_name , Course_year , Department_id) VALUES ('BBA' , '3Year' ,'5')")
mydb.commit()

 inserted_data_course = mycursor.execute("INSERT INTO Course (Course_name , Course_year , Department_id) VALUES (%s ,%s ,%s))")
 Insert_value_course =[("Integreted MBA" , "5 Year" ,"1") , ("BCA", "3 Year" ,"3") ,("Designing" , "4 Year" ,"4" ) ,("LLB" , "3Year" , "2") , ("BBA" , "3Year" ,"5")]
 mycursor.executemany(inserted_data_course , Insert_value_course)
 print(mydb)
 mydb.commit()
```

```
select the data  course and display data using line by line
mycursor.execute("SELECT * FROM Course")
myresult = mycursor.fetchall()
for x in myresult:
        print(x)
print(mycursor.rowcount, "was inserted.")

#select the data  Department
cursor.execute("SELECT * FROM Department")
myresult = mycursor.fetchall()
for x in myresult:
        print(x
print(mycursor.rowcount, "was inserted.").
```

Conclusion

The project “Cpython using crud operations” has been developed as per requirement specification. It has been developed by using XAMPP software and Cpython also with MySQL lite.
Using xampp software we connected MySQL with Cpython and wrote all quarries.
After that we used CMD for getting our output results.

References

- https://www.sqlitetutorial.net/sqlite-python/creating-database/
- https://www.guru99.com/python-mysql-example.html
- https://www.w3schools.com/

THANK YOU