

TY B.Tech. (CSE) – II [2022-23]
5CS372 : Advanced Database System Lab.
Assignment No. 9

PRN: 2020BTECS00033
Name: Prathamesh Raje

Title: Install & deploy the following cloud databases on windows platform.

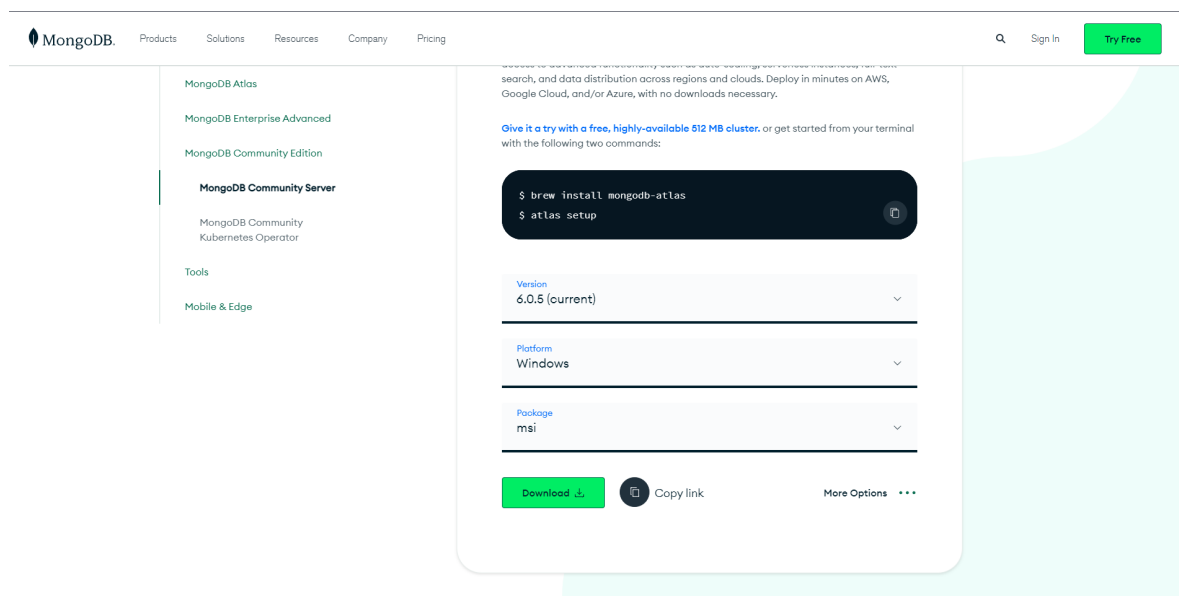
Aim: To install the MongoDB and Cassandra DB and to create Python desktop Application to demonstrate the CRUD operation

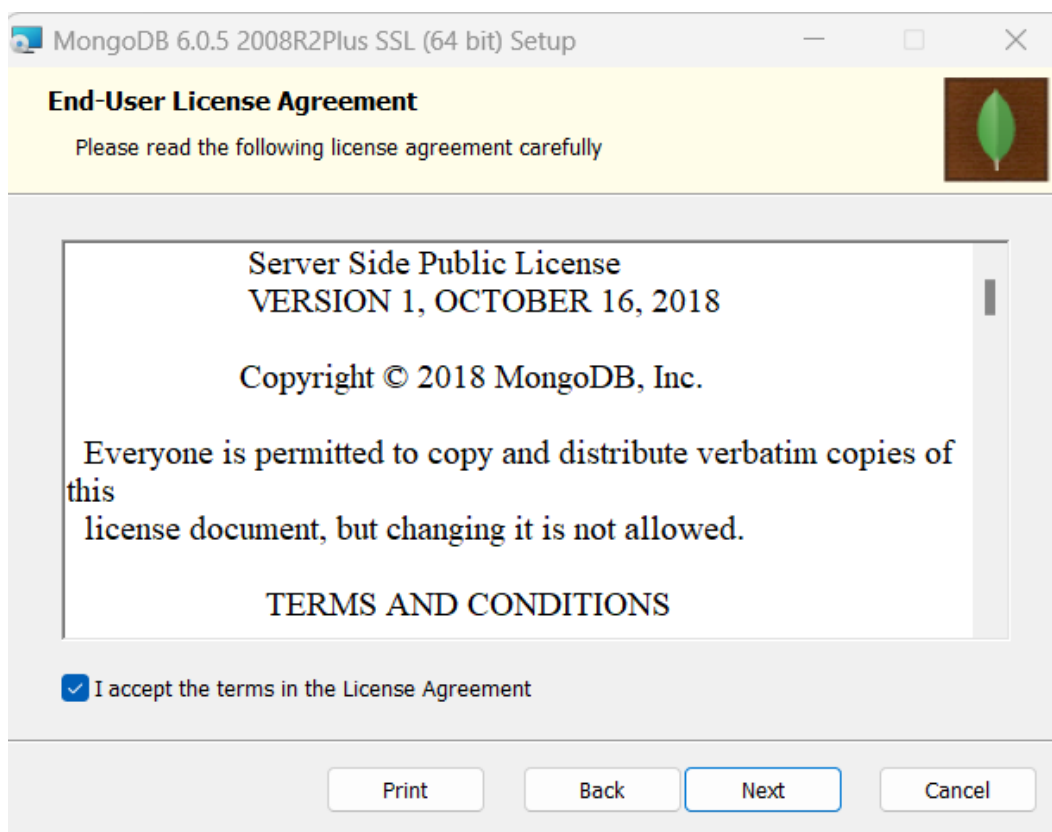
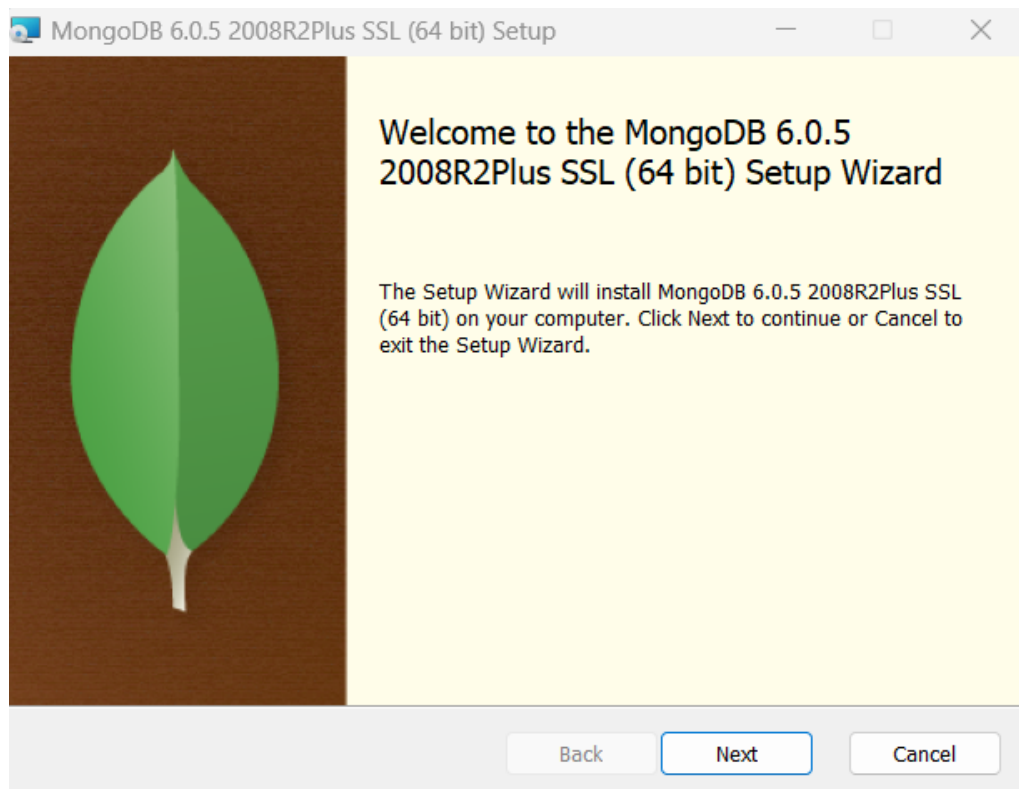
Procedure:

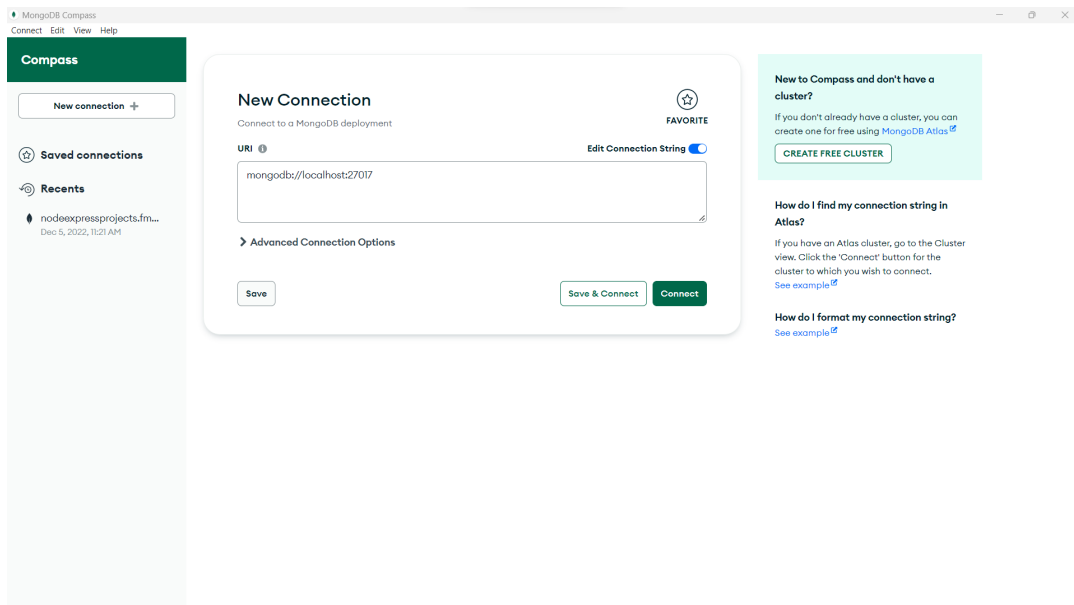
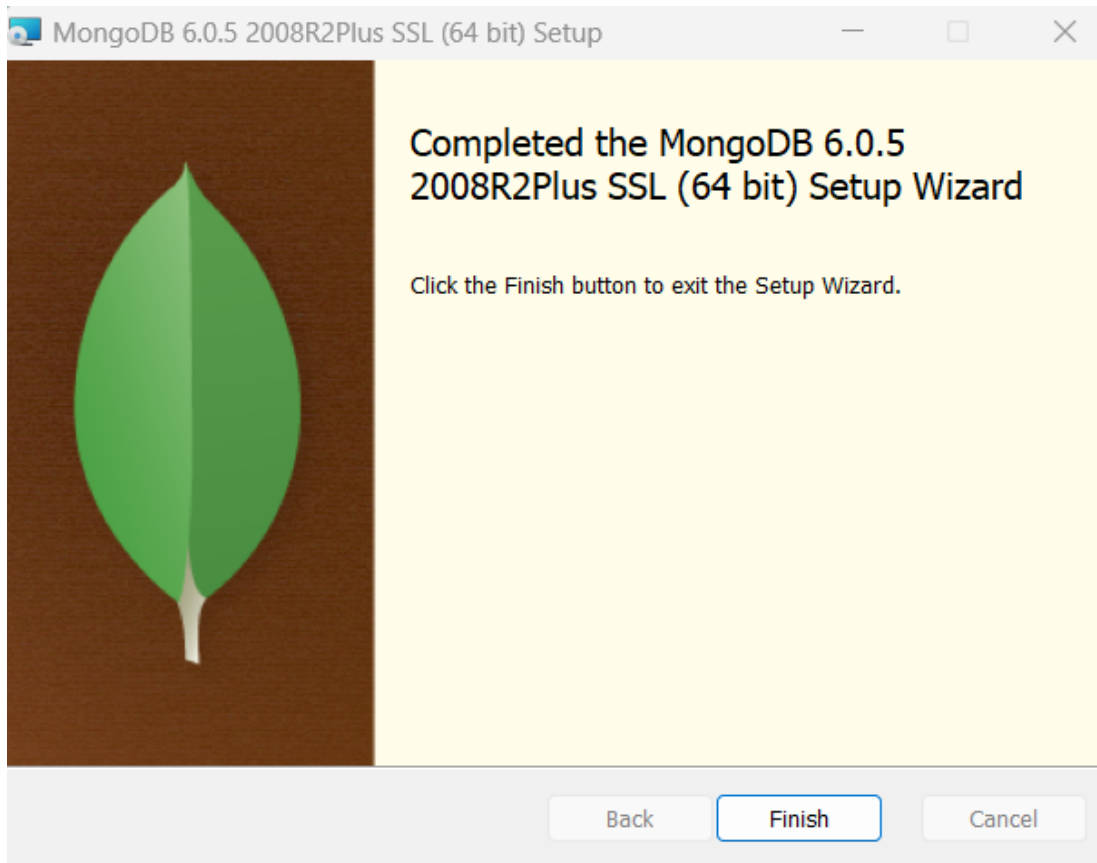
Installation & configuration:

Installation of MongoDB

Under the Software section, click on the Community server version.







The screenshot shows a Windows File Explorer window with the address bar displaying the path: This PC > OS (C:) > Program Files > MongoDB > Server > 6.0 > bin. The main area displays a list of files and folders with columns for Name, Date modified, Type, and Size. The files listed are InstallCompass, mongod.cfg, mongod, mongod.pdb, mongos, and mongos.pdb. Each file has a corresponding icon and a pin icon to its left.

Name	Date modified	Type	Size
InstallCompass	08-03-2023 18:45	Windows PowerSh...	2 KB
mongod.cfg	25-04-2023 22:22	CFG File	1 KB
mongod	08-03-2023 20:06	Application	55,071 KB
mongod.pdb	08-03-2023 20:06	PDB File	8,25,668 KB
mongos	08-03-2023 19:30	Application	34,035 KB
mongos.pdb	08-03-2023 19:30	PDB File	4,63,300 KB

The screenshot shows the "Edit environment variable" window from Windows Settings. The title bar reads "Edit environment variable". On the right side of the title bar is a close button (X). Below the title bar are two tabs: "System variables" which is currently selected, and "User variables". A scrollable list contains eight system variables:

- C:\Users\Raje\AppData\Local\Programs\Eclipse Adoptium\jdk-1...
- C:\Program Files\MySQL\MySQL Shell 8.0\bin\
- %USERPROFILE%\AppData\Local\Microsoft\WindowsApps
- C:\Users\Raje\AppData\Local\Programs\Microsoft VS Code\bin
- C:\Users\Raje\AppData\Roaming\npm
- C:\Program Files\CodeBlocks\MingGW\bin
- C:\Program Files\Python310\Scripts\
- C:\Program Files\Python310\

The remaining three slots in the list are empty. To the right of the list are six action buttons arranged vertically: New, Edit, Browse..., Delete, Move Up, and Move Down. At the bottom left of the window are OK and Cancel buttons.

```
C:\Users\Raje>mongod --version
db version v6.0.5
Build Info: {
  "version": "6.0.5",
  "gitVersion": "c9a99c120371d4d4c52cbb15dac34a36ce8d3b1d",
  "modules": [],
  "allocator": "tcmalloc",
  "environment": {
    "distmod": "windows",
    "distarch": "x86_64",
    "target_arch": "x86_64"
  }
}
```

Installation of Cassandra DB

Java and Python:

```
Command Prompt

C:\Users\Raje>java --version
openjdk 17.0.6 2023-01-17
OpenJDK Runtime Environment Temurin-17.0.6+10 (build 17.0.6+10)
OpenJDK 64-Bit Server VM Temurin-17.0.6+10 (build 17.0.6+10, mixed mode, sharing)

C:\Users\Raje>python --version
Python 3.10.7
```

The screenshot shows the Apache Cassandra website. At the top, there is a navigation bar with links for GET STARTED, DOCUMENTATION, COMMUNITY, and LEARN, along with a DOWNLOAD NOW button. The main heading is 'Downloading Cassandra'. Below this, there is a 'Releases' section with two columns. The left column is for the 'Latest GA Version' (4.1.1) and the right column is for the 'Previous Stable Version' (4.0.9). Each column includes a download button and a link to the release page.

Latest GA Version	Previous Stable Version
Download the latest Apache Cassandra 4.1 GA release: Latest release on 2023-03-21 Maintained until 4.4.0 release (May-July 2025)	Download the latest Apache Cassandra 4.0 release: Latest release on 2023-04-14 Maintained until 4.3.0 release (May-July 2024)
4.1.1	4.0.9
(pgp, sha256 and sha512)	(pgp, sha256 and sha512)

You are signed in as 2020btcc0003 ADS LAB : Assignment No. 9 - prathu ADSL Assignment 9 - Google Docs Apache Cassandra | Apache Cassandra Apache Downloads

apache.org/dyn/closer.lua/cassandra/4.0.9/apache-cassandra-4.0.9-bin.tar.gz

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We suggest the following site for your download:
<https://d1cdn.apache.org/cassandra/4.0.9/apache-cassandra-4.0.9-bin.tar.gz>

Alternate download locations are suggested below.

It is essential that you verify the integrity of the downloaded file using the PGP signature (`.asc` file) or a hash (`.md5` or `.sha*` file).

HTTP

<https://d1cdn.apache.org/cassandra/4.0.9/apache-cassandra-4.0.9-bin.tar.gz>

BACKUP SITE

<https://d1cdn.apache.org/cassandra/4.0.9/apache-cassandra-4.0.9-bin.tar.gz>

VERIFY THE INTEGRITY OF THE FILES

It is essential that you verify the integrity of the downloaded file using the PGP signature (`.asc` file) or a hash (`.md5` or `.sha*` file). Please read [Verifying Apache Software Foundation Releases](#) for more information on why you should verify our releases.

Verify the PGP signature using PGP or GPG. First download the [KEYS](#), as well as the `.asc` signature file for the relevant distribution.

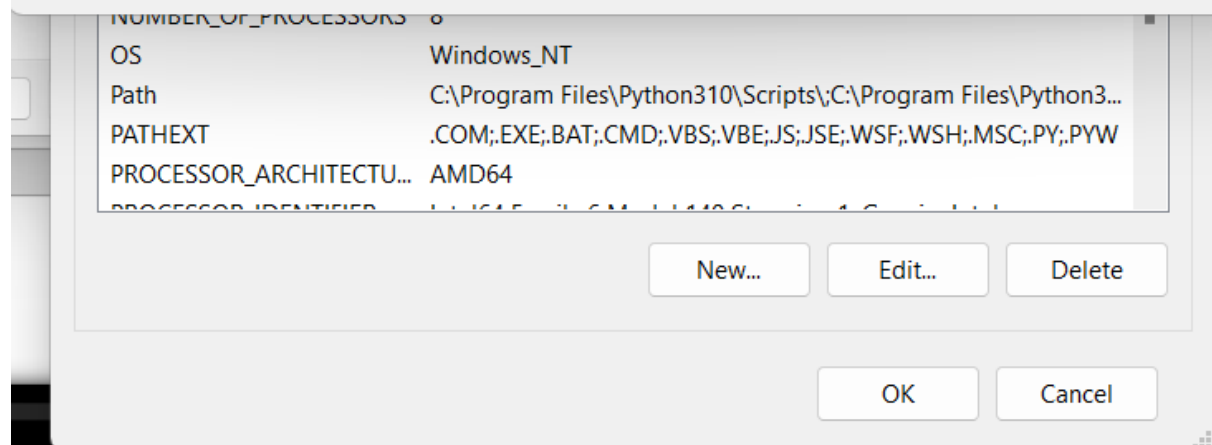
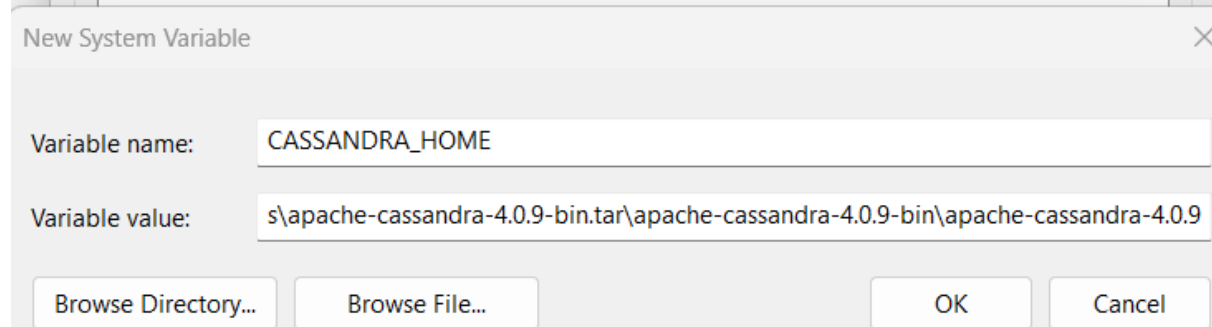
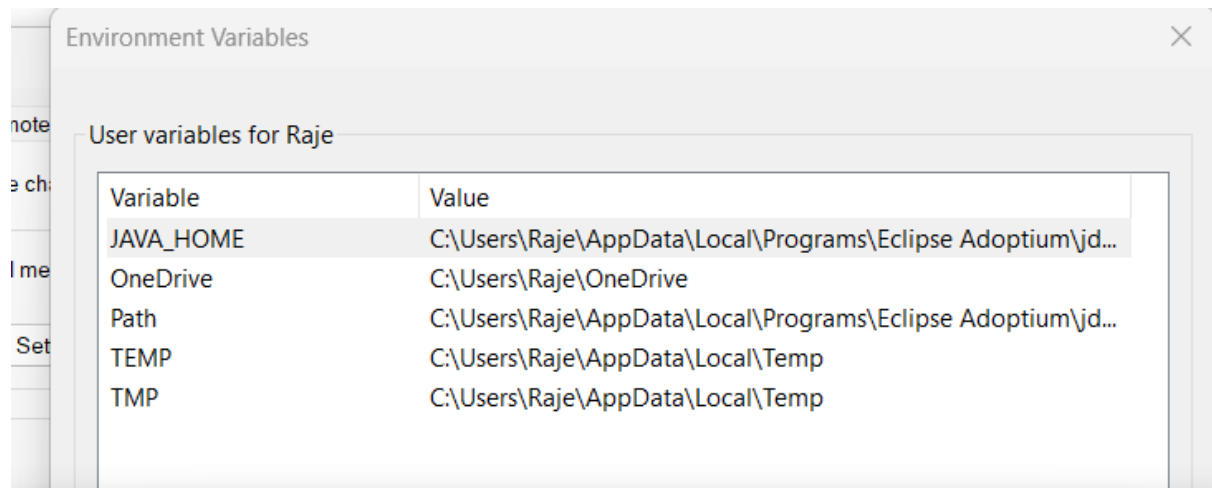
```
% gpg --import KEYS
% gpg --verify downloaded_file.asc downloaded_file
```

or

```
% gpgk -a KEYS
% gpgk downloaded_file.asc
```

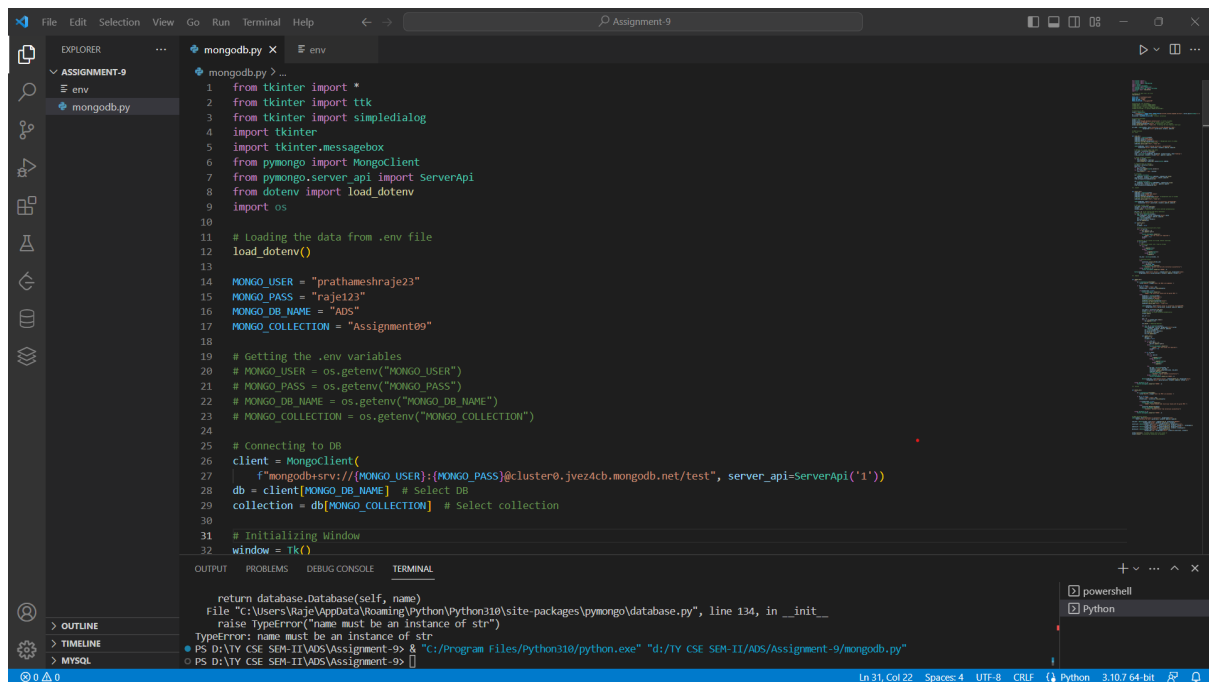
Downloads > apache-cassandra-4.0.9-bin.tar > apache-cassandra-4.0.9-bin > apache-cassandra-4.0.9

Name	Date modified	Type	Size
Today			
bin	26-04-2023 07:00	File folder	
pylib	26-04-2023 07:00	File folder	
tools	26-04-2023 07:00	File folder	
lib	26-04-2023 07:00	File folder	
conf	26-04-2023 07:00	File folder	
doc	26-04-2023 07:00	File folder	
Earlier this month			
CASSANDRA-14092	11-04-2023 13:02	Text Document	5 KB
CHANGES	11-04-2023 13:02	Text Document	439 KB
LICENSE	11-04-2023 13:02	Text Document	13 KB
NEWS	11-04-2023 13:02	Text Document	137 KB
NOTICE	11-04-2023 13:02	Text Document	1 KB



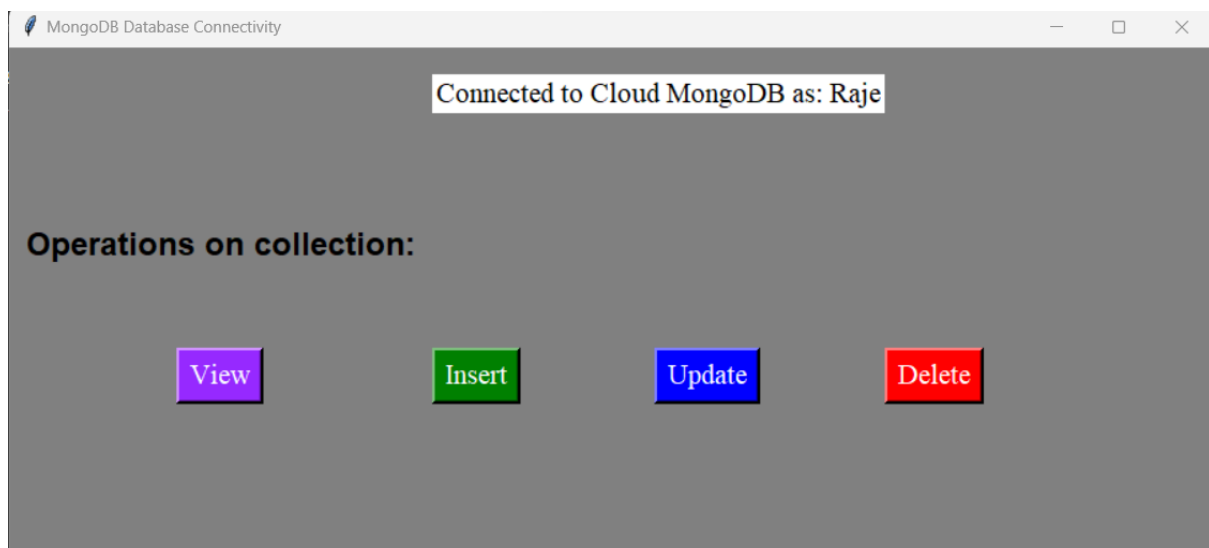
CRUD operations On MongoDB

Code:




```
1 from tkinter import *
2 from tkinter import ttk
3 from tkinter import simpledialog
4 import tkinter
5 import tkinter.messagebox
6 from pymongo import MongoClient
7 from pymongo.server_api import ServerApi
8 from dotenv import load_dotenv
9 import os
10
11 # loading the data from .env file
12 load_dotenv()
13
14 MONGO_USER = "prathameshraj23"
15 MONGO_PASS = "raje123"
16 MONGO_DB_NAME = "ADS"
17 MONGO_COLLECTION = "Assignment09"
18
19 # Getting the .env variables
20 # MONGO_USER = os.getenv("MONGO_USER")
21 # MONGO_PASS = os.getenv("MONGO_PASS")
22 # MONGO_DB_NAME = os.getenv("MONGO_DB_NAME")
23 # MONGO_COLLECTION = os.getenv("MONGO_COLLECTION")
24
25 # Connecting to DB
26 client = MongoClient(
27     f"mongodb+srv://{MONGO_USER}:{MONGO_PASS}@cluster0.jvez4cb.mongodb.net/test", server_api=ServerApi('1')
28 )
29 db = client[MONGO_DB_NAME] # Select DB
30 collection = db[MONGO_COLLECTION] # Select collection
31
32 # Initializing window
33 window = Tk()
34
35 return database.Database(self, name)
36 File "c:\Users\Raje\AppData\Roaming\Python\Python310\site-packages\pymongo\database.py", line 134, in _init_
37     raise TypeError("name must be an instance of str")
38 TypeError: name must be an instance of str
39 PS D:\TY CSE SEM-II\ADS\Assignment-9> & "C:/Program Files/python310/python.exe" "d:/TY CSE SEM-II/ADS/Assignment-9/mongodb.py"
40 PS D:\TY CSE SEM-II\ADS\Assignment-9> |
```

GUI:




Insert Values in Database:


 INSERT into Table

Insert values in collection: Assignment09

Name	<input type="text" value="Samrat"/>
PRN	<input type="text" value="2020BTECS00006"/>
Branch	<input type="text" value="CSE"/>


Insert Values

 SUCCESS ×

 Values inserted into Collection successfully!

OK

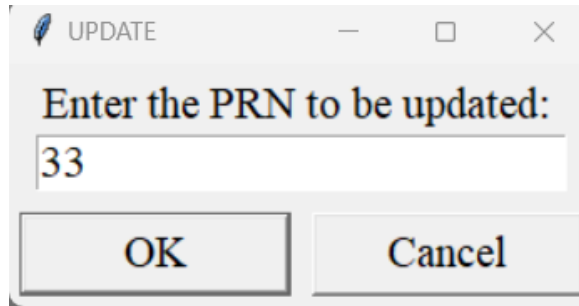
View Database Entries:

 VIEW Table

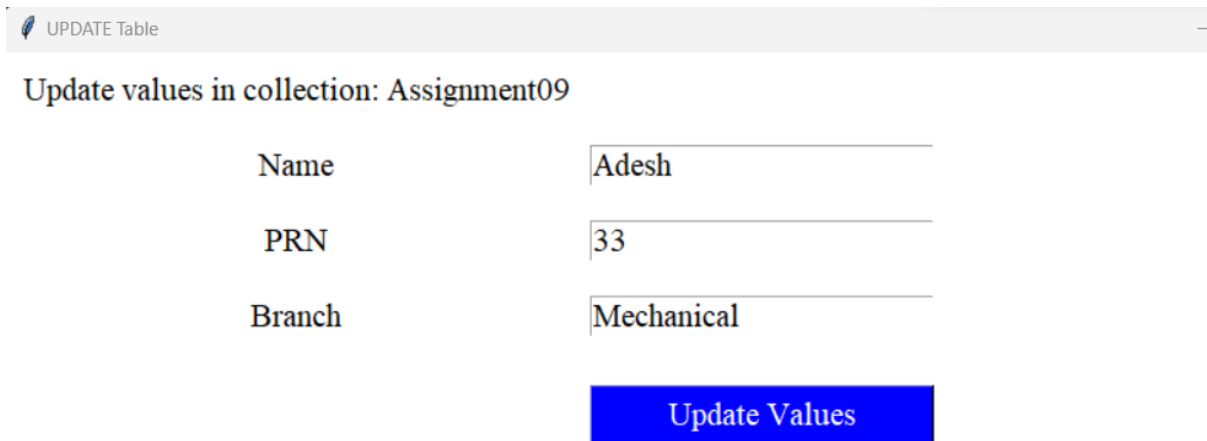
Viewing Collection - Assignment09

_id	Name	PRN	Branch
64489d3d436c778	Prathamesh	2020BTECS00033	CSE
64489db6dd0a70a	Samrat	2020BTECS00006	CSE

Update Database Entry:

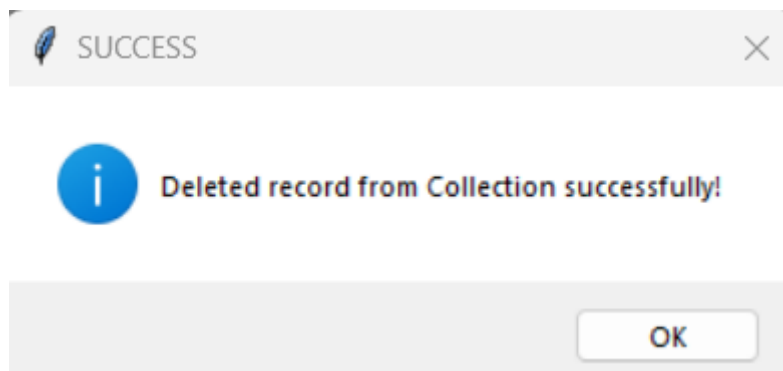


A small dialog box titled "UPDATE" with a feather icon. It contains a label "Enter the PRN to be updated:" and a text input field with the value "33". At the bottom are "OK" and "Cancel" buttons.



A form titled "UPDATE Table" with a feather icon. It displays "Update values in collection: Assignment09". Below this are three labels with corresponding input fields: "Name" with "Adesh", "PRN" with "33", and "Branch" with "Mechanical". A blue "Update Values" button is at the bottom right.

Delete Database Entry:



A message box titled "SUCCESS" with a feather icon and a close button. It contains an information icon and the text "Deleted record from Collection successfully!". An "OK" button is at the bottom right.