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Experiment No. 1.4

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Section/Group: MCD-1/ Grp B
Semester: I
Date of Performance: 1st Nov 22
Subject Name: Python Programming Lab
Subject Code: 22CAH-645

1. Aim/Overview of the practical:

A. Implement a student class with information such as rollno, name, class. The information must be entered by the user.

B. Create a program to implement library management system using classes and objects

2. Task to be done:

A. To create a class and define a function/method that inputs student details such as roll no., name & class and then displays it on the screen.
B. To create one or more class to implement various methods for Library Management System such as Show all Books, find books, etc…

3. Code for experiment/practical:

A. First Part Code:

```
class Student:

    def student_info():
        roll_no = int(input("Enter Roll No. of the Student: "))
        name = input("Enter Name of the Student: ")
        s_class = input("Enter Class of the Student: ")

        print("Student info are as: ")
        print('Name: ', name, "\nRoll: ", roll_no, "\nClass: ", s_class)
```

```
if __name__ == '__main__':
    Student.student_info()
```

B. Second Part Code:

```
C. class Books_Details:    # Class Definition

       def book_details(find):

           books = {
               "The company of women": {"Writer": "Kushwant Singh", "Year": 1999,
   "Available": "Yes"},
               "The dark room": {"Writer": "RK Narayan", "Year": 1938, "Available":
   "No"},
               "Gitanjali": {"Writer": "Rabindranath Tagore", "Year": 1910,
   "Available": "Yes"},
               "The suitable boy": {"Writer": "Vikram Seth", "Year": 1993,
   "Available": "No"},
               "Capitalism: a ghost story": {"Writer": "Arundhati Roy", "Year":
   2014, "Available": "Yes"},
               "The maid": {"Writer": "Nita Prose", "Year": 2022, "Available":
   "Yes"},
               "Pride and prejudice": {"Writer": "Jane Austen", "Year": 1813,
   "Available": "No"},
               "Gone with the wind": {"Writer": "Margaret Mitchell", "Year": 1936,
   "Available": "Yes"},
               "Crime and punishment": {"Writer": "Fyodor Dostoyevsky", "Year":
   1866, "Available": "No"},
               "Jane eyre": {"Writer": "Charlotte Brontë", "Year": 1847,
   "Available": "Yes"},
               "Clean code": {"Writer": "Robert C. Martin", "Year": 1989,
   "Available": "Yes"},
               "Introduction to algorithms": {"Writer": "Thomas H. Cormen, Charles
   E. Leiserson, "
                                                      "Ronald L. Rivest, Clifford
   Stein", "Year": 1938, "Available": "No"},
               "SICP": {"Writer": "Harold Abelson, Gerald Jay Sussman, Julie
   Sussman", "Year": 1910, "Available": "Yes"},
               "Code complete": {"Writer": "Steve McConnell", "Year": 1993,
   "Available": "No"},
               "The pragmatic programmer": {"Writer": "Andrew Hunt, David Thomas",
   "Year": 1999, "Available": "Yes"},
           }
           if find == "All":
               print('\n\t\t\t\t\t\t\t-------------- RESULT --------------')
               for _ in books:
                   print("\t\t\t\t\t\t\t", _)
           else:
               print('\n\t\t\t\t\t\t\t-------------- RESULT --------------')
               print("\t\t\t\t\t", books[find])


   if __name__ == '__main__':
       find = '100'
       obj = Books_Details   # Object Creation
       while find != '0':
           print("\n\n\n-------------------------------- WELCOME TO LIBRARY
   MANAGEMENT SYSTEM "
```

```
                "--------------------------------\n")

        print("\t\t\t\t\t\t\tEnter the name of Book to Search...
OR\n\t\t\t\t\t\t\tEnter "
              "'All' to view all Books... OR\n\t\t\t\t\t\t\tEnter 0 to Exit\n")

        find = input("\t\t\t\t\t\t\tType here: ")

        if find == '0':
            print("\n\t\t\t\t\t\t\t========================== Thank You!
==========================")

        elif find == 'All':
            obj.book_details(find)

        else:
            try:
                print(obj.book_details(find))
                print()
            except:
                print()
                print("\t\t\t\t\t\t\tEnter a Valid Name!")
                print()
```

4. Result/Output/Writing Summary:

A.

```
C:\Users\krish\AppData\Local\Microsoft\WindowsApps\python3.10.exe C:/Users/krish/Desktop/tailwind/w.py
Enter Roll No. of the Student: 39
Enter Name of the Student: Rishav
Enter Class of the Student: MCA CCD
Student info are as:
Name:  Rishav
Roll:  39
Class:  MCA CCD
```

B.

```
C:\Users\krish\AppData\Local\Microsoft\WindowsApps\python3.10.exe C:/Users/krish/Desktop/tailwind/w.py
Enter Roll No. of the Student: 39
Enter Name of the Student: Rishav
Enter Class of the Student: MCA CCD
Student info are as:
Name:  Rishav
Roll:  39
Class:  MCA CCD



-------------------------------- WELCOME TO LIBRARY MANAGEMENT SYSTEM --------------------------------

                            Enter the name of Book to Search... OR
                            Enter 'All' to view all Books... OR
                            Enter 0 to Exit

                            Type here: The dark room

                            -------------- RESULT --------------
                    {'Writer': 'RK Narayan', 'Year': 1938, 'Available': 'No'}
None
```

Learning outcomes (What I have learned):

1. Learned how to create a class and access it or call it later on.

2. Learned to define a method inside the class.

3. Learned to create a Dictionary and store its key value pair.

4. Learned to use nested Dictionary inside a class method and call it using object.

Evaluation Grid:

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.	Demonstration and Performance (Pre Lab Quiz)		5
2.	Worksheet		10
3.	Post Lab Quiz		5