

UNIVERSITY PARTNER



# Object-Oriented Design and Programming

(5CS019)

SQL files and UML

University Id	: 2228148
Student Name	: Jeron Rajak
Lecturer	: Mr. Raj Shrestha
Word Count	: 419
Group	: L5CG1

## Abstract:

The project Course management system is a desktop-based application made using The java swing components. The application has functionalities that can be beneficial for any educational institution.

---

## Acknowledgment:

I would like to thank the module leaders and the team of Object-Oriented Design and Programming for giving the students an opportunity to build a project that can be beneficial in a real-world scenario.

## Table of Contents:

Screenshots of Tables:.....	2
UML Class Diagram:.....	6

## Table of Figures:

Figure 1: Users Table .....	2
Figure 2: Tutor Table .....	2
Figure 3: Submitted Assignment Table.....	2
Figure 4: Student Table .....	3
Figure 5: Registered students table.....	3
Figure 6: Modules Table .....	3
Figure 7: Marks Table.....	4
Figure 8: Courses Table .....	4
Figure 9: BIT Table .....	4
Figure 10: BIBM Table.....	4
Figure 11: BDS Table .....	5
Figure 12: Assignment Table.....	5
Figure 13: Module Assigned Table .....	5

## Screenshots of Tables:

























				User_Id	Full_Name	Gender	Username	Password	Course	User_Type
<input type="checkbox"/>				2	Jerry Prichet	Male	Jerry	Jerry	BIBM	Student
<input type="checkbox"/>				4	Yami Paudel	Female	Yami	Yami	BIT	Student
<input type="checkbox"/>				5	hemal pant	Female	hemal	hemal	BIT	Student
<input type="checkbox"/>				6	Kailash Parajuli	Male	parajuli	parajuli	BIT	Teacher
<input type="checkbox"/>				7	subash Shrestha	Male	Subash	Subash	BIT	Admin
<input type="checkbox"/>				8	Sumedha Paudel	Female	Sumedha	Sumedha	BIT	Student
<input type="checkbox"/>				10	Prabin Sapkota	Male	Prabin	Prabin	BIBM	Teacher
<input type="checkbox"/>				11	Tom Hanks	Male	Tom	Tom	BIBM	Admin

Figure 1: Users Table

Id	Name	Phone_Number	Address	Sex	Module_Assigned	Date_Of_Birth	Full_Time
13	kailash parajuli	768782734	bhaktapur	Male	ISA	1988-01-23	YES
15	Rakesh Paudel	98347834	kathmandu	Male	ISA	1981-01-10	YES
17	Jerry Lawyer	987572632	Pokhara	Male	OODP	1999-01-10	YES
18	Raj Pradhan	9854365453	pokahara	Male	Concepts AI	1990-12-21	YES
19	Raj Shretha	9854334651	pokahara	Male	OODP	1990-12-21	YES
20	Raju Aryal	9853712643	Ktm	Male	ISA	1990-12-21	YES
21	Krishna Ram	9846577543	Ktm	Male	NMC	1990-12-21	YES

Figure 2: Tutor Table

Id	Assignment_One	Assignment_Two
1	file1	file2
2	file1	file1

Figure 3: Submitted Assignment Table

Id	Student_Name	Semester	Level
1	Manish Maharjan	2	5
2	Newa Shrestha	1	4
3	Granger Rai	2	5
5	Ram Aryal	4	4
6	Ram Shretha	5	6

Figure 4: Student Table

NMC	ISA	OODP	ISP	DSA	AI
Justin Timberlake	Austin Theory	Roman Reigns	Ram Thapa	Jesh Thapa	Yuman Thapa
Ojaswee Rai	Bibek Neupane	Kimber Kardashian	Justin Newa	Pushpa Kamal	Tom Hens
Kush paudel	Karki Ramesh	Kunfu panda	Lunna Walters	Jessy Pinkman	Pinky Thapa
Ojaswee Rai	Kritika Thapa	Jery Ham	Hungary karki	Jenisha rai	Ragnar Lothbroke
Rajendra Rai	Bunty Maharjan	Ganga Naima	Derik Walter	Pokemon Karki	Lothbroke Timbers
Isha Maharjan	dinerys Targerian	Tyrion Iannister	Josh pinkman	Tom Granger	Lex Luther
Nikky Wlaters	Herseys Nuggy	Nuggets hums	Tiffany Jam	Jeremy Suik	Suikka Juna
Chinay Nauma	Naima Pravin	Justin Kerry	Grager junm	Jamuna	Lother
Rajendra Rai	Bunty Maharjan	Ganga Naima	Derik Walter	Jeremy Suik	Suikka Juna
Ojaswee Rai	Kritika Thapa	Justin Kerry	Justin Newa	Jenisha rai	Ragnar Lothbroke
Nikky Wlaters	Herseys Nuggy	Nuggets hums	Ram Thapa	Jeremy Suik	Pinky Thapa

Figure 5: Registered students table

Module_Name	Course_Name	Level	Semester	Credit_Value	Optional_Module
Concepts And technologies AI	BIBM	Level 5	Semester 3	4	YES
Marketing	BIBM	Level 4	Semester 2	4	YES

Figure 6: Modules Table

student_Id	Student Name	Level	Module_1	Module_2	Module_3	Module_4	Module_5	Module_6	Module_7	Module_8
1	Shretha	6	57	61	75	97	36	57	68	82
2	Kailash Parajuli	6	23	32	54	65	87	24	45	43
4	Manish Maharjan	5	34	32	23	12	32	23	12	23
5	Hailey Michaels	6	56	54	43	23	43	54	43	34
6	Jeremy Walters	5	34	23	45	45	34	65	87	56
7	Isha Shijapati	5	34	23	45	45	34	65	87	56
8	Tom henks	5	34	23	45	45	34	65	87	56
9	Krishna paudel	5	34	23	45	45	34	65	87	56
10	Justin Timberlake	5	34	23	45	45	34	65	87	56

Figure 7: Marks Table

Course_Id	Course_Name	No_Of_Modules	Active_Status	Length
4	BIBM	13	NO	4
7	BDS	16	NO	4
8	BIT	16	YES	3

Figure 8: Courses Table

Id	Optional_One	Optional_Two
1	Networking	Robotics
2	Model Designing	Statistics

Figure 9: BIT Table

Id	Optional_One	Optional_Two
1	Organizing Skills	PPD

Figure 10: BIBM Table

Id	Optional_One	Optional_Two
1	Organizing Skills	

Figure 11: BDS Table

Id	Teacher_Name	Module_Name	AssignmentOne	AssignmentTwo
1	Ashish Acharya	NMC	Complete Lab report 7	Complete WorkShop 7
2	Prashant Shrestha	AI	Complete workshop 7	complete tutorial 7
3	Jayesh Khanal	NMC	workshop6	coursework 1
4	Prabin Sapkota	NMC	Tutorial 1	workshop1
5	Manisha Maharjan	AI	Ques 5	workshop 10
7	Subash karki	AI	Tutorial 1	wkshop 2

Figure 12: Assignment Table

Teacher_Name	Module_1	Module_2	Module_3	Module_4
Ashish Acharya	OODP	NMC	IPA	ISA
Prabin Sapkota	OODP	NMC	ISA	ASP
Kush Paudel	ISA	Web.Tech	Database	NMC
Raj Shrestha	OODP	NMC	ISA	Database
Kisha Shrestha	NMC	Database	AI	Big Data
Kriti Parajuli	OODP	Big Data	NMC	Statistics
Jayesh Rajbhandari	OODP			
Ramesh kc	NMC			

Figure 13: Module Assigned Table



## UML Class Diagram:

The UML Class Diagram is a diagram based on the UML(Unified Modeling Language) with the purpose of visually representing a system along with its main actors, artifacts, their operations to maintain vital information about the system.

The UML Class Diagram for the course management system has been provided separately where multiple GUI components have been used to build a desktop application that has the ability to register students, teachers, and admin. The user registration class is responsible to sign up all the users. Without registration, no user can log in to the application. Hence, the user login page cannot exist without the user registration page. They extend to an upper class i.e. JFrame() which is available in the swing library under javax. During login, the user can select their roles and login to that specific dashboard.

The admin plays the most vital role in the system as he/she is responsible for activating or deactivating a particular module and is able to cancel a course completely. Admin has the ability to add modules to a course and assign teachers to the modules. They have the ability to perform CRUD operations on the students, and teachers. The admin can generate a yearly report about the students which will dictate if the student will proceed to the next level or not. The admin dashboard has the ability to assign many tutors to a module. They can generate many reports for the students and the students can view the report once they get generated.

Teachers are another huge part of the system. They have the ability to assign assignments to the students and mark the students with grades. The marks page cannot exist without the assignment page. The teachers mark a particular student once they have completed a year of study. They mark the student in eight modules taught over the year and the marks table is viewed by the admin who generates the report.

The student is a key stakeholder of the system, they have the ability to view teachers who are assigned for particular modules. They can enroll in a particular course and view the modules taught in those courses. A student can enroll in one course at a time. At level 6, they have the ability to select two optional modules. The students have the ability to view assignments posted by the teacher and submit assignments. A student can submit one or many assignments at a time. The students can view the report once they get generated by the administrator.