



Software Development (SE 490)

Presented by: Yassmen Mamash

Grading Methods

Assignments	Midterm Exam	Final Exam	Project +Lab	Total
10%	25%	40%	25%	100%





User



Developer

Software

- ✓ Desktop Application
- ✓ Web Site or Application
- ✓ Mobile Application



Methodology

Software Development life cycle (SDLC)

1. Planning
2. Analysis
3. Design
4. Implementation



SQL : Part 3

T-SQL (Transact-SQL)



One-To-One Relationship



PRIMARY KEY



Id	Name	Code	ManagerID

Department

FOREIGN KEY



PRIMARY KEY



Id	Name

Manager

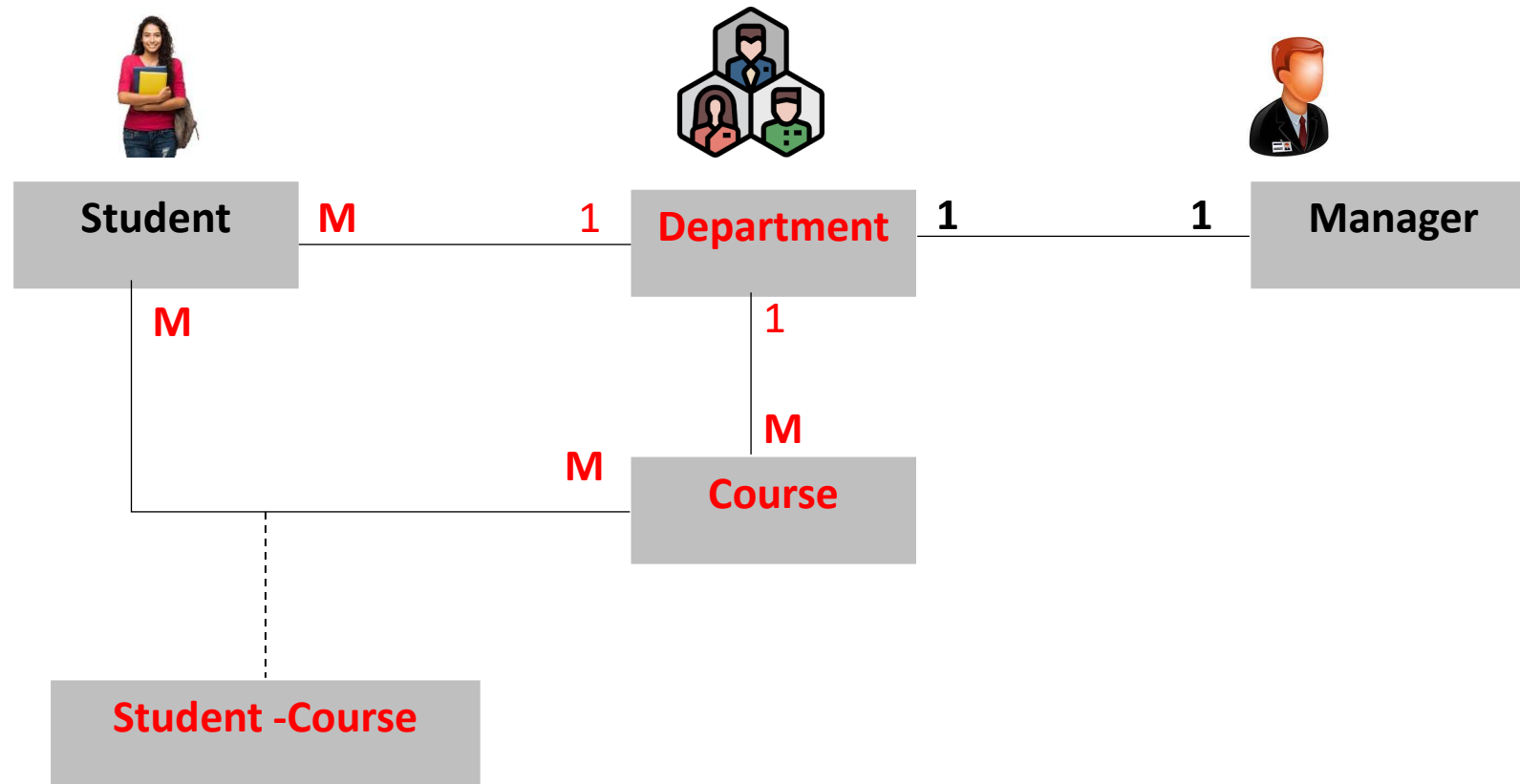
Id	Name	Code

Department

Id	Name	Department ID

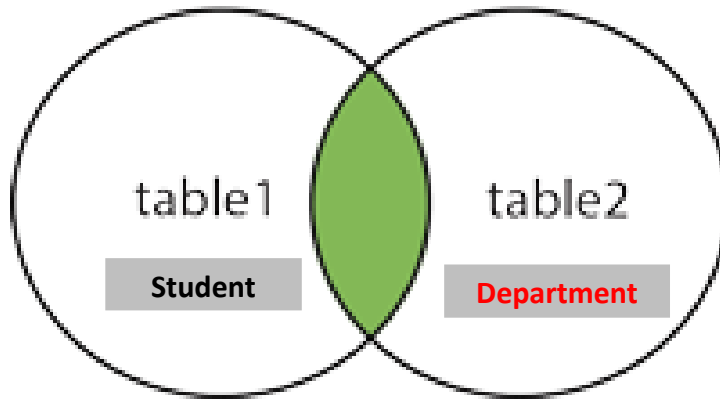
Manager





The **INNER JOIN** keyword selects records that have matching values in both tables.

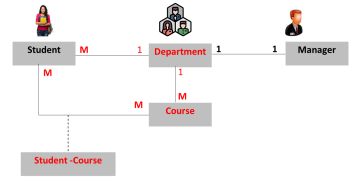
INNER JOIN



```
SELECT * FROM Student
SELECT * FROM Department
```

```
SELECT Student.Name, Department.Name
FROM Student INNER JOIN Department
ON Student.DepartmentID = Department.Id;
```

JOIN Three Tables



Student

Id	Name	Num	Birthday	IsActive	IsDelete	Note	DepartmentID
1	Ali	54	1990-12-12	1	0		1
2	Ahmed	78	1997-1-1	1	0		2
3	slwaa	95	1999-3-3	0	1		2
4	Ismail	15	2000-5-5	1	0		1
5	Fatma	32	2000-9-9	1	0		3

Department

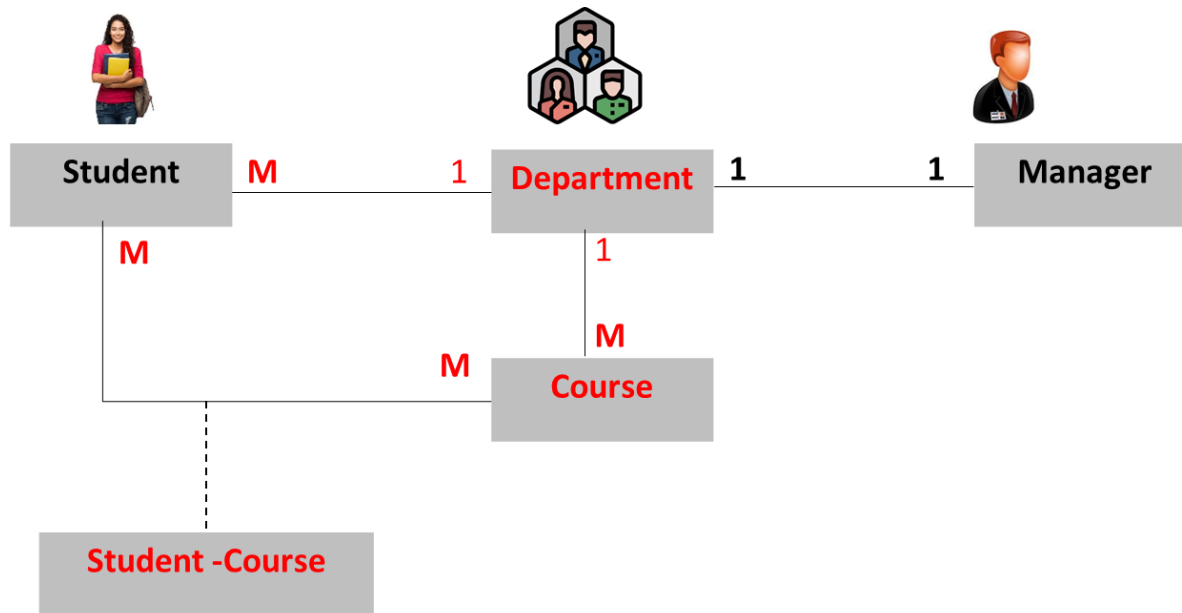
Id	Name	Code
1	Software Engineering	SE
2	Computer science	CS
3	Information System	IS



JOIN Three Tables

```
SELECT * FROM Student_Course
```

```
SELECT Student.Name, Student.Num, Course.Name  
FROM Student-Course  
INNER JOIN Student  
ON Student-Course .StudentID= Student.Id;  
INNER JOIN Course  
ON Student-Course. CourseID = Course.Id;
```



Student

Id	Name	Num	Birthday	IsActive	IsDelete	Note	DepartmentID
1	Ali	54	1990-12-12	1	0		1
2	Ahmed	78	1997-1-1	1	0		2
3	slwaa	95	1999-3-3	0	1		2
4	Ismail	15	2000-5-5	1	0		1
5	Fatma	32	2000-9-9	1	0		3

Course

Id	Name	Code
1	Java	IT101
2	C#	100
	SQL	205

Student-Course

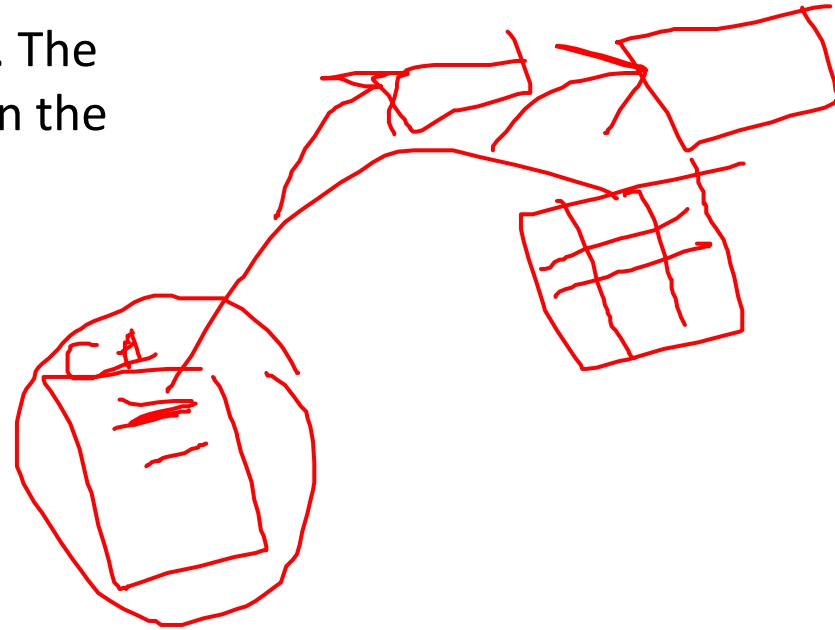
Id	StudentID	CourseID
1	2	1
2	3	1
3	3	3
4	4	2
5	5	1
6	1	2
7	5	3



SQL Views (virtual table)

A view contains rows and columns, just like a real table. The fields in a view are fields from one or more real tables in the database.

```
CREATE VIEW view_name AS  
SELECT column1, column2, ...  
FROM table_name  
WHERE condition;
```



Stored Procedure With One Parameter

```
CREATE PROCEDURE procedure_name  
AS  
sql_statement
```

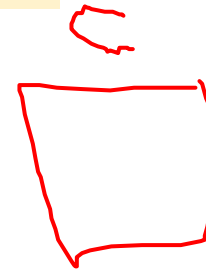
```
EXEC procedure_name;
```

```
CREATE PROCEDURE SelectAllDepartments  
AS  
SELECT * FROM Department
```

```
EXEC SelectAllDepartments
```

```
CREATE PROCEDURE SelectAllCustomers @code nvarchar(30)  
AS  
SELECT * FROM Customers WHERE Name = @code
```

```
EXEC SelectAllCustomers @code = 'SE';
```



Stored Procedure With Multiple Parameters

```
CREATE PROCEDURE SelectAllCustomers @name nvarchar(30), @code nvarchar(10)
AS
SELECT * FROM Department WHERE Name = @name AND Code = @code
```

```
EXEC Department @name= 'Information System', @code= 'IS';
```



SQL Comments

- Single Line Comments

--Select all:

```
SELECT * FROM Customers;      SELECT * FROM Customers -- WHERE Id=5;
```

- Multi-line Comments

```
/*Select all the columns  
of all the records  
in the Customers table:*/  
SELECT * FROM Customers;
```