

[Normalization]

* We can put everything in single table
Instead of Multiple table



Advantages

↳ Retrieval is fast (No Join operation)

Disadvantages

↳ Redundancy of data

↳ Anomalies may arise

Insertion Deletion Updation

* Normalization is done to remove these problems

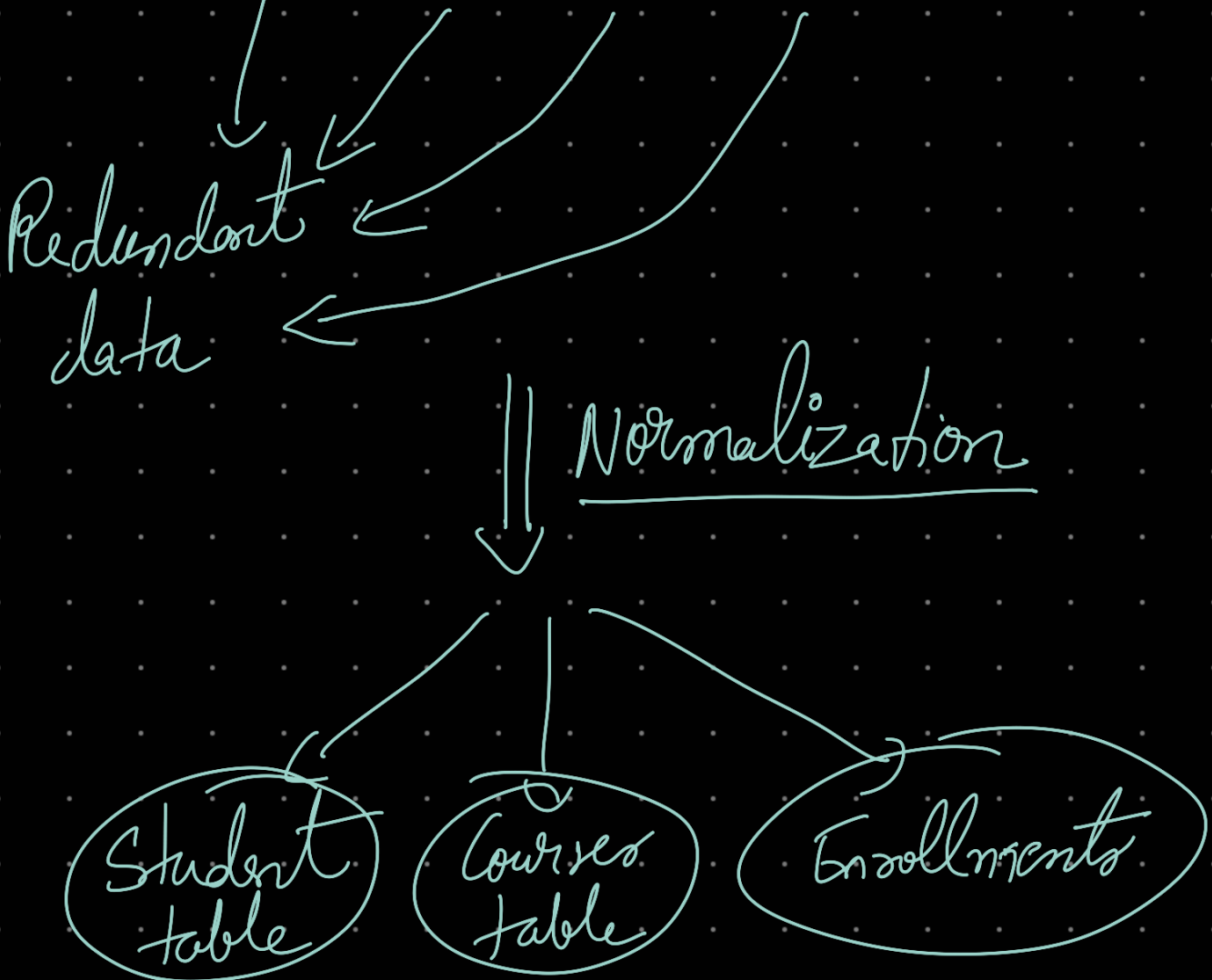


After converting ER \rightarrow tables, it's important to Normalize each table before storing it using SQL.

E.g

javascript Copy code

StudentID	StudentName	CourseID	CourseName	Instructor
1	John Doe	101	Math	Prof. Smith
1	John Doe	102	Physics	Dr. Brown
2	Jane Roe	101	Math	Prof. Smith



Students:

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StudentID	StudentName
1	John Doe
2	Jane Roe



Courses:

javascript

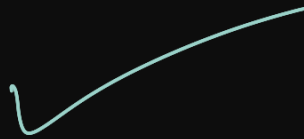
CourseID	CourseName	Instructor
101	Math	Prof. Smith
102	Physics	Dr. Brown



Enrollments:

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StudentID	CourseID
1	101
1	102
2	101



- * Minimized Redundancy.
- * Query performance could be improved
- * Maintaining tables is easy