
THIS DOCUMENT COVERS

A.C.I.D

- Atomic Apply all update or none of it.
- Consistency update must result in valid data
- Isolation
- Durability Once successfully written data persists and survives crashes etc.

C.R.U.D.

- Create
- Read
- Update
- Delete

Compare and contrast normalized and denormalized databases

Normalized databases minimise redundancy

Denormalized databases introduce redundancy to improve read time by reducing the number of joins

Risk and Pricing Solutions

Joins

StudentId	StudentName
1	Kenny Wilson
2	Robert Turnbull
3	Milly Vanilly

StudentCourse

CourseId	StudentId
1	1
1	2
2	1
2	2

Courses

CourseID	CourseName	Teacherid
1	Algorithms	1
2	Calculus	2

Write a query to show a list of all students and courses

```
select S.StudentName, C.CourseName from StudentCourse SC
JOIN Courses C ON SC.CourseId = C.CourseId
JOIN Students S on S.StudentId = SC.StudentId
```

StudentName	CourseName
Kenny Wilson	Algorithms
Robert Turnbull	Algorithms
Kenny Wilson	Calculus
Robert Turnbull	Calculus