Data visualization with advanced Excel

Introduction to joins

Introduction to joins

Introduction to joins

- **What are joins and how are they used within a relational database?**

  Joins allow two different rows from different tables to come together to become one large row containing the values from both rows.

Introduction to joins

Vlookup

- Are types of relationships

- Allow us to append related data to the end of a row

Introduction to joins

Joins

- Through the primary and foreign key bridges

- Preserve the integrity of table 1

- Prevents the need to store data in more than 1 table

Introduction to joins

Joins

If we did not have joins, data would have to be captured in both tables as opposed to only one.

Introduction to joins

Joins

There are two primary types of joins:

- Inner join
- Outer Join

Introduction to joins

Joins

- **Inner join**

  Refers to the intersection of the two tables.

Introduction to joins

Joins

- **Inner join**

Introduction to joins

Joins

- **Inner join**

A | B
3 | 3
4 | 4

A   B

1   3   5
2   4   6
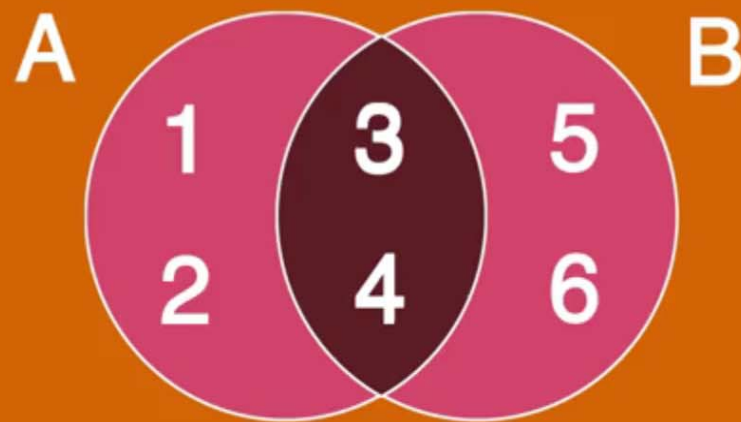
Introduction to joins

Joins

- **Inner join**

Driver	ID#	Vehicle license
John	01	5348908
Cindy	03	9348450

Introduction to joins

Joins

- **Outer join**

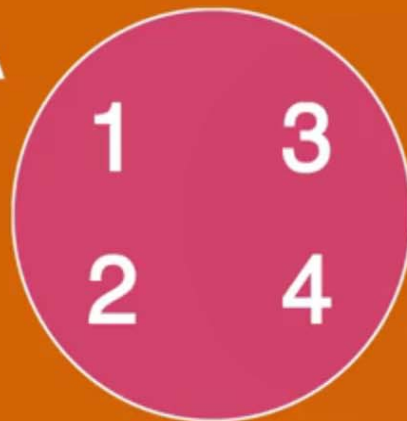 Is the union of A and B, all the columns in A and all the columns in B.

  If something in A does not have a corresponding data in B, then the B portion is null, and vice versa.
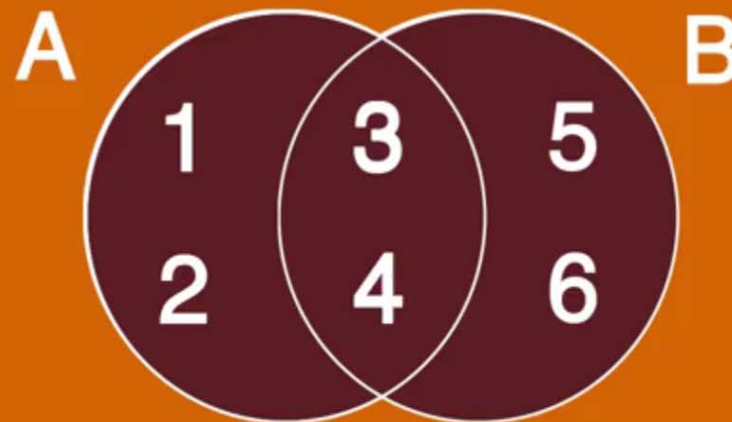
Introduction to joins

Joins

- **Outer join**

A

1 3

2 4

B

3 5

4 6

Introduction to joins

- **Outer join**

A   B

1   3   5
2   4   6

A I B
1 I null
2 I null
3 I 3
4 I 4
null I 5
null I 6

Introduction to joins

- **Outer join**

A   B

1   3   5

2   4   6

A I B
1 I null
2 I null
3 I 3
4 I 4
null I 5
null I 6

Introduction to joins

Joins

- **Outer join**

A   B

$$1 \quad 3 \quad 5$$
$$2 \quad 4 \quad 6$$

A | B
1 | null
2 | null
3 | 3
4 | 4
null | 5
null | 6

Introduction to joins

Joins

- **Outer join**

Driver	Gender	ID#	Vehicle license	Make	Model
John	M	01	5348908	Toyota	Prius
Null	null	01	9348450	Audi	A3
Peter	M	02	null	null	null
Cindy	F	03	2349824	BMW	M4

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Joins

- **Outer join**
  - Left outer join
  - Right outer join

Introduction to joins

Joins

- **Outer join – Left outer join**

  Will give all columns in A, plus any common columns in B.

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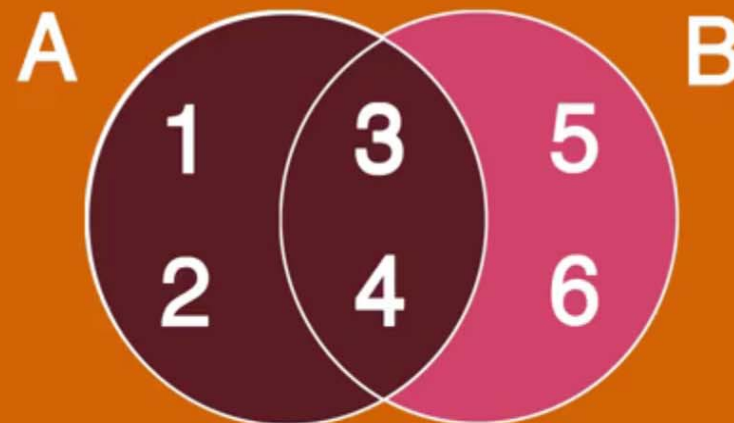
Joins

- **Outer join – Left outer join**

A   1   3   5   B

2   4   6

```
A I B
1 I null
2 I null
3 I 3
4 I 4
```

Introduction to joins

- **Outer join – Left outer join**

A   1   3   5   B
     2   4   6

A	B
1	null
2	null
3	3
4	4

Introduction to joins

Joins

- Outer join – Left outer join

A | B
1 | null
2 | null
3 | 3
4 | 4

Introduction to joins
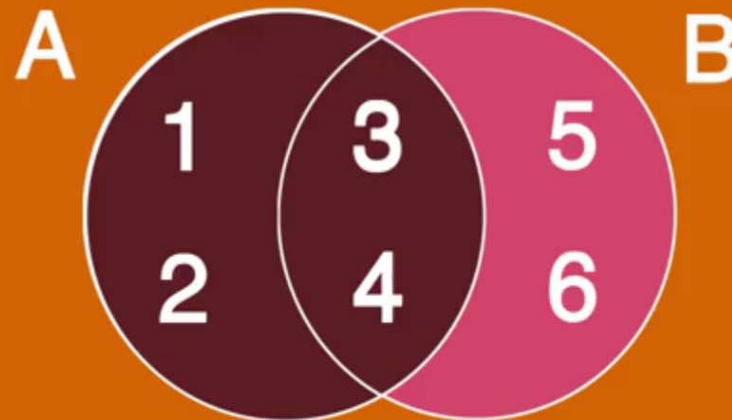
Joins

- **Outer join – Left outer join**

Driver	Gender	ID#	Vehicle license	Make	Model
John	M	01	5348908	Toyota	Prius
Peter	M	02	null	null	null
Cindy	F	03	2349824	BMW	M4

Introduction to joins

Joins

- **Outer join – Right outer join**

  Will give all columns in Table B, plus any common columns in Table A.

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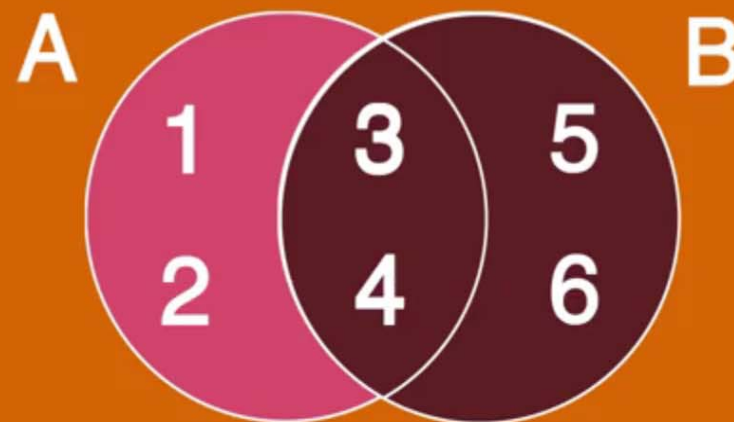
Joins

- Outer join – Right outer join

A

| 1 | 3 |
| 2 | 4 |

B

| 3 | 5 |
| 4 | 6 |

Introduction to joins

- **Outer join – Right outer join**

A | B
3 | 3
4 | 4
null | 5
null | 6

Introduction to joins

Joins

- **Outer join – Right outer join**

A	B
3	3
4	4
null	5
null	6
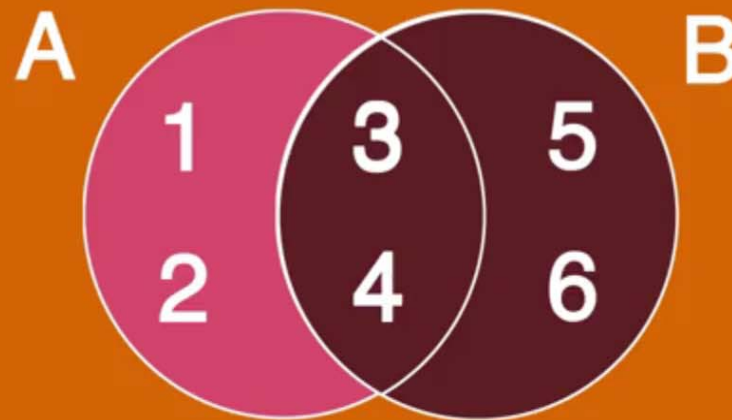
Introduction to joins

Joins

In this video:

- The concept of joins
- Explored different types of joins