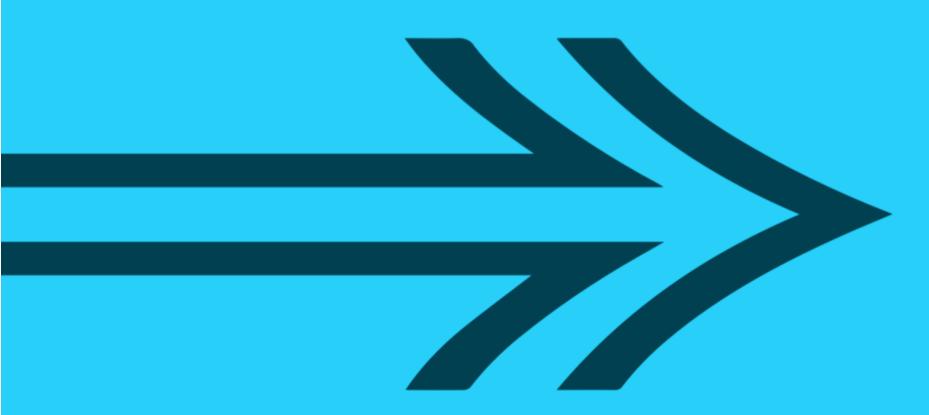


# Fundamental Concepts in Data Insight:

Demo: Relational Data & SQL

Fundamentals for a General Audience





QA Ltd. owns the copyright and other intellectual property rights of this material and asserts its moral rights as the author. All rights reserved.



## How do you define data schema?

```
CREATE TABLE evidence (
   EvidenceID INT PRIMARY KEY,
   Value FLOAT,
   Category TEXT,
   Report TEXT,
   Department TEXT
);
```



### How do you insert data?

#### INSERT INTO evidence VALUES

```
(1, 1000, "Money", "Found at X, Person Y", "Vice"),
(2, 2500, "Money", "Found at A, Person Y", "Vice"),
(3, 500, "Weapons", "Found at B, Person Z", "Terrorism");
```



## How do you query for data?

```
SELECT *
FROM evidence
```

```
pd.read_sql("SELECT * FROM evidence", db)
```

	EvidenceID	Value	Category	Report	Department
0	1	1000.0	Money	Found at X, Person Y	Vice
1	2	2500.0	Money	Found at A, Person Y	Vice
2	3	500.0	Weapons	Found at B, Person Z	Terrorism



## How do you peform analytical queries?

```
pd.read_sql("""

SELECT Category, AVG(Value)
FROM evidence
GROUP BY Category
""", db)
```

		Category	AVG(Value)
	0	Money	1750.0
•	1	Weapons	500.0