

# Data Quality Problems

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graph TD; A["Data Quality Problems"] --> B["Single Source"]; A --> C["Multi Source"]; B --> D["Entity Level"]; B --> E["Attribute Level"]; C --> F["Entity Level"]; C --> G["Attribute Level"]; D --> D1["- missing attributes"]; D --> D2["- unsatisfied constraints"]; D --> D3["- varying entity nesting"]; E --> E1["- missing values"]; E --> E2["- misspellings"]; F --> F1["- different degree of normalization"]; F --> F2["- different formats"]; F --> F3["- naming conflicts"]; F --> F4["- structural conflicts"]; G --> G1["- different data types"]; G --> G2["- conflicting manifestations"]; G --> G3["- varying wordings"]; G --> G4["- varying languages"]; G --> G5["- varying units"];
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## Single Source

### Entity Level

- missing attributes
- unsatisfied constraints
- varying entity nesting

### Attribute Level

- missing values
- misspellings

## Multi Source

### Entity Level

- different degree of normalization
- different formats
- naming conflicts
- structural conflicts

### Attribute Level

- different data types
- conflicting manifestations
- varying wordings
- varying languages
- varying units