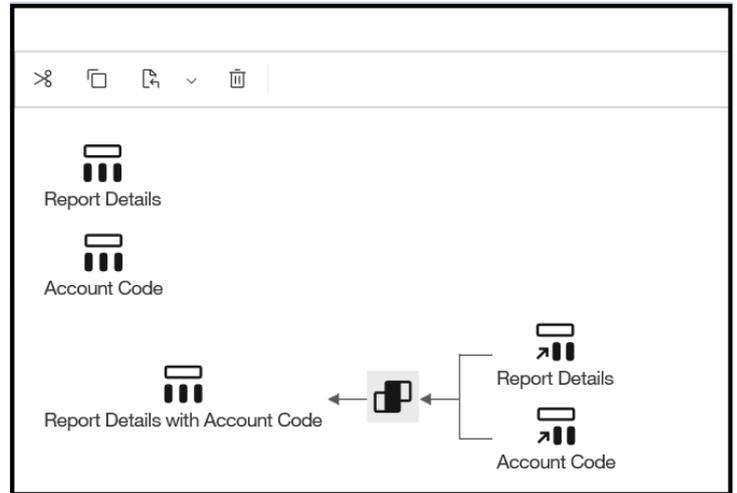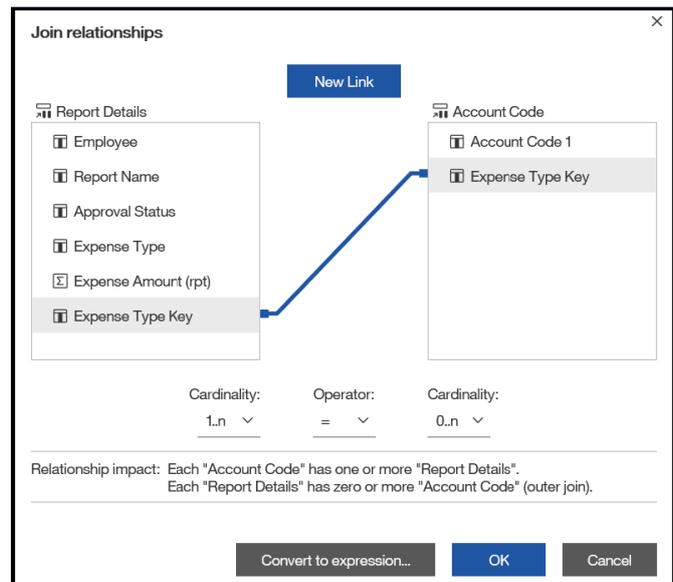# Cardinality explained (for advanced users)

This document was specially created for advanced users who want to gain a better understanding of joins and cardinality when building reports in Cognos 11.

After joining two queries, you then define the join relationship and its cardinality.
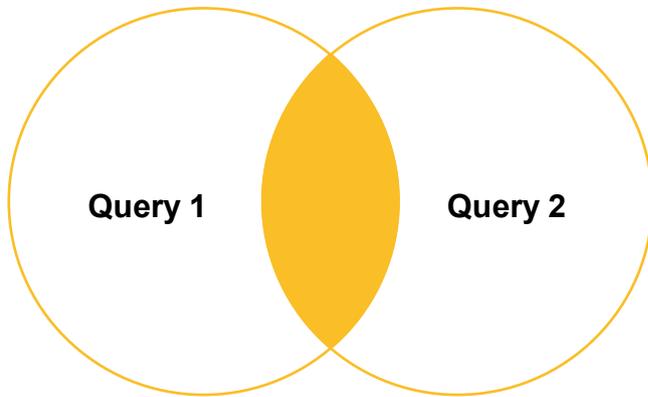**Cardinality refers to the unique relationship between the data values that have been joined.**

In this scenario, a join has been created to add the account code to expense details. The join relationship has been defined using the Expense Type Key which calls for a cardinality relationship of 1:n to 0:n. The relationship impact then reads that each account code will have one or more expenses and each expense will have zero or more account codes.

Create a Join ⟶ Define Join Relationship ⟶ Create Cardinality
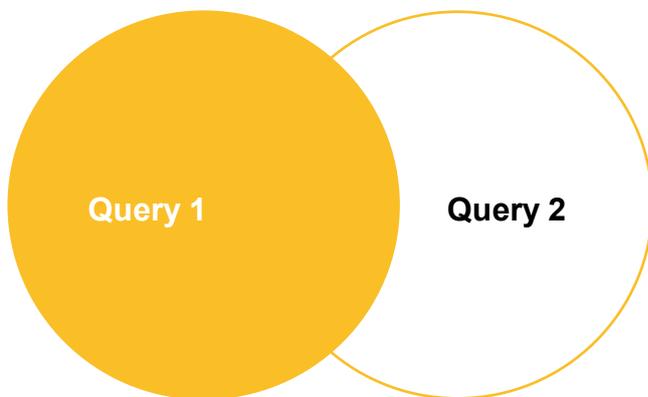
Cardinality relationships can be expressed as:

One-to-one (1:1) – this data item has one and only one matching record

One-to-many (1:n) – this data item has one or more than one matching record(s)

Zero-to-one (0:1) – this data item has zero or only one matching record

Zero-to-many (0:n) – this data item has zero or more than one matching record(s)

For additional reporting resources, visit the Reporting Hub on SAP Concur Community.

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SAP® Concur® is the world's leading brand for integrated travel, expense, and invoice management solutions, driven by a relentless pursuit to simplify and automate these everyday processes. The highly-rated SAP® Concur® mobile app guides employees through business trips, charges are directly populated into expense reports, and invoice approvals are automated. By integrating near real-time data and using AI to analyze transactions, businesses can see what they're spending, improve compliance, and avoid possible blind spots in the budget. SAP Concur solutions help eliminate yesterday's tedious tasks, make today's work easier, and support businesses to run at their best.

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