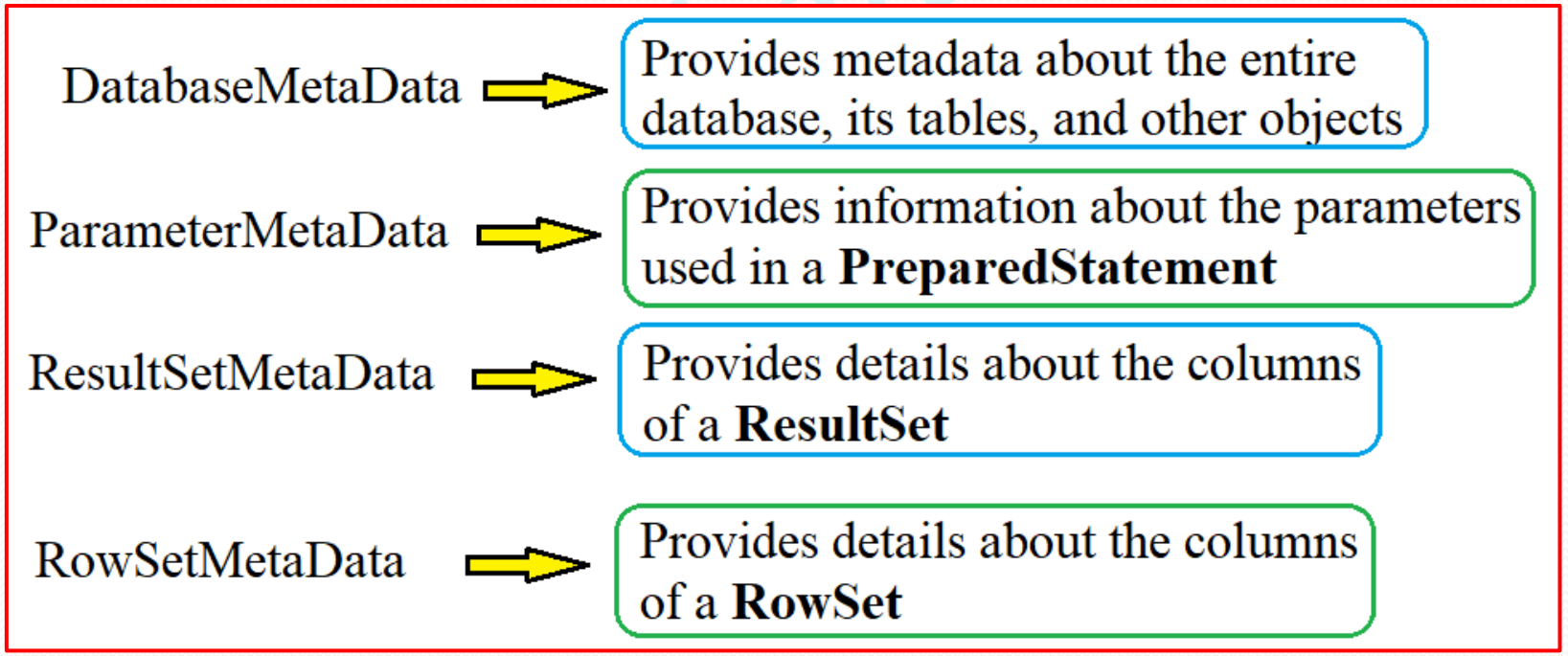
MetaData in JDBC

MetaData

- Data about data is called metadata knowing more info about existing info is called metadata.
- In JDBC we can use metadata to gather more info about underlying Database and its tables.
- JDBC support 4 modes of metadata programming



DatabaseMetadata

Method Name	Description
getDatabaseProductName()	Returns the name of the database product
getDatabaseProductVersion()	Returns the version of the database product
getDriverName()	Retrieves the name of the JDBC driver used.
supportsStoredProcedures()	Checks if the database supports stored procedures.

ParameterMetadata

Method Name	Description
getParameterCount()	Returns the number of parameters in the PreparedStatement.
getParameterType(int param)	Retrieves the SQL data type of the specified parameter.
getParameterMode(int param)	Returns the mode of the parameter (IN, OUT, INOUT).
isNullable(int param)	Checks if the specified parameter can accept NULL values.

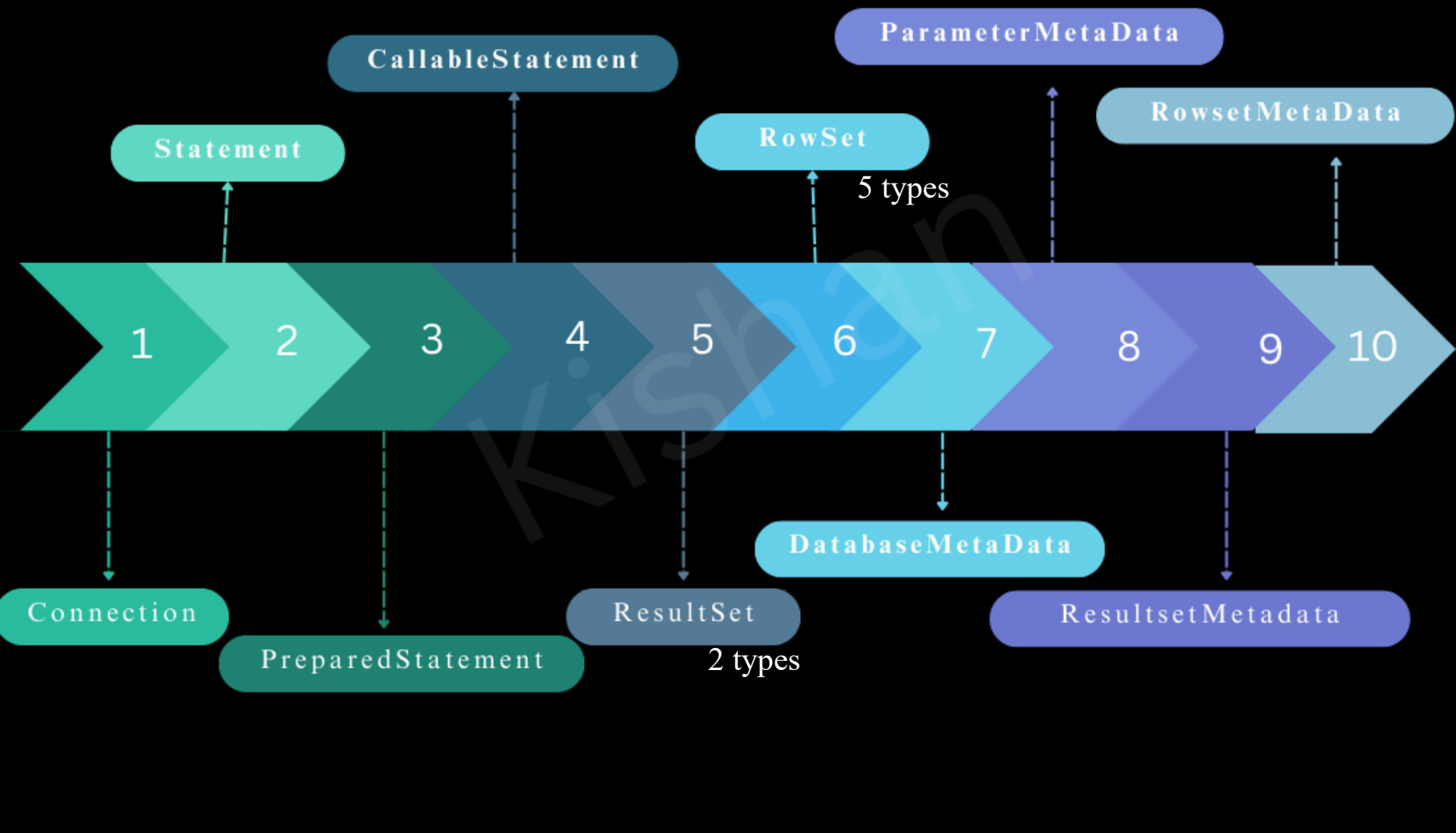
ResultSetMetaData

Method Name	Description
getColumnCount()	Returns the number of columns in the ResultSet.
getColumnName(int column)	Retrieves the name of the specified column in the ResultSet
getColumnDisplaySize(int column)	Returns the maximum width of the column.
isAutoIncrement(int column)	Checks if the column value is auto-incremented by the database.

RowSetMetaData

Method Name	Description
getColumnCount()	Returns the number of columns in the RowSet.
getColumnName(int column)	Retrieves the name of the specified column in the RowSet
getColumnType(int column)	Returns the SQL data type of the specified column in the RowSet

SUMMARY OF OBJECTS CREATED IN JDBC



Streams with JDBC

Working with SQL types

- In JDBC, streams are used to handle large amounts of data, such as large text files or binary files.
- JDBC supports two primary types of streams

Byte Streams

- Used for binary data such as images, videos, or executable files , textual data
- Managed using InputStream and OutputStream classes.

Character Streams

- Used for character data, such as large text files.
- Managed using Reader and Writer classes.

BLOB Interface (Binary Large Object):

- BLOB is used to store binary data like images, audio, or video files in a database.
- A BLOB can hold a large amount of data, making it ideal for storing multimedia files.

CLOB Interface(Character Large Object):

- CLOB is used to store large character-based data, such as large text files, HTML files, or even large blocks of XML data.
- A CLOB can hold up to gigabytes of character data, making it suitable for textual information.