

Q³i₂ - IBM9I03G IBM i2 Analyst's Notebook Importing & Analysis

Course Description

Overview

This course enables users of all levels to understand essential concepts and features required to create and analyse associative and temporal charts.

This course focuses on importing and analysis within Analyst's Notebook and how to use these two tools together. This includes:

- Creating Conditional Formatting Specifications.
- Planning an Import.
- Import information contained in a Text File.
- Create a variety of Association and Temporal Charts Using the Importer.
- Using Social Network Analysis.

The scenario-driven exercises include example data from open-sourced data sets.

The Searching and Analytical exercises includes using Analytical Attributes and Selection Sets and more advanced features of the Find Linked and Find Path tool.

The exercise order may change depending on the audience and whether optional exercises (Google Earth and Celebrite imports) are included.

Course Objectives

Upon completion of this course, users should be able to:

- Create and modify Conditional Formatting Specifications.
- Use Regular Expressions, Analytical Attributes and Selection Sets to analyse data.
- Use advanced features of Find Linked and Find Path.
- Create and modify Import Specifications to create associative and temporal charts.
- Import text files.
- Use Column Actions to cleanse and standardise data when being imported.

Intended Audience

This course is suitable for the following audiences:

- Law Enforcement Agencies
- Intelligence Analysts
- Investigators
- Researchers
- Accountants
- Auditors
- Prosecutors, Lawyers, Solicitors
- Fraud Analysts
- National Security
- Telecommunications, Insurance, Banking, Retail industry
- Customer Intelligence Analysts

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Prerequisites

The prerequisites for taking this course are:

- Q³i₂ - IBM9I02G IBM i2 Analyst's Notebook Essentials **OR** IBM i2 Analyst's Notebook Essentials 9i02G course
- Comfortable using the Windows operating system.
- Basic understanding of analytical techniques.

Follow-On Courses

This course is a prerequisite for the following courses:

- Q³i₂ - IBM9I03G IBM i2 Analyst's Notebook Intermediate
- Q³i₂ - IBM i2 iBase User course
- Q³i₂ - IBM i2 iBridge User course

Course Elements

Exercises in this course are presented using the following elements:

Guided Exercises

Raw data is provided and students are guided through the process to solve the scenarios with detailed step-by-step instructions to obtain the required results.

The scenarios include multiple entities and links to ensure repetition and thereby reinforce the functionality of i2 Analyst's Notebook.

Guided Error Handling Exercises

In some cases, the students will be guided towards forcing errors or bad charting practices. These are designed to show how to fix the error or chart the information a different way.

Visualisation Techniques

After learning the basics involved in creating associative and temporal charts, students will be asked to use functions already taught in subsequent exercises. This ensures repetition learnt early can be applied again in different situations, such as using searching functions to modify chart elements to emphasise certain areas of the chart which can aid in visually analysing and briefing from a chart.

Revision

After each exercise, the students will be asked a series of questions to reinforce their knowledge.

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Estimated Training Schedule

Note: Course speed will vary depending on individual's computer skills, willingness and prior knowledge.

Day 1.

1. Conditional Formatting

Scenario: Incidents and Crimes in QLD

- Create a conditional formatting specification to change all entities based on Attribute Value
- Duplicate and modify a conditional formatting specification to exclude all non-Event semantic entities and change all remaining Event semantic entities based on Label Text Analysis Attributes.
- Create a conditional formatting specification to modify link colours based on specific Label Text Analysis Attribute values.
- **Optional Revision**
 - Create conditional formatting specifications to change icons based on Vehicle Body Style and colour based on Vehicle Colour attributes.
 - Create conditional formatting specification to ignore all non-phone semantic entities and change phone icons to mobile phones if they start with 04, 614 or (04).

Scenario: Telephone Call Summary

- Create conditional formatting specification to change link width to linear or logarithmic based on link occurrences.

2. Advanced Analysis

Scenario: Incidents and Crimes in QLD

- Complex Find Text – using Regular Expressions and Wildcard searches.
- Visual Search – including analysis attributes.
- Bar Charts, Histograms & Heat Matrix searches.
- List Items, Analysis Attributes & Excel.
- Combining searches.
- Using Selection Sets to compare profiles.
- Advanced Find Linked & Find Path – adding Bar Charts on entities, links, arrow direction and Date/Time.
- **Optional Revision**

3. Social Network Analysis

Scenario: Facebook Friends Network

- Calculate SNA to identify potential nodes with conditional formatting to find highest Betweenness, Closeness, Degree, Eigenvector, K-Core.
- Calculate SNA with link directions.
- Calculate SNA with link weightings.
- **Optional Revision**

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Day 2

4. Cleansing Import Data With Column Actions

Scenario: Telephone Subscriber Details

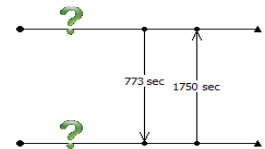
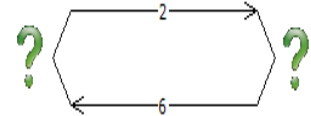


- Use Column Action to use different icon types based on Subscriber Type (Gender or Organisation Type). Compares use of Find & Replace Text, Replace Value and Replace from Substitution File.
- Create simple Substitution File.
- Use Column Action (Split Text based on a character) to use different phone icon types based on whether the phone starts with 04 and is 10 digits long (Mobile Phone) or not (Telephone).
- Use Column Action to copy the Address field and remove line breaks and place a space after comma characters to use in the Address identity field.
- Create an import specification that links the Subscriber to the Phone and to the Billing Address with attributes on the Phone and Subscriber link.

5. Cleansing Import Data With Column Actions (continuation)

Scenario: Telephone Calls

- Use column actions to remove unnecessary characters from the phone number (such as brackets, spaces, #,).
- Use column actions to remove dial out of country code prefixes (0011).
- Use column actions to standardise Australian phone numbers that were listed with 61 country code.
- Add leading zero prefixes with conditions using regular expressions.
- Use Column Action to use different phone icon types based on whether the phone starts with 04 and is 10 digits long (Mobile Phone) or not (Telephone).
- Create an import specification that shows a frequency count between the source phone and destination phone and run the file on 3 separate files in the same chart.
- Duplicate the association telephone call import specification and create a timeline import specification.
- Use a column action to convert a call duration time value into number of seconds to use as the label on the telephone call links.
- Analyse the chart.



6. Importing Text Files

Scenario: People Associations

- Create import specification that links the people to each other with their Date of Birth added as attributes and the people's gender as their entity type.
- **Optional Revision**

