

Introduction to NVivo

V1.0)

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Introduction

Welcome to this IT Training course which introduces the NVivo software package. NVivo is a qualitative data analysis computer software package produced by QSR International. A qualitative data analysis package allows users to classify, and sort thousands of non-numerical pieces of data, such as documents, audio files and images. It also allows us to present this sorted data in various other forms such as charts and models. The package is used extensively through academia, government and in commercial organisations.

Objectives

On successful completion of this course participants will be able to:

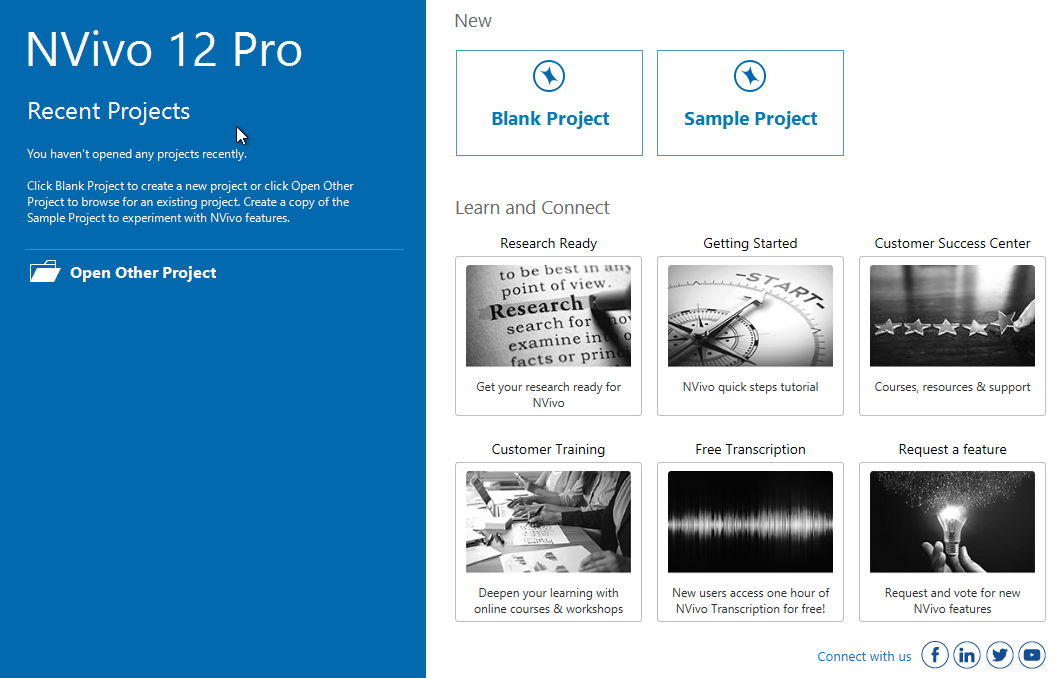
* Become familiar with the NVivo workspace and help features
* Identity nodes and case nodes and classify them
* Recognise attributes and put these into the project
* Understand and import internal and external sources
* Apply basic codes to source files, and view coding stripes
* Run and save queries
* Display information in chart form
* Present material and findings in various formats

Introduction to NVivo

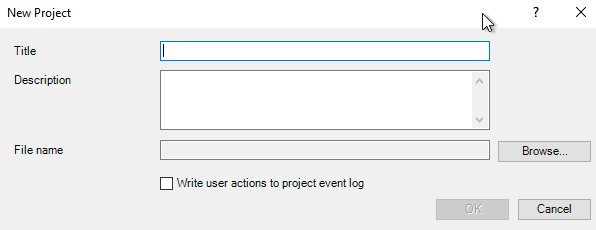
# Starting NVivo

NVivo is available on your Start Menu. Click on the Windows start button on the bottom left, then click “All Programs”. Look for “QSR” then the “NVivo 12” group and finally click NVivo 12 to open the program.

The welcome screen refers us to “Projects” (which have the file extension “.nvp”) – these are NVivo’s fundamental units. If we have started a project, then we can click this on the left-hand side. Otherwise, we should click the “New Project” button at the top of the screen:



Clicking on the New Project allows us to create a brand-new project where a Title, Description and filename can be created. It is good practice to add a description whenever we have the opportunity as it can be a useful mnemonic for later. Normally, a project file will be saved into the My Documents folder, but a different location can be specified.

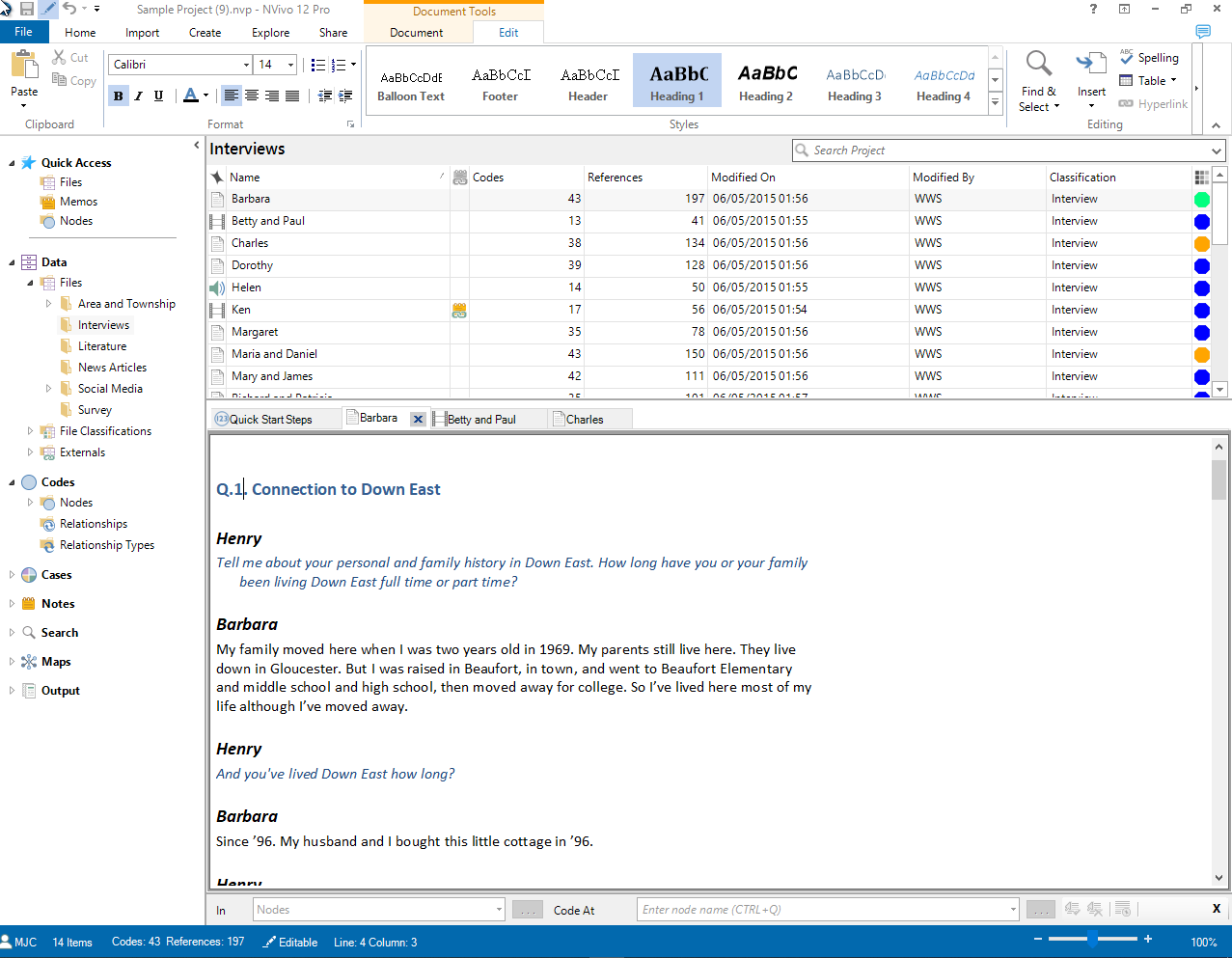


Please note that NVivo projects are not backward compatible. The newest version will open projects created in older versions of the software, but older versions of NVivo will **not** open projects created in the current version.

**Exercise: Opening a Training Project**On this course, some training files (about volunteering) have been provided for you – your tutor will advise on how to obtain these. Open NVivo and start a new project called “Training\_Project”

# The NVivo window

The NVivo window can be split into several different areas:



* The title bar is along the top as well as the ribbon area. The ribbon area is shown in the top middle of the screen, and it has functionality like Word 2007/2010/2013. Some older versions of NVivo have a menu-driven screen in its place.
* The Navigation view is down the left-hand side of the screen. It allows us to access sources, nodes, etc. with one click (bottom) and allows us to create file folders for the individual structures (i.e. sources, nodes etc.)
* Moving to the right of the screen, there is a Find bar just below the ribbon for finding individual details.
* Contents of individual files are shown in the List view. In the screenshot above, this is the Interviews section.
* Individual files are shown in the Detail view. In the example above, an interview is shown here.
* There is a quick coding area shown just below the interview – it is shown in grey.
* Finally, there is a status bar at the bottom of the screen.

Note that extensive help and tutorials are also available through the Help menu on the top right side of the screen, and from the QSR International website.

# Key concepts

NVivo is a qualitative data analysis tool which allows us to organise, analyse and visualise information as part of research projects. Its fundamental base unit is known as a **project**, and the project uses a series of fundamental building blocks. There are three important ones to note here:

##### Your own research ideas/themes for your project (**nodes**)

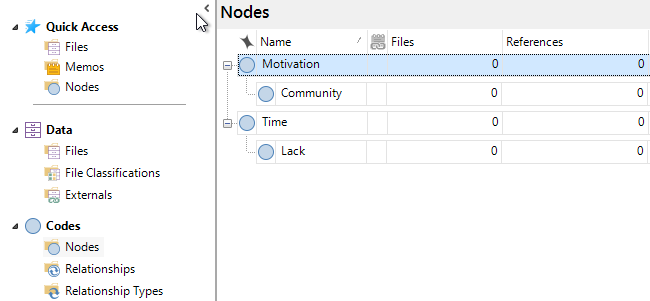
##### People and organisations with whom you have interacted (**cases)**

##### Your own qualitative data project files (**files**)

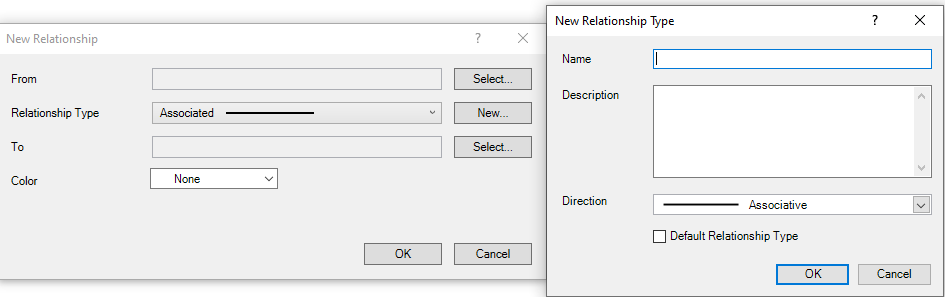
NVivo allows you to connect your nodes and cases with either all or part of your source files. From these connections, it can produce various charts, graphs, and tables about your project.  
We start with nodes (which are part of a structure called codes) and cases.

# Nodes, Cases and Relationships

Nodes and cases are created in the same way, by clicking on the appropriate icon under the “Create” tab. Sub-nodes can be created (just like a directory structure) by clicking on the “parent” (original) node and then clicking “Create Node”.  
  
**Exercise:** Try creating some cases and nodes for your project, such as Assumptions, Time, Goals and Contexts. What sub-nodes could there be? Also, create some cases based on the files you were given.

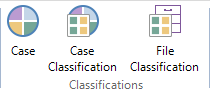
You will find your created nodes and cases in the Nodes section of the Navigation area.   
  


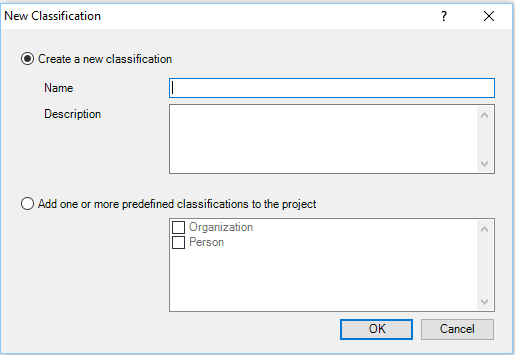
It is also possible to define relationships between nodes and cases. This is done via the New Relationship icon. Once there, after selecting the required nodes, you also declare the type of relationship: i.e. whether there is an associative relationship (no direction), is one-way only or is symmetrical (as shown below):

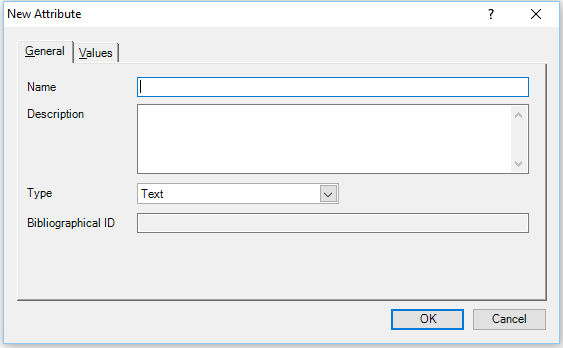


# Classifications and Attributes

NVivo has built in structures which allow us to associate pre-defined types about the sources and nodes that we have imported or created. These are known as **classifications,** and can be found in the Navigation View.

Located in the Create tab, the case classification tab allows us to classify organisations and individual people in the study. We only do this once at the start of the project by creating one singular Person classification and then associating each person with that single classification.

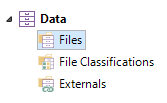
Once the Person classification has been added to your project, classify each case added to your project by classified by right clicking on it, selecting ‘Classification’, then ‘Person’ (the only option).   
  
**Exercise:** Add the Person classification to your Project, and assign Person appropriately.

The Person classification is important as it contains several variables which are known as **attributes**. In research, an attribute is a variable which describes a person. The default attributes for a person in NVivo include name, sex, and age group, and we can then add further attributes which relate to the research we are doing. For example, in a medical study we could add an attribute as to whether a person smoked or not.   
  
In NVivo, we can add attributes via the Create tab (as per the icon shown above). As usual, a name should be added, but we can also add its type. Generally, this will be a text variable but numbers, date/time and Boolean variables can also be added here.

Once all the required attributes have been added into the Person type, we then add the attributes about each person to the project. This is done via a classification sheet, which can be found by double clicking the Person classification. This classification sheet is similar in appearance to a spreadsheet.

**Exercise:** Try adding data to a Classification sheet.  
  
Note that if you have your information in a spreadsheet, there is a wizard which allows you to import your file directly into NVivo. However, if you use this, NVivo will attempt to “best guess” types and attributes – it may not be 100% perfect.

# Files

The qualitative data files which form a part of your project are also known as files in NVivo. There are two sorts of file that NVivo can embed (place) into your project - internal (under Files) and external (under Externals).

* Internal filesinclude Word documents, Excel files, images, PDFs, audio files and video files. NVivo allows you to view, and edit these files directly, and you can also create document files in the program.

Note that audio and video files can also be embedded in the same way but be careful! When you embed files, the size of the project file increases accordingly and if you have several, it might be better to treat these files as external sources.

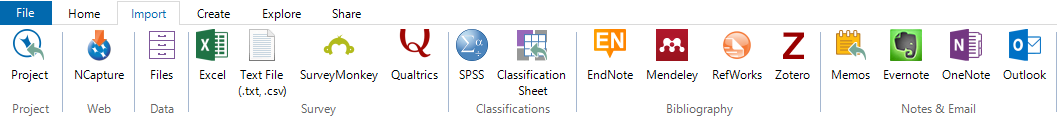
* Externals are those that cannot be embedded into the project, such as webpages, books, newspaper articles (and the links to them). There are however some file types which cannot be directly embedded such as PowerPoint presentations.

Note however that if you converted the PowerPoint presentation to PDF, you could embed this file directly.

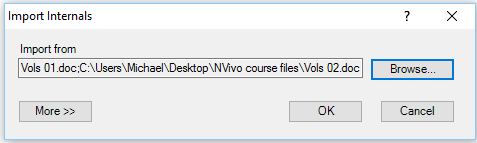
Files (as well as nodes and cases) can also have folder (directory-like) structures associated with them, and they can also be classified. File classification works in the same way as case classification, although there are over 50 different classifications such as Blog, Legal Document, Focus Groups, and Interviews.

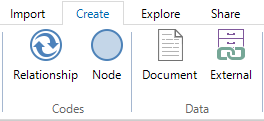
# Importing Internal and External Files

**Internal** files can be imported via the Import tab. The method that NVivo uses to import sources is dependent on the file type and program. NVivo can import survey data from Survey Monkey, as well as other packages such as OneNote and Outlook.

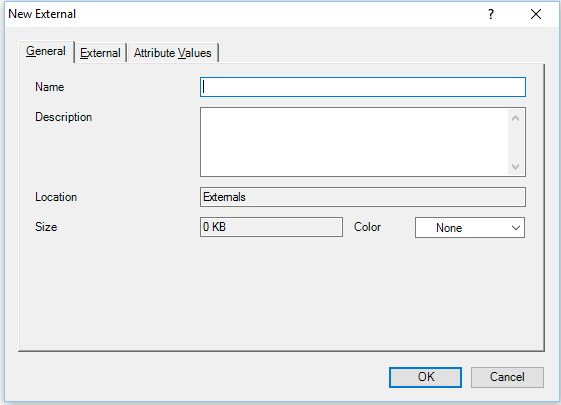
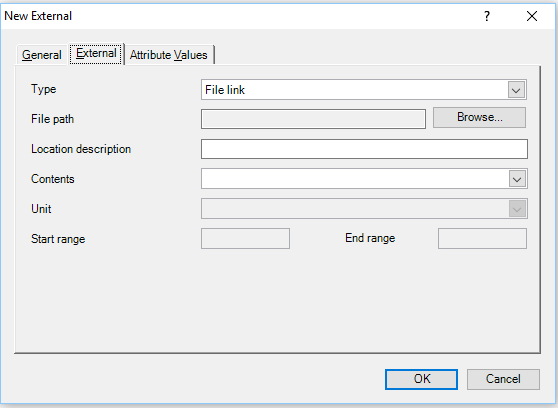


After selecting the appropriate file type, select the appropriate files and click Ok. One or more files can be selected in this way; a dialogue box will indicate the files to be imported:



**External** files can be brought in via the External icon located in the Create tab.

The resulting dialogue box allows us to enter details in the various tabs such as Title, Description, file type and external location:

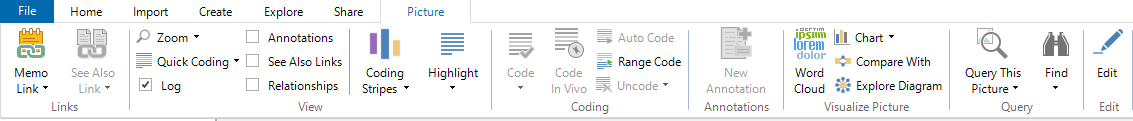
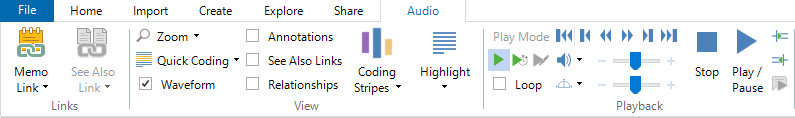
Note that the other files above – document, memo, video, audio and matrix specifically refer to the creation of new files in NVivo. They are **not** used when you are importing your own files.

**Exercise:** Try adding some internal and external files now.

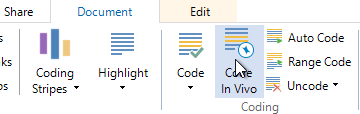
Imported files can be viewed simply by first clicking on the appropriate folder in the Navigation View (Data. Files), and then clicking on the file in the List view. The file will appear in the Detail view, at which point context-sensitive tabs will appear in the ribbon for any manipulation.

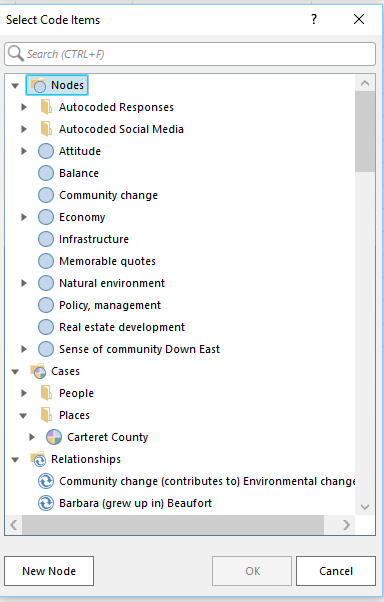
Note also that multiple files can be opened at once; you can use the tabs at the top of the detail view to move between them. Also, once imported, the files can be directly edited in NVivo. However, it is important to note that any **edits** in NVivo are **independent** of the original document. In other words, changing a Microsoft Word file in NVivo will have no effect on the original Word document and vice versa.

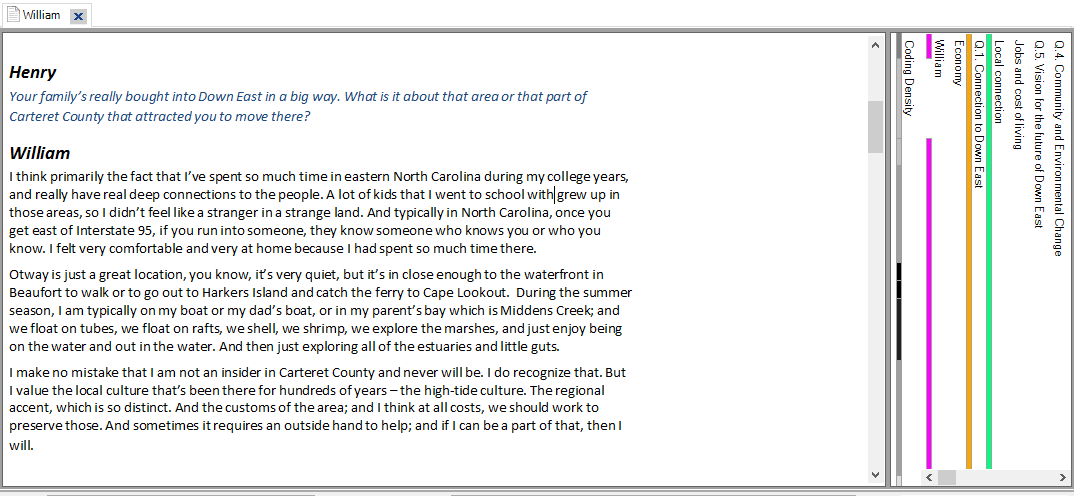
Finally, NVivo provides additional image and media processing options when these files are imported. These include the ability to take notes on any part of the files. However, please note that NVivo does not allow the ability to transcribe files. NVivo does offer a transcription service but you would have to pay for this.

# Coding your Files

The process of coding is straightforward.   
  
Open the file in NVivo and select the part of the code that relates to the case/node/relationship (or select “Control + A” to select the entire source). Then click on the Code option in the additional tab that has appeared (this depends on file type).

This brings up a dialogue box all the Cases, Nodes, and Relationships in the project. It is then a case of selecting the appropriate entry in the list and clicking on Ok.  
  
However, once this is done, you may notice that nothing happens to happen to the original file. From this, you might think that NVivo has not made coded the file. In fact, it has done so, but without showing this to you. However, there is a way to show this which is known as Coding Stripes, which are also shown on the same tab as shown above. An example of a coding stripe in a project is shown below:

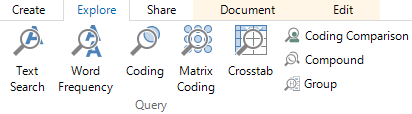


**Exercise:** Have a go at coding some data.

# Queries

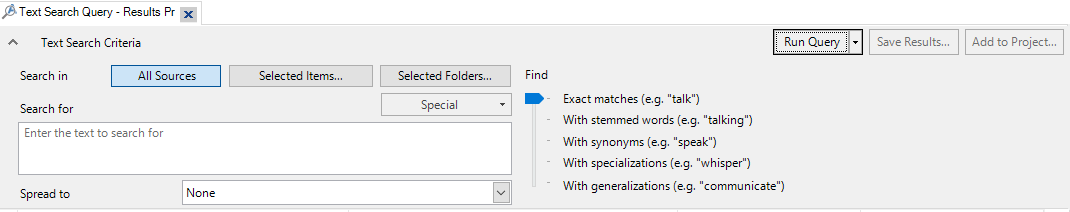
Queries are a very useful way of examining data. There are several types of queries available, although time will only permit us to look at the first four:

|  |  |
| --- | --- |
| **Query Type** | **Description** |
| Text search | Search for specific words or phrases in your documents |
| Word frequency | Find the most frequently occurring words in your documents |
| Coding | Find content coded to any node, or find all cases with specific attributes |
| Cross-Tab | Cross-tabulate items |
| Matrix coding | For more complicated cross-tabulations |
| Compound | Combine text and coding queries (i.e. search for specific words or phrases near specific coding) |
| Coding comparison | Compare coding done by different users |
| Group | Find items that are associated in a particular way with other items |



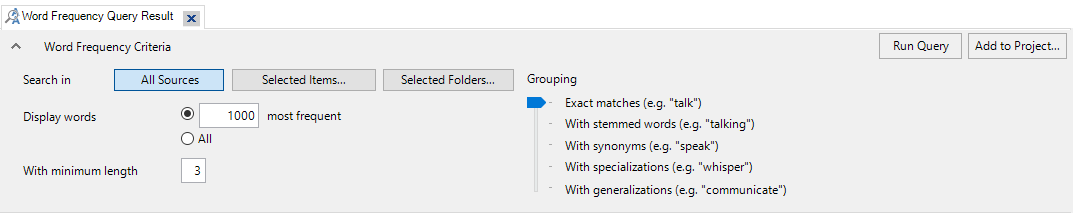
Note that the first four queries are listed in the Query wizard.

**Text Search Query**

Searches the entire project for a word or phrase. Note that it is possible to use operators in text searches. For example “woman OR lady” and “20 AND century” are both valid:  
  


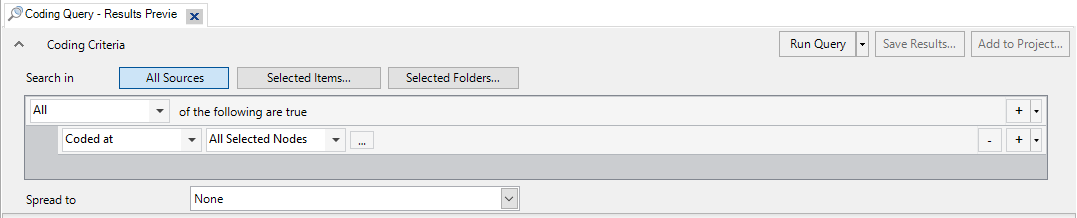
**Word Frequency Query**

Shows how many times a word or phrase appeared in the project:



**Coding Query**

Searches for items by their coding or by attribute values.



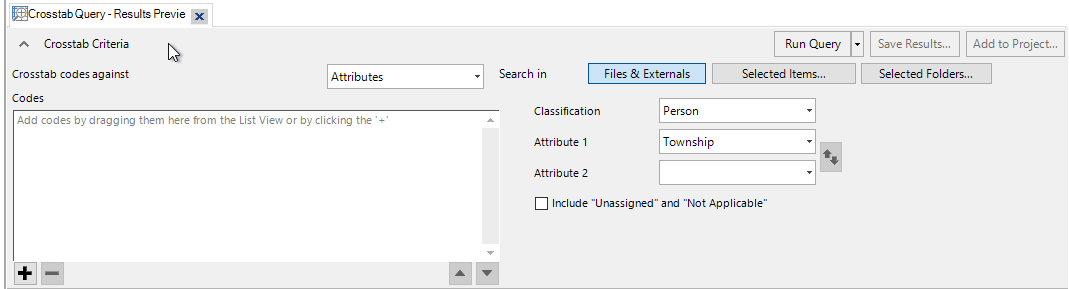
The criteria “All Selected Nodes” can be selected to be changed for any of the following:

* All Selected Nodes – specify several themes, and search for documents containing **all** of these themes. For example, in the query “smoking” and “drinking” both would have to appear to show a positive result
* Any Selected Node – specify several themes, and search for documents containing **any** of these themes. For example, only one of “smoking” and “drinking” would have to appear for a positive result (thus more results)
* Any Cases Where – specify an attribute and search for all cases with that **attribute value** (e.g. it shows very specific data about say people over 25 or women only)

The plus and minus signs on the right-hand side allow more or less lines in the query.

**Cross-Tabs Query**

Looks at cross-tabulations of your data.



This compares codes (nodes and relationships) against attributes in your project (similar to that in other qualitative data packages such as SPSS.

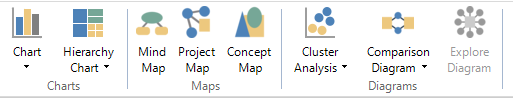
Queries return various charts and graphs along with the text data, evidenced by the tabs shown on the right-hand side.

* Word Search: Summary and Reference tables plus a Word Tree (showing the ways that words have been placed together)
* Word Frequency: Summary and Word Tree plus a Word Cloud (shows the words used by size – the larger the word, the more frequently it appears) and Cluster Analysis (a graphical representation)
* Coding: Summary and Reference, plus other tabs depending on the sort of file found.
* Cross-Tabs: A cross-tabulation table and Chart

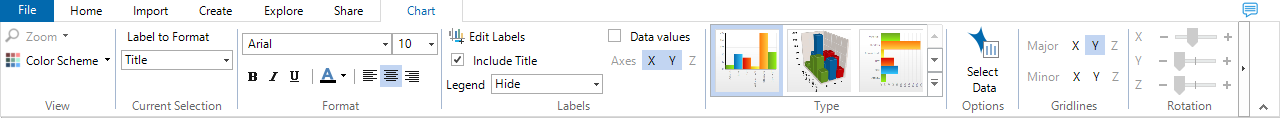
**Exercise:** Try performing some queries yourself.

# NVivo Output

NVivo allows you to create several different maps, charts, graphs, and diagrams. These different “visualisations” can be found in the Explore tab:

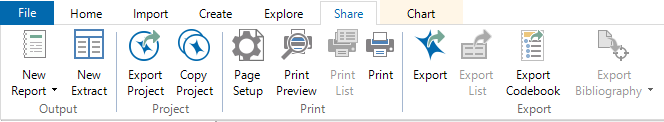


Many of these visualisations are created because of queries being run as shown above, but some are only available from the Explore tab, such as Mind Maps. When run, extra tabs appear with extra options such as the Chart tab:



The Chart wizard allows you to create charts by Coding, Files, or Cases. This means that files, cases, and attributes can also be individually examined graphically. There are several chart types available from two-dimensional and three-dimensional line charts to pie charts and bar graphs.  
  
Other visual information as such as Project and Concept Maps allows you to design your own visual picture of your project using project elements.

NVivo also allows you to export data. The Share tab includes an option to Explore Items. This menu is context-sensitive and produces different options depending on the sort of file being exported.



# Course Review and Revision

You have now completed all the units in this course. We hope that you have found this course in NVivo interesting and informative. If you still find you have a problem with anything, please ask your tutor for advice.

You will now be asked to fill in a course questionnaire, which is located at:

<https://glasgow.onlinesurveys.ac.uk/it-evaluation-form-2016>

We hope you will give us the full benefit of your perspective on the NVivo course as a participant, and it helps us develop the course further.

Thank you for your attendance and attention on this course.

Useful Shortcut keys

Using keyboard shortcuts can help you become more efficient when creating documents in Microsoft applications. Most keyboard shortcuts require you to use two or more keys at the same time. To use a keyboard shortcut first press and hold down the modifier key or keys (i.e. SHIFT, CTRL, ALT) and then press the corresponding standard key on your keyboard.

| Function | Shortcut |
| --- | --- |
| Go to "Tell me what you want to do" | ALT+Q |
| Open | CTRL+O |
| Save | CTRL+S |
| Close | CTRL+W |
| Cut | CTRL+X |
| Copy | CTRL+C |
| Paste | CTRL+V |
| Select all | CTRL+A |
| Bold | CTRL+B |
| Italic | CTRL+I |
| Underline | CTRL+U |
| Cancel | Esc |
| Undo | CTRL+Z |
| Re-do | CTRL+Y |