

Chapter 3: Terminology & Concepts

The rationale behind PocketSurvey is to allow you to design a survey or questionnaire easily by creating a set of questions organised into groups. You do not need to worry about the data structure of the captured data because it is done automatically for you by the program.

While PocketSurvey is very easy to use, there are some basic terms and concepts that you need to understand to help you create better survey designs efficiently. This chapter explains these terms and concepts.

The main PocketSurvey terms that you need to become familiar with are described in this section of the manual. For more a full list of general terms, see “[Appendixes — Glossary of Terms](#)”.

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What is a Survey?

When you want to collect some data about a particular subject or object in a structured manner you need to create a survey (often called a questionnaire) that asks the correct questions in an organised manner. The collected data needs to be stored in a format that can be analysed easily by database programs such as Microsoft Access.

With PocketSurvey questionnaire designs comprise of groups of questions. These questionnaire designs, when run on the handheld computer or handheld simulator on your PC, present questions to the person running the survey and collect the answers in other files that can be analysed later.

Note The important thing to realise is that the survey design (the questions) is kept separate to the collected data. Different files are used for each purpose but the survey design organises all this for you.

The first question - Question 0

Every survey must have a starting question to uniquely identify the answers to a set of questions. This is often referred to as the Survey Identifier. For more a detailed description of this screen, see "[Chapter 13: Questions in Detail](#)".

The screenshot shows the 'Question 0' configuration window. At the top, there's a title bar with 'Question 0' and window controls. Below the title bar, there's a 'Survey Identifier' text box containing 'Survey identifier', with 'Modify', 'Close', and 'Help' buttons to its right. Underneath, there are two checkboxes: 'Use previous' (unchecked) and 'Confirm' (checked). A tabbed interface is visible with tabs for 'formatted', 'text', 'barcode', and 'number', where 'number' is the active tab. The main area is divided into three sections: 'Size check' with radio buttons for 'None' (selected), 'Optional', and 'Obligatory', and input boxes for 'Low' and 'High'; 'Number of digits' with input boxes for 'Whole part' (3) and 'Decimal part' (0); and 'Navigation' with radio buttons for 'None', 'Spin buttons' (selected), and 'Trackbar'.

What are Groups?

Groups contain questions or more groups and are used for the following.

- **Organising.** You use groups to organise a survey questionnaire into manageable parts. This not only helps when designing your survey but it also makes data collection much easier for the mobile worker using survey on the handheld computer away from the office. Since groups are only used to control or organise the flow of questions they do not generate any output data.
- **Grouping.** Groups allow questions on similar topics to be grouped together, and so can give the survey design a well-defined structure. As well as making survey designs easier to read and understand, groups can also be used to vary between random and sequential questioning modes for different parts of the same survey design.
- **Nesting.** Groups and questions may be intermixed. Groups may also contain other groups. This nesting of groups can go to any depth but is normally restricted by the amount of memory available.

Predefined Groups.

For your convenience PocketSurvey always creates two standard predefined groups when you create a new survey design. These groups cannot be deleted. Add your user-defined groups or questions within either of these two special groups.

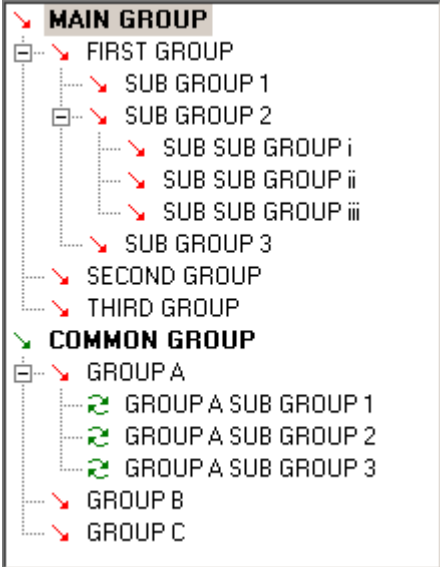
- **Main Group.** The main group is where you will create most of your questions or groups. A survey can be as simple as a few questions within the Main group or it can have a complex grouping of nested sub groups and questions.
- **Common Group.** The common group is where you can create questions or groups that are used more than once in a survey. It saves you time and effort because you only have to define a commonly used question once and you can easily reuse it in the main body of your survey.

Questions in this group are normally repeated and create 'child' data. For example if you are surveying a house and want to ask the same set of questions for each room you would put your room questions in this common group.

Group display area

The group display area is shown below. You can expand and contract groups using the +/- icons. For more a detailed description of this screen area, see "[Chapter 13: Questions in Detail](#)".

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What are Questions?

A question is normally thought of as just a phrase or a sentence. However, in a survey it is more than this – the question has some other important information associated with it. Therefore, apart from the **text** of the question (the **prompt**), a question has a **type** and a **data destination** for the answer and other optional question details depending on the type of question.

- **Question Prompt.** Will be presented to the user when going through each question in a survey. Question texts may also be used to associate question answers to particular questions in the results of a survey.
- **Type.** May be one of several types that will accept input in a variety of formats. Question types are discussed in detail in the Type of Questions section of this manual. For more a detailed discussion of question types, see “[Chapter 8 — Questionnaire | Question](#)” and “[Chapter 13 — Questions in Detail](#)”.
- **Data Destination.** Defines where the result of answering a particular question will be directed. For more a detailed discussion of how questions map on to data, see “[Chapter 3: — “Questions and Collected Data”](#)”.
- **Other Details.** Some common details associated with questions that you need to become familiar with are:
 - ⇒ **Follow up questions.** You can follow a question by a set of further common questions. For example, if you are surveying a house and wanted to ask the same set of questions for each room you would first ask for a room number in the main group and use follow up questions about your room from the common group.
 - ⇒ **Use previous.** When conducting the survey the previous answer to a particular question can be displayed to the user. This will save typing time.
 - ⇒ **Confirm.** The user will be shown the answer they have just entered and will be prompted to either accept or re-enter the answer.
 - ⇒ **Must answer.** Used to ensure the question is answered.

Question display area

The question display area is shown below. For more a detailed description of this screen, see “[Chapter 8 — Questionnaire | Question](#)” and “[Chapter 13 — Questions in Detail](#)”.

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Question/Group	Type	Data/Mode	
1: Text Input - Who are you ?	Text	Survey Details	
2: Menu Selection - Select a colour	Menu	Survey Details	
3: Menu Selection - Select foods you like	Menu	Survey Details	
4: Number Question - How old are you	Number	Survey Details	
5: Yes/No Question - Do you like computers	☑ Menu	Survey Details	
6: What computer do you have?	Text	Survey Details	
7: Formatted Question - Enter A9	Formatted	Survey Details	
8: Jump Question - Skip next question	Jump	Survey Details	
9: This question is always skipped	Link	none	
10: Auto Date - Not shown but collects current date	Auto date	none	
11: Auto Time - Not shown but collects current time	Auto time	none	
12: Input Date - User must enter a date	Input date	Survey Details	
13: Input Time - User must enter a time	Input time	Survey Details	
14: Barcode - Used with barcode reader	Barcode	none	
15: Sketch - User can sketch something	Sketch	Survey Details	
◆			

Questions and Answers - The Collected Data

Since questions form the major part of any survey, it is important to understand what happens to the answers – the collected data!

PocketSurvey is unique in that the data collected in the answers is automatically organised for you based on how you design a question. Essentially the organisation depends on what data destination you choose when you define a question.

Note Users often ask about groups. Groups are very simple, they organise your questions into groups, they don't actually collect data themselves. Think of groups as the overall structure of your survey.

Data Overview

The output from a survey is in the form of one or two comma separated data files (.CSV files). Typically you will import these data files into a database program such as Microsoft Access or a spreadsheet such as Microsoft Excel for later analysis.

When imported into a database program each data file from your survey becomes a database table, with each record within the file becoming a table row, and each field within a record being a table column.

Tip If you don't understand database terminology of tables, row and columns you will probably need to get a database expert within your company to explain it to you.

Parents & Children

PocketSurvey lets you specify one of two data destinations for any individual question. The terms used for these two data destinations are 'parent' and the 'child'. However, you can choose the actual names for the parent and child data destinations. You could call the parent and child any of the following: 'father' and 'son', 'house' and 'rooms', or 'plot and 'house'.

The important thing to realise here is that there is a relationship between the data destinations. The technical term for this relationship is 'one-to-many', but it is easier to think of it as a parent having one or more children.

For a very simple survey you will probably only need to collect your data into a single data destination, the parent. For more complex surveys you need to use this 'one-to-many' or 'parent-child' relationship where you want to capture some overall data and also some repeating data. For example, when surveying a house property you may not only want to collect some overall property information but also collect some detailed information about each room in the house. (A house has one or more rooms — in other words 'one-to-many'.)

Note

If you do not wish to store the answer to a question you select a data destination of 'none'. You would probably do this when asking questions that only jump to other questions.

Family Tree!

This one-to-many relationship enables PocketSurvey to model the requirements of most, if not all, surveys.

In fact PocketSurvey is even more powerful than this – you can even link to other surveys and extend this parent child structure ad infinitum like a family tree! Take the asset or facilities management situation and imagine a building having many rooms, each room has many desks, each desk has many pieces of equipment, and so on.

Parent Data Destination

The parent data file has records with a field for the Survey Identifier and a field for each answer. The optional first (header) row will have the field names that will help you when you import into a database package. This is shown schematically below.

Survey Identifier	Question 1	Question 2	Question 3
0001	Yes	No	Yes
0002	Maybe	No	Yes
0003	Yes	Yes	Yes

The file containing the parent data is always named as **SurveyName#ParentDataName.csv** and is found in the survey folder.

Child Data Destination

Questions with child data destinations generate a slightly different data structure than that of the parent data file. There will always be a field containing the Survey Identifier similar to that in the parent table, as this is necessary to maintain the 'one-to-many' relationships.

However, because we can have multiple occurrences (or instances) of child question answers we need some way of uniquely identifying each answer to each individual question. This is done by introducing extra fields to contain: Group number, the actual Question number, and Instance. This is shown schematically below.

Survey Identifier	Group Number	Question Number	Instance	Question Heading	Answer
0001	1.2.	1	2	Question 1	Yes
0001	1.2.	1	1	Question 1	Yes
0001	2.0.	3	1	Question 3	No
0002	1.2.	1	1	Question 1	Yes

The file containing the child data is always named as **SurveyName#ChildDataName.csv** and is found in the survey folder.

Answers to Common questions

Common questions generate additional fields in the child data file, shown in yellow and red below, and are often used to organise repeated questions. The field heading is the question prompt.

Thus for each common question there will be an extra column in the child data file. This is shown schematically below.

Survey Identifier	Group Number	Question Number	Instance	Question Heading	Answer	Common Question 1	Common Question 2
0001	2	4	4	Plot No	34	Blue	Faulty
0001	2	4	3	Plot No	56	Blue	Faulty
0001	2	4	2	Plot No	36	Red	OK
0001	2	4	1	Plot No	54	Yellow	Faulty

Another major use of common questions is to provide a costing mechanism.

Tip	You can view the complete database specification for a survey design by views in the database specification report from the REPORT DB SPECIFICATION menu option.
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Data destination selection

The data destination selection on the questions screen is shown below. In the illustration the name of the parent data entity is 'Site Data' and the name of the child entity is 'Plot Data'.



Handheld Pocket PC Terminology

If you are new to using mobile devices such as handheld pocket PCs you will find it useful to become familiar with the following terms.

ActiveSync

The Microsoft program that manages synchronisation between your mobile device and your desktop computer.

Baud Rate

The speed at which a modem or serial connection transmits data

Cable Connection

A communications method by which you use a cable to connect your mobile device to another device.

Compact Flash Card

A modem, network, or storage card that you plug into your mobile device.

COM port

A serial communications port used to connect a device, such as a modem, printer, or mobile device, to your desktop computer.

Connection

The ability to interact with another device, computer, network, or the Internet by means of a serial cable, infrared, modem, or network card.

Cradle

Hardware provided by your mobile device manufacturer that is connected via a serial cable to your desktop computer. The device is placed in the cradle to connect to your desktop computer.

Desktop Computer

A personal computer running Microsoft Windows to which you connect your mobile device.

External Modem

A stand-alone modem that is connected by a serial cable to a desktop computer or mobile device.

Infrared (IR) Connection

A communications method by which you connect your mobile device to another device (such as another mobile device, your desktop computer, or a printer) using the IR ports on each device.

Mobile Device

A small computer running Microsoft Windows CE.

Modem Card

A card that you plug into your mobile device to connect to a phone line.

Modem Connection

A connection between your mobile device and a remote computer or network that is established using a modem installed on your device.

PC Card

A modem, network, or storage card that you plug into your mobile device. This card conforms to the PCMCIA specification.

Remote Connection

Any connection that connects your mobile device to a remote computer or network. Typically, a remote connection is established using a modem or network (Ethernet) connection.

Remote Networking

A communications program located on the mobile device used to create, store, and establish modem connections to remote computers and networks.

Reset

The process that causes your device to restart. For more information, see your device manufacturer's documentation.

Serial Cable

A cable provided by your manufacturer to connect your mobile device to your desktop computer through a COM port.

USB Cable - Universal Serial Bus Cable

A cable provided by your manufacturer to connect your mobile device to your desktop computer through a universal serial bus.

Windows CE

An operating system specially designed for mobile devices. Windows CE is similar to other Microsoft Windows operating systems.

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