



Interviewer CAPI Manual



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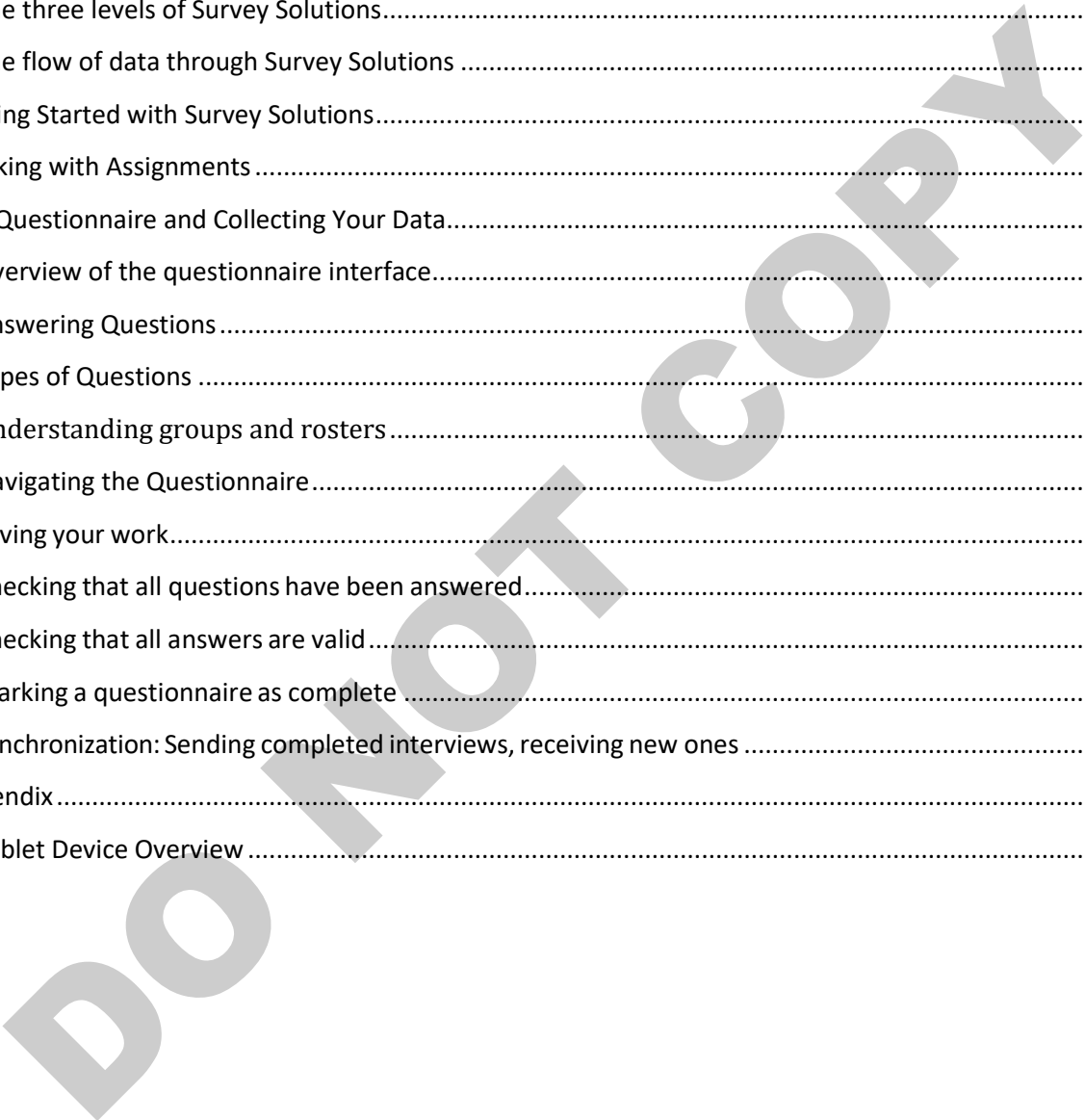
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What is CAPI?

CAPI stands for **C**omputer **A**ssisted **P**ersonal **I**nterviewing. It is a method of conducting personal interviews that involves the assistance of a computer or electronic device, such as a tablet or phone. In most cases, the interviewer will be reading the questions from an electronic questionnaire to the respondent, and recording the corresponding answers into the electronic questionnaire using the mobile device. CAPI has become a preferred method of conducting interviews, as it has several advantages over its paper counterpart (PAPI). Following are some of the main advantages and disadvantages of using CAPI for conducting surveys.

CAPI Advantages

- Reduced time lag between collection and analysis.
 - Since the responses for interviews are recorded electronically using a mobile device, there is no need for manual coding or data-entry as is the case with paper-based interviews. Since validation checks can be applied automatically and the supervisor can also validate the work easily, the time-lag between the collection of data and having it ready for analysis is significantly reduced.
- Error and mistakes reduction.
 - Validation checks can be implemented into the questionnaire to test and warn when inconsistent or incorrect responses are recorded.
 - The supervisor can easily review each interview and detect errors.
- Easy update of questionnaires.
 - Since the questionnaires live electronically on the tablet, any last minute changes or adjustment to the content or structure can be reflected immediately.
- Automatic application of skip patterns or filter questions.
 - Skip patterns and filters are coded into the structure of the questionnaire and only the relevant and answered questions are displayed.
 - This makes navigating and administering the questionnaire easier and less mistake-prone.

CAPI Disadvantages

- Greater upfront cost.
 - The cost of acquiring the tablets or devices and implementing CAPI may exceed the budget for PAPI at first, but these devices can be used for subsequent surveys.
- Possibility of device failure.
 - As with all electronic devices, there is possibility for failure (dead battery, freezing of device, breaking of device, loss of device).
- More complex logistics.
 - The deployment and implementation of the survey may be a bit more complicated than with paper, as there may be several CAPI components to take into consideration.

Survey Solutions and the World Bank CAPI Initiative

At the Statistical Institute of Belize, the main software that we use to implement surveys via CAPI is a set of tools called **Survey Solutions**.

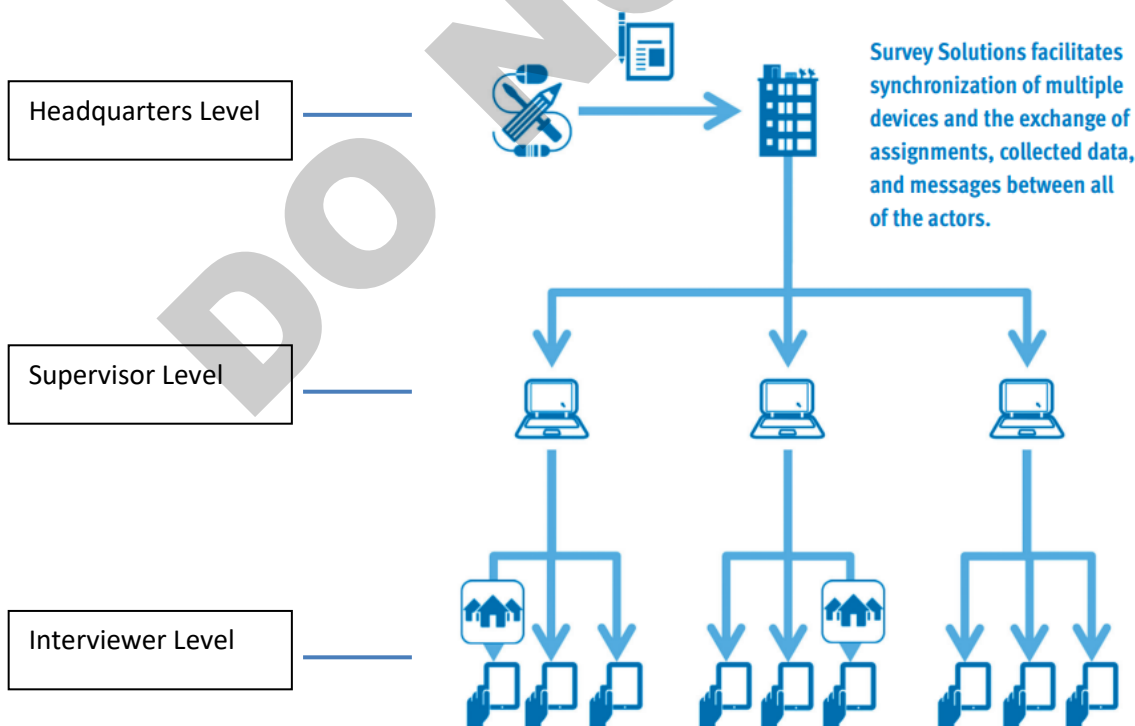
Survey Solutions is a free CAPI software developed by the World Bank which offers a cost-effective, sustainable solution for conducting complex, large-scale surveys.

Survey solutions provides users, such as the SIB, with a suite of tools that combines:

1. Data-capturing functionality
 - This is the electronic questionnaire part of the CAPI, the part that is used to actually administer and complete an interview.
2. Survey management
 - Survey Solutions provides both “Headquarters” and “Supervisor” functionalities. That is, tools for the proper management, tracking and supervising of the survey.
3. Data aggregation
 - Data captured in the field can readily become available for export (downloading the data) and analysis as soon as the interviewers get an internet connection and send back their completed interviews.
 - This data can be readily exported in various useful formats that the SIB uses to analyze and tabulate data.

The three levels of Survey Solutions

As previously mentioned, Survey Solutions provides tools for different sets of users. There are three main types of users that are involved in the implementation of surveys:



The Headquarters (HQ) Level

The Headquarters level is a set of tools for the design and creation of the electronic questionnaire, the creation of the users (supervisors and interviewers) as well as the management of the survey and the export of the data collected. Headquarters administers all assignments to supervisors, whom then distribute them appropriately to their teams. This is usually done through a web browser on a **PC**.

The Supervisor Level

The supervisor level is the level where work is distributed among the teams of interviewers (by the supervisor). This is where all assignments and re-assignments are handled. The supervisor works through their Supervisor Portal using a **web browser**, and besides handling assignments, have the responsibility to review all submitted interviews and track the progress of their teams.

The Interviewer Level

The interviewer level consists mainly of a mobile app that is installed on a **tablet** or device, where assignments or questionnaires are received by interviewers and subsequently administered to the respondents. The Survey Solutions Interviewer Application allows for the sending and receiving and management of interview assignments.

Together, these three levels and their users interact seamlessly in order to properly carry out all of the field operations of a survey.

The flow of data through Survey Solutions

Where does an interview assignment originate, how does it arrive to the interviewer's tablet, and how is it sent back to the main office (HQ)? The flow and processing of interview data and assignments through survey solutions is a straightforward affair. It is first important to note that all data transmitted and exchanged within Survey Solutions is done wirelessly using an **Internet** connection. This means that in order to receive assignments, both supervisors and interviewers must be connected to the internet, although internet connection is **not** needed to administer the questionnaire for an interview. Having this in mind and remembering the three levels of Survey Solutions, the following steps and illustration to explain the data-flow through Survey Solutions.

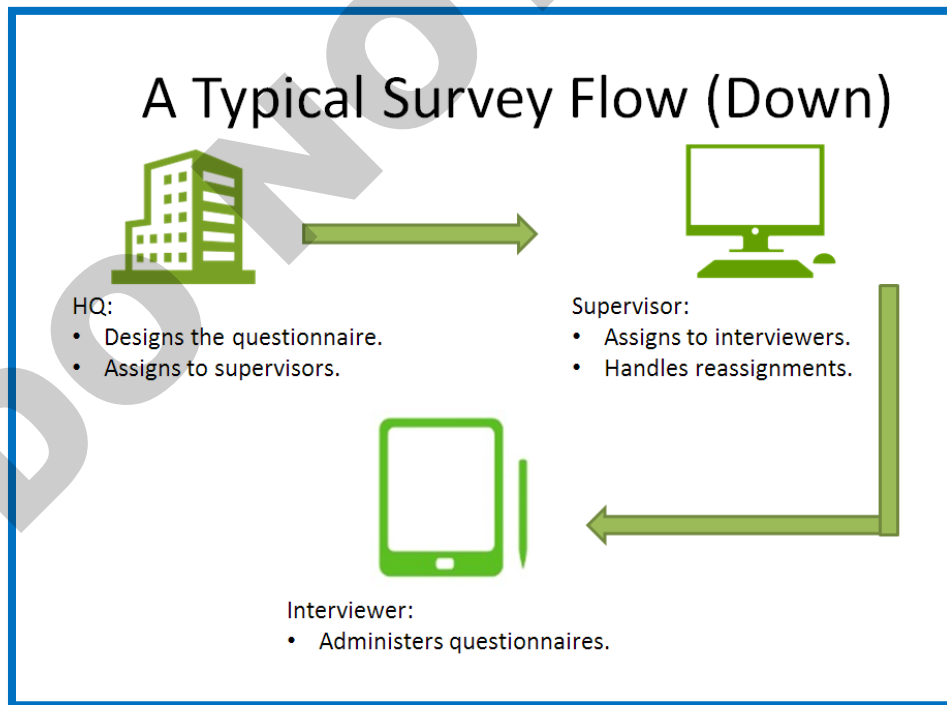
- I. All interview assignments originate at the **Headquarters** level. Here, an electronic questionnaire is designed for the survey, and a **sample** is created. This **sample** is the set of all households or respondents that have been selected to participate in the survey. The sample is created as a text file that is uploaded into the system to create electronic assignment cases, or interview assignments. These cases will then be assigned to the appropriate Supervisors for the different teams or districts.
- II. The **Supervisors**, after receiving the assignments, distribute the interviews to their team members. This is done through their Supervisor interface using a web browser, as previously mentioned. The supervisors must also handle the reassignments of interviews as is often necessary. When a supervisor assigns an interview to an interviewer, this assignment is sent via the internet to the tablet of the respective interviewer, through the Survey Solutions Interviewer App.
- III. Using an internet connection, the **Interviewer** then retrieves their assigned interviews through the Interviewer Application. Each assignment is one questionnaire for one specific household or

respondent. The interviewer will then open the appropriate interview and administer it to the respondent.

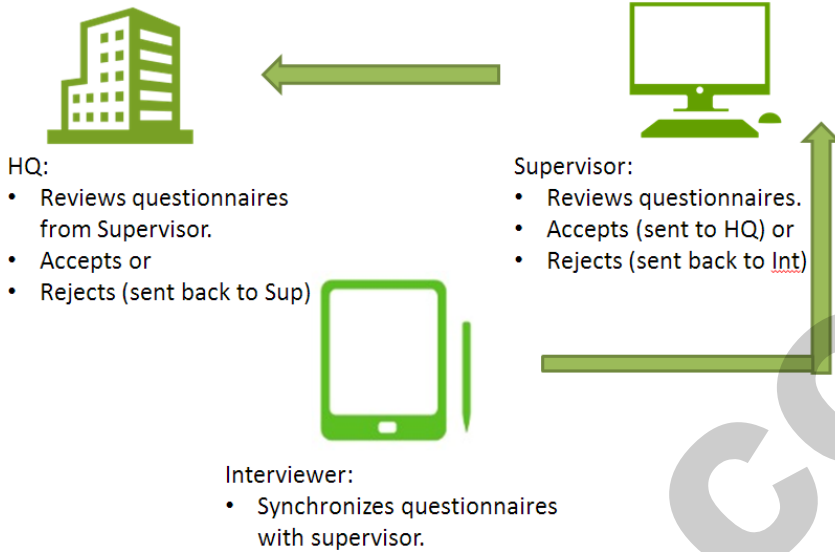
- IV. Once an **Interviewer** has completed a number of interviews and has reviewed the contents to ensure the quality of the data, it will be necessary to connect to the internet once more in order to send these completed assignments to their Supervisor. The process of sending and receiving assignments is referred to as **synchronization**.
- V. Completed assignments that have been sent to the **Supervisor** will then be available for **review** and verification through the Supervisor interface. The Supervisor thus has the responsibility to review all completed interviews and to either “Approve” or “Reject” each one. Rejected interviews will be returned to the Interviewer, usually with an accompanying message by the supervisor, while approved interviews will return once more to Headquarters.
- VI. Completed interview assignments that are approved by Supervisors return once more to the **Headquarters** level. Here, the interview goes through one final verification before it is either Approved and added to the database, or Rejected and sent back to the supervisor. Interviews that have been approved are considered finished, and the data is ready for export and analysis.

Both editors/coders and field supervisors will use the supervisor interface. Since coding can only be completed at the supervisor level, field supervisors will only select the field that indicates that the questionnaire was checked.

The following diagrams simplify and summarize these steps.

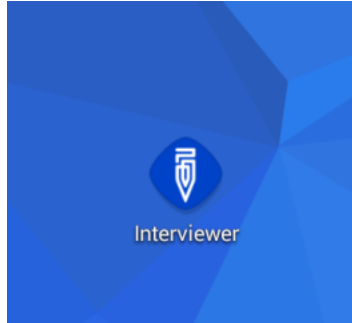


A Typical Survey Flow (Up)

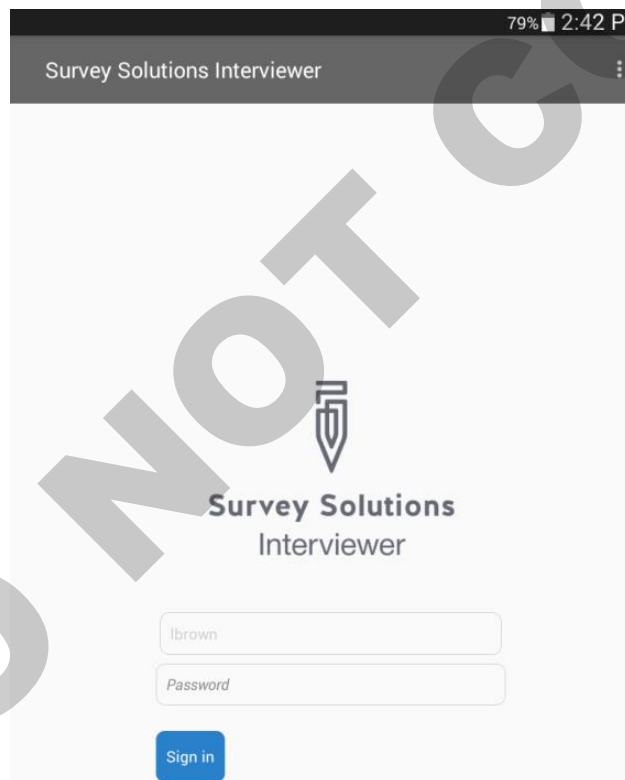


Getting Started with Survey Solutions

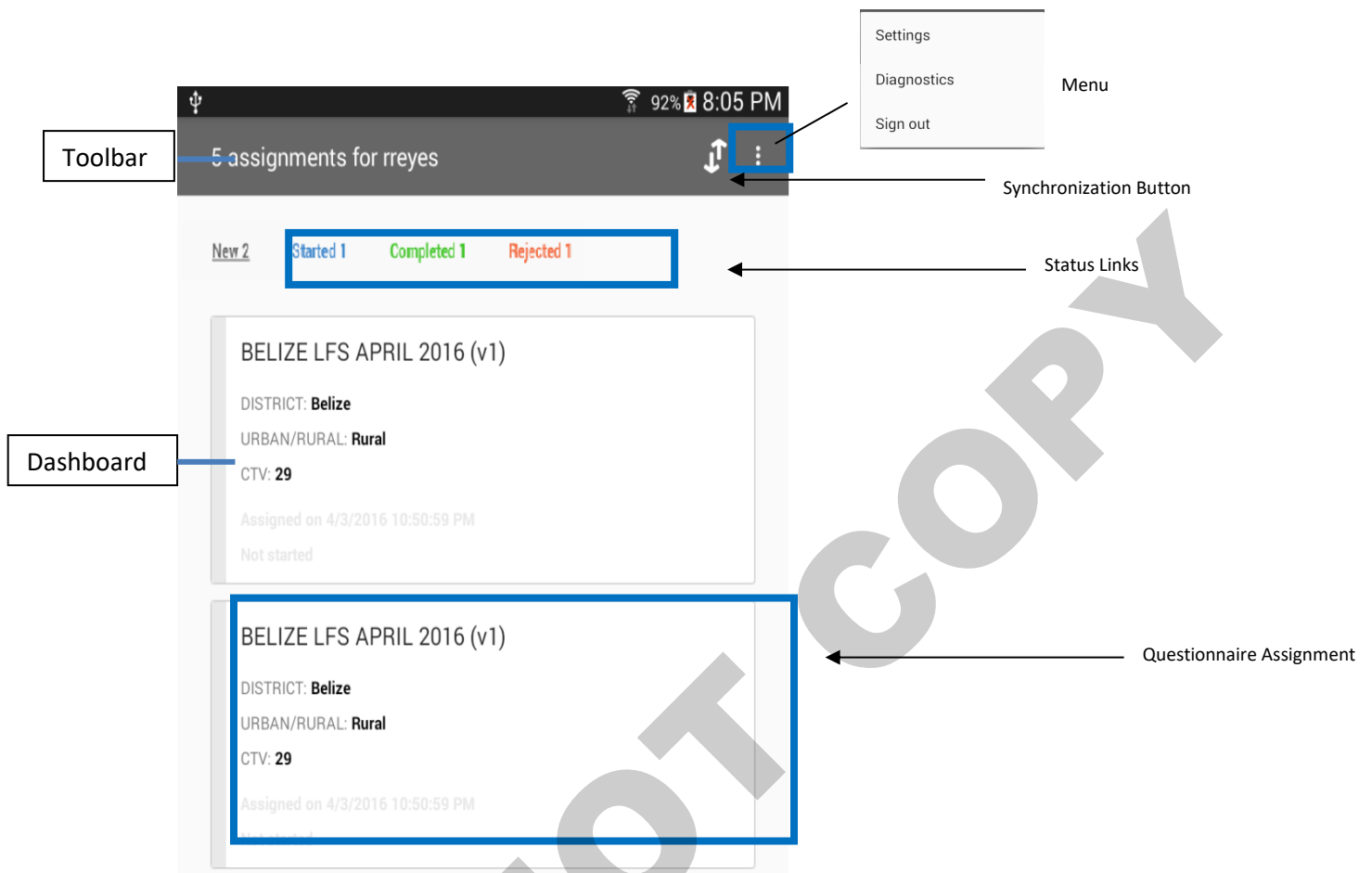
1. To get started with Survey Solutions as an Interviewer, first locate the Interviewer Application in the tablet device given to you. The application looks as follows:



2. Once you open the application, you will be greeted with a **Sign In** screen as follows:



3. Every Interviewer has a unique username and password which they will use to Sign In into the application. These credentials are created by headquarters and will be provided to all interviewers before every survey. In the above illustration, interviewer 'lbrown' must enter her password and then click on the blue Sign In button.
4. After signing in, you will see the following **Dashboard** screen.



5. The interviewer application toolbar has a synchronization and menu button in the upper right-hand corner of the screen. When the **synchronization button** is pressed the file exchange with the supervisor application is triggered. This means that new assignments are retrieved and completed assignments are sent back to the supervisor. The **menu button** provides easy access to other components of the software: Dashboard, where all assignments are listed; Diagnostics, where tablet information can be backed up manually; Settings, where the supervisor can set up the team's tablets; and Sign out, which allows the interviewer to sign out of the application at the end of the day.
6. The dashboard offers a functional overview of the interviewer's assignments and the state they are in. The **Status Links** displayed at the top of the dashboard sorts survey cases by their status. New, which means the assignment has not been started; Completed, which means the assignment has been marked by the interviewer as complete; or Rejected, which means the supervisor has reviewed the assignment and returned it to the interviewer for correction. Under each status link, individual assignments are displayed as a box. Each box contains the set of information that the interviewer should use to identify the interview assignment. For example, this may be the name of the household and their location information.

Working with Assignments

1. To open an interview assignment in order to administer it, simply locate the correct assignment in your dashboard. To do this, use the case-identifying information that is displayed in the assignment box. This information is usually fields such as ED number, cluster number and household or building number that serves to identify a particular household or location. For the Listing Exercise, the information to look out for is ED number, cluster number, and block number.
2. After locating the assignment, simply tap on it in order to open it.
3. Use the back button on the tablet if you want to come out of the assignment and return to the dashboard.

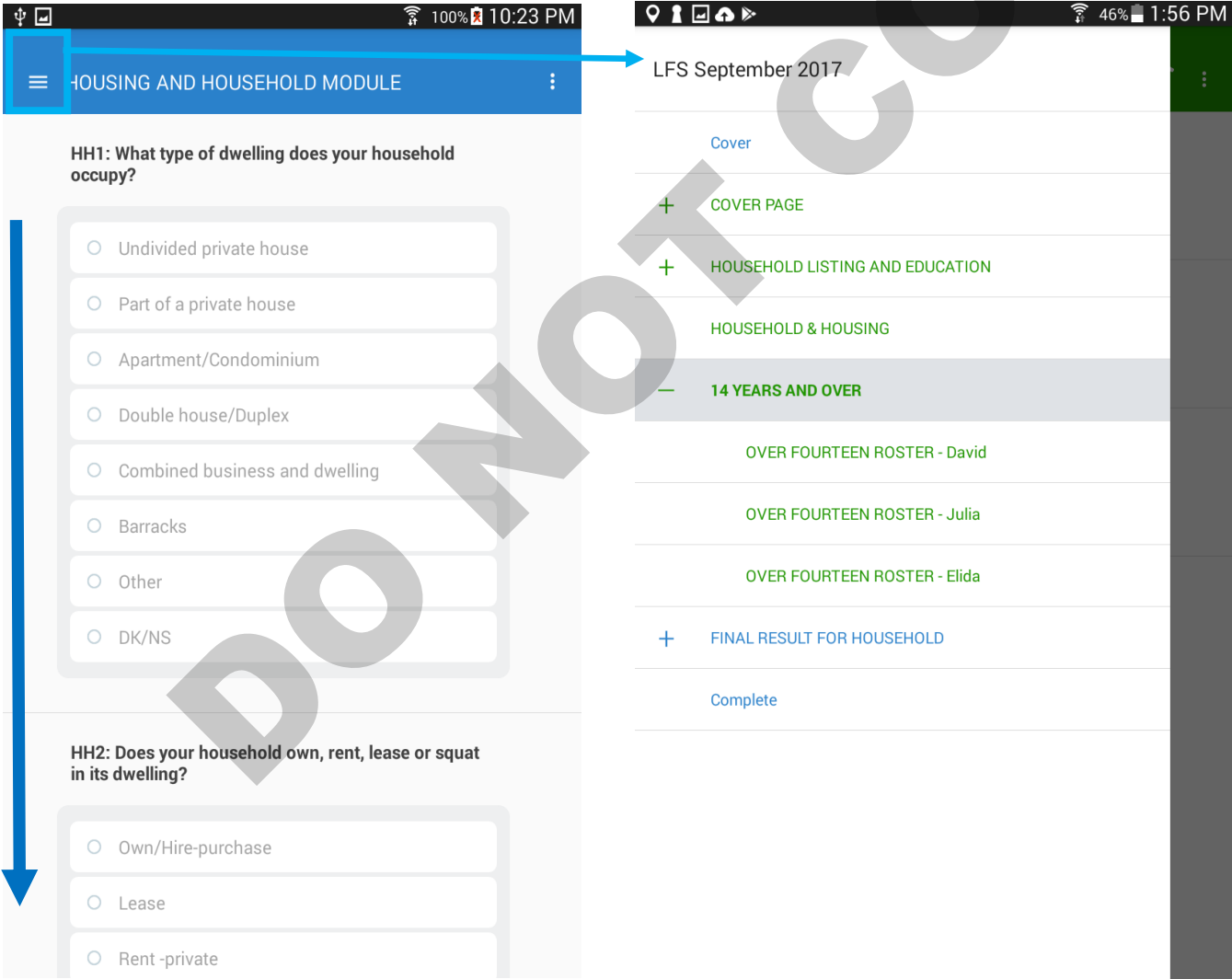
DO NOT COPY

The Questionnaire and Collecting Your Data

Once you locate and open an appropriate interview assignment, the questionnaire will be displayed and your task is not to navigate it and administer it to the respondent.

Overview of the questionnaire interface

- 1. The first thing to note about the questionnaire interface is the menu button located on the upper left-hand corner of the display. Represented by three white horizontal lines, when tapped, this button will open up a side menu displaying the different sections of the questionnaire. As will be further explained in this manual, this provides many uses, especially for navigation and review of the questionnaire.
- 2. In the main part of the display, the questions are displayed. In order to navigate through the questions simply respond to them in the proper order and scroll through the questionnaire.

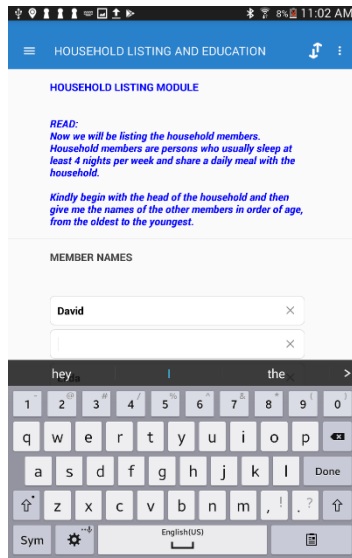


Answering Questions

Recording an answer

1. To enter an answer, simply tap on the answer field. The keyboard will pop up on the display and you simply have to record the appropriate answer.

After an answer has been recorded, an “X” will appear to the right of the field. This is the button to remove or delete the recorded answer. Please use this button carefully.



Correcting a mistake



Certain fields or questions in the questionnaire contain validations that compare the recorded answers with the set of expected or “correct” answers. For example, fields where totals are entered will contain a validation to ensure that the sum has been performed correctly.

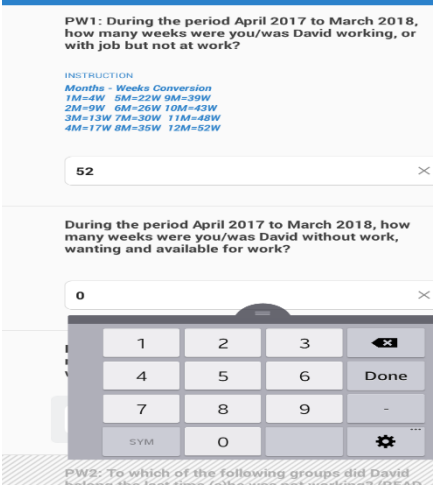
When the interviewer enters an unexpected or inconsistent answer, the field will be flagged in a red color and an error message will be displayed describing the problem.

Please note that an invalid question does not necessarily mean that the answer is wrong. If an invalid answer is indeed a wrong answer, check your work. If an invalid question is a correct answer, please leave an explanatory comment for your supervisor. (Comments are explained in another section.)

Types of Questions

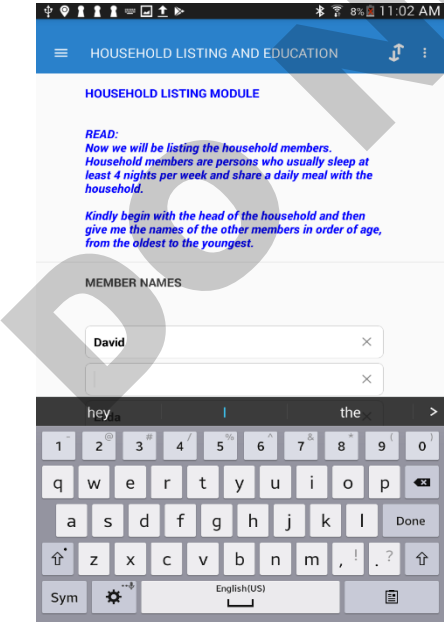
There are several different types of questions supported by Survey Solutions, and they are used record different types of data. Some of the main ones and the ones that will used during the survey include:

1. Numeric



Questions that take a numeric response have a field for an open numeric answer. When that field is tapped, the numeric keyboard appears so that the interviewer can compose an appropriate numerical response.

2. Text



Text questions have a field for an open text response. When that field is tapped, the text keyboard appears so that the interviewer can compose an appropriate text response.

3. Single Select

HL7: In what country were you/was Sharlette born?

Belize

Mexico

Guatemala

Honduras

El Salvador

USA

Other

DK/NS

Single-select categorical questions have answer options with radio buttons. To answer this type of question, the interviewer taps the radio button associated with the most appropriate answer.

4. List

MEMBER NAMES

David

Julia

Elida

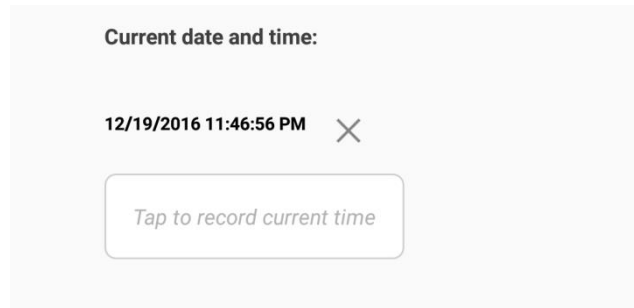
Tap to enter new item

List type questions are used to enter several items that form part of a list or group. An example of this would be entering the names of all the members of a household.

Tap on the empty text box and use the keyboard to input an answer. Additional elements can be added to the list until the maximum allowed number of items is entered.

To delete elements from the list, click on the X mark. However, be careful: doing so may result in deleting data, if the elements of a list question are linked to a roster (e.g., names of household members linked to their educational data, each of which has their own row in the household demographics roster).

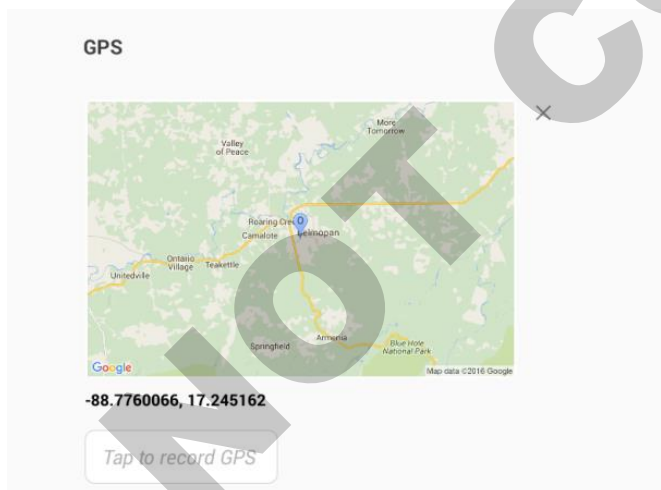
5. Date/Date Time



This type of questions records the current date and time. This is useful to record interview start and end times.

To record an answer, simply tap on the button to record the current date and time.

6. GPS



Survey Solutions also provides an easy way to capture geolocation via the GPS-type question.

Simply tap the button that reads "Tap to record GPS" and make sure the location feature on the tablet is turned on. The GPS coordinates will automatically be detected and recorded by the application.

7. Comments: leaving them for your supervisor, seeing them from your supervisor

Comments can be left for any question. This may be useful to explain answers that you have confirmed but that may appear strange or wrong to your supervisor.

EA34: What is your/David's total income from employment in your/his/her MAIN job? This is before taxes and deductions. (Include tips, bonuses, commissions, etc., from all sources.)

INSTRUCTION
*Please ask the respondent for the exact figure before showing flash card.
IF THE EXACT INCOME IS NOT GIVEN, THEN RECORD '9999'*

9999 ×

YOUR COMMENT
Respondent does not know spouse's income

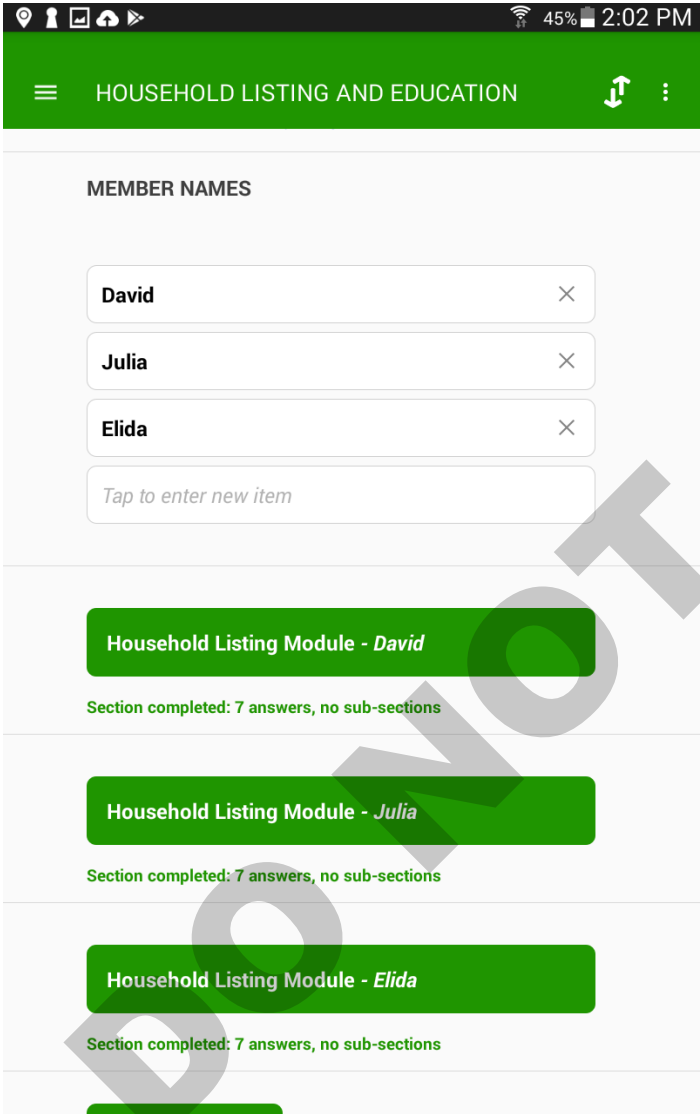
EA35: How often do you/does David receive this income?

Monthly ×

To leave a comment, press for a moment on the question of interest. After a few seconds, a comment field will appear, into which you can type any comment.

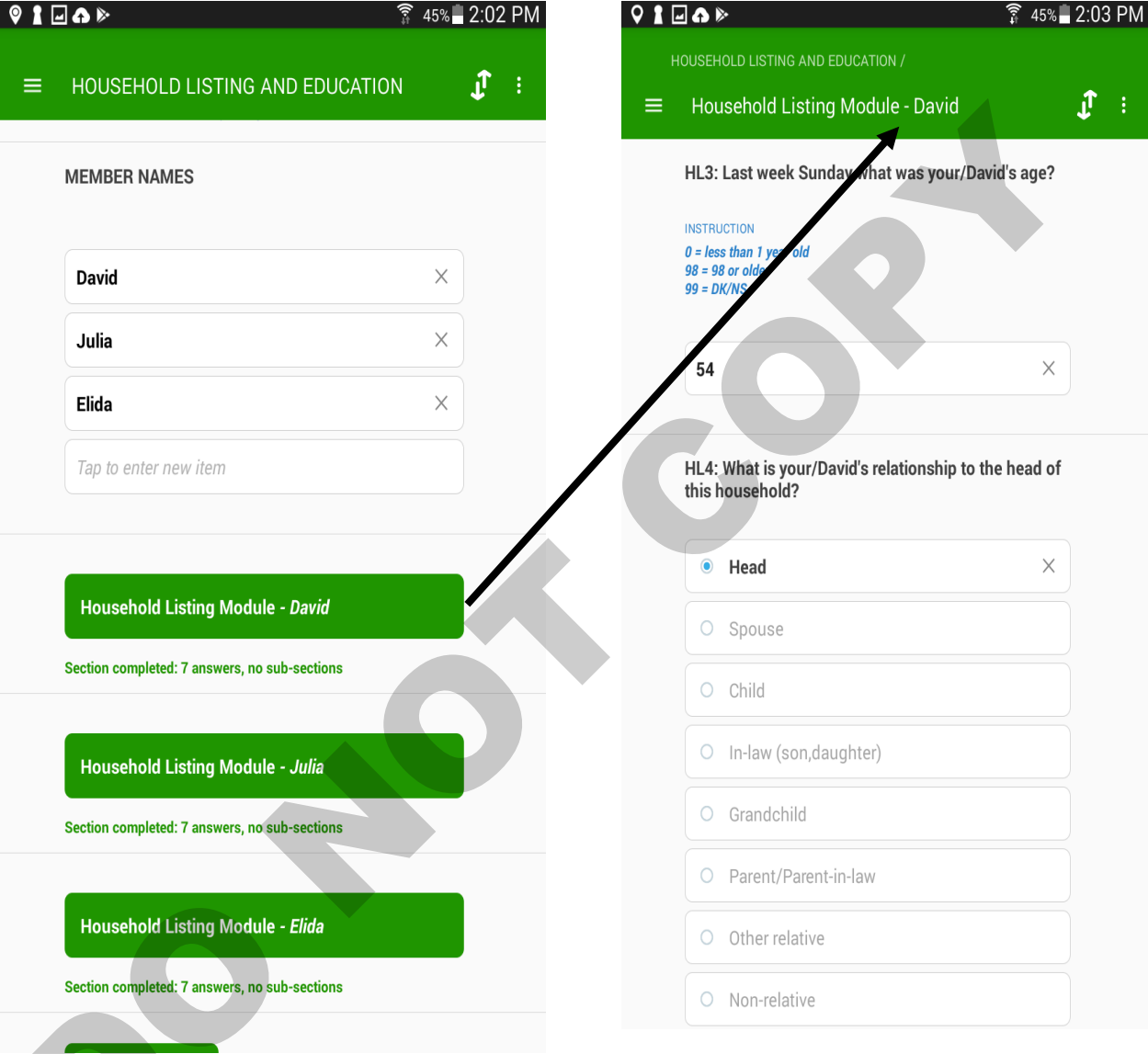
Understanding groups and rosters

Groups and rosters are special groupings of questions. On the tablet, both first appear as a button.



When the button is tapped, the interviewers see the questions or roster row associated with that button.

Rosters, in Survey Solutions, are a group of questions that are to be repeated a specific number of times, depending on the source question. As in the previous picture, a roster can have a list-type question for a source, and thus create the group of questions for every item entered in the list.



An interviewer must complete a roster row by row (every button created is a row). By tapping on the button associated with any given row, the interviewer will see all questions for that item in the roster. To move back to the roster view, click on the Return button that appears at the bottom of the screen (at the end of the roster).

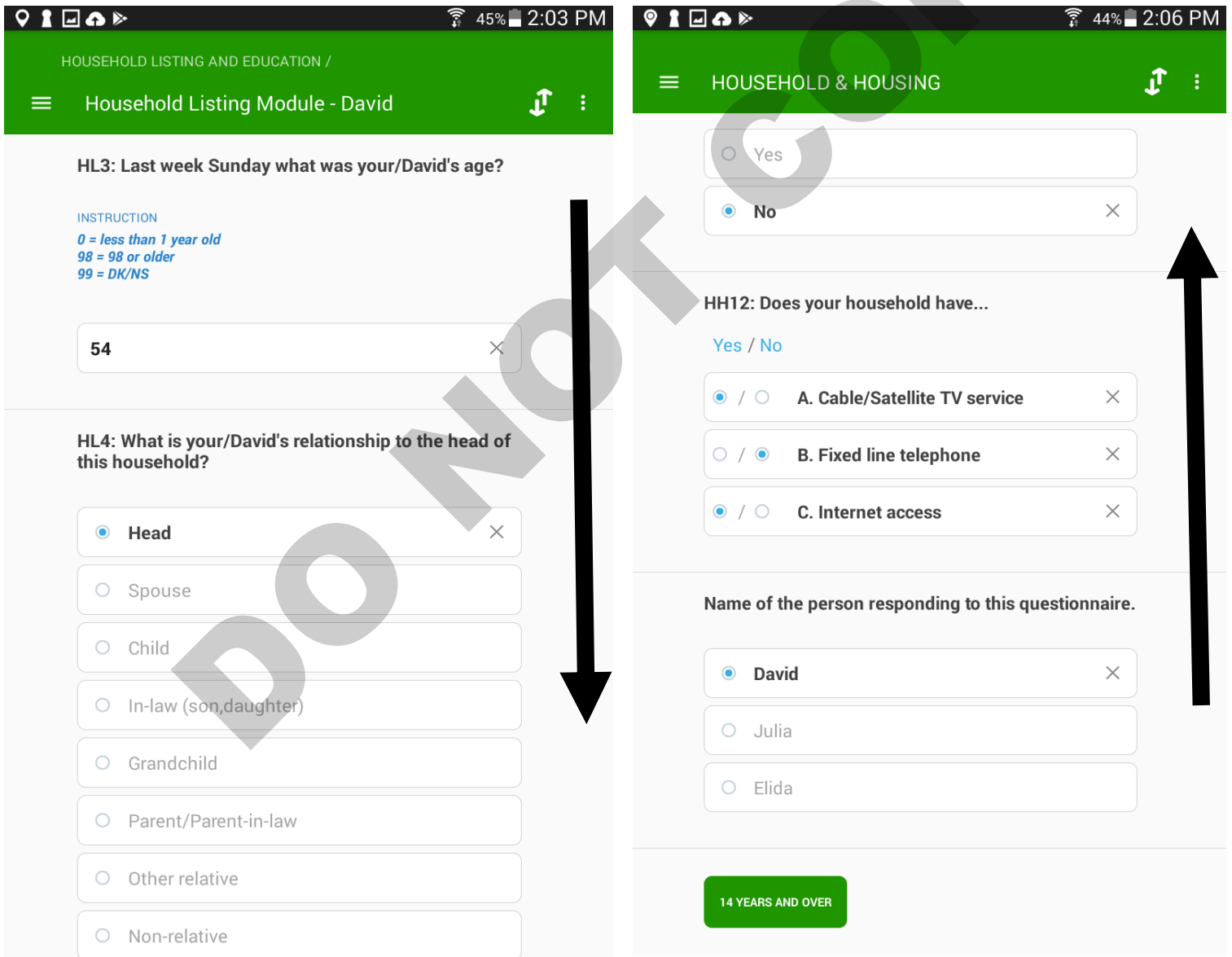
Navigating the Questionnaire

Interviewers should strictly follow the survey protocol for administering a questionnaire (e.g. asking earlier questions before later questions, completing earlier modules before later modules), but may occasionally need to move around the questionnaire for good reasons (e.g. review their work, move between rows of the roster if the respondent corrects an earlier answer, administer an independent module when the key respondent for that module is present).

The interviewer can move around questionnaires in several ways.

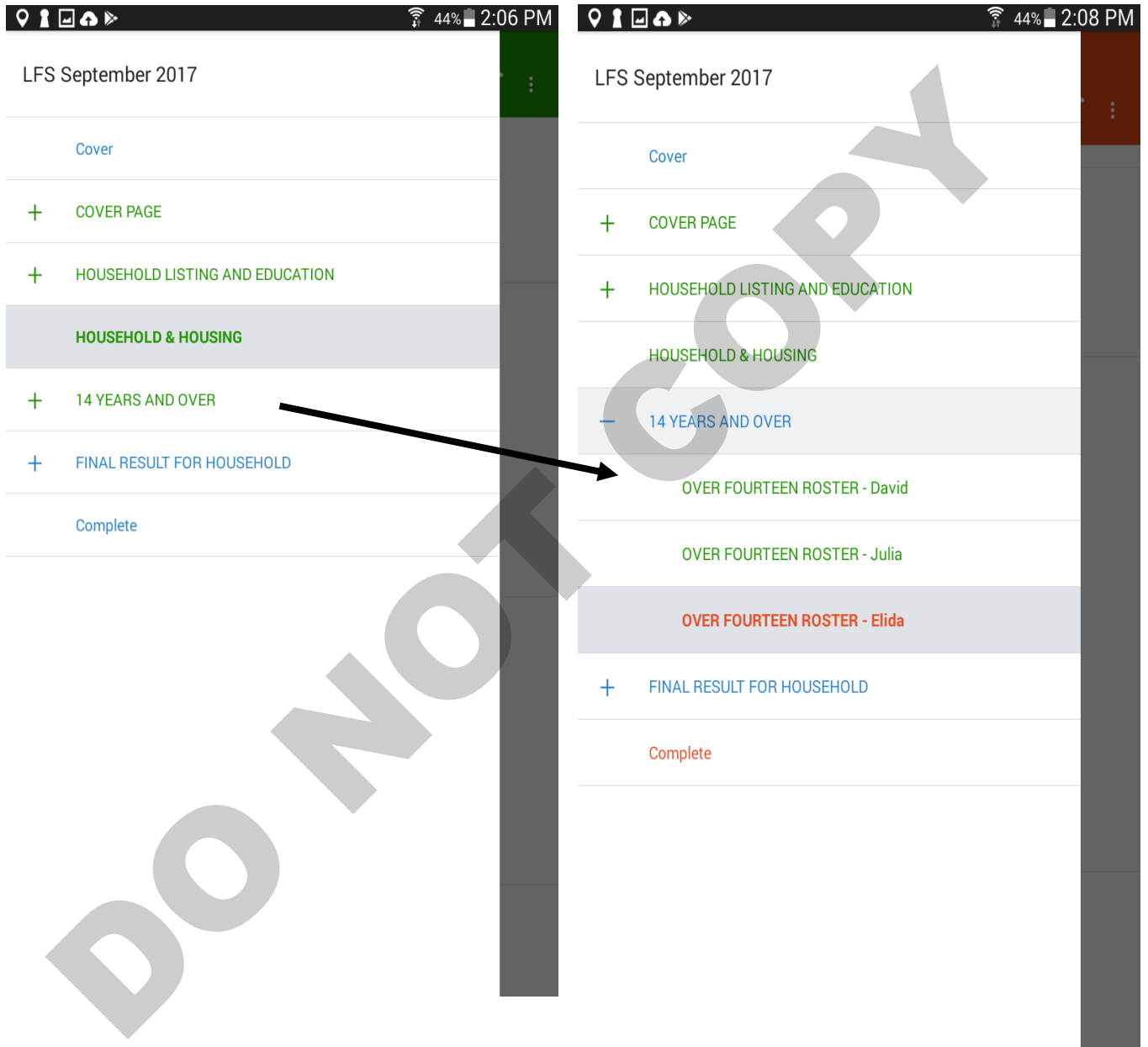
Within a section

Swiping up and down moves within a single group of questions (e.g., a module)



Between chapters and sections

The interviewer may move from one module or section to the next by using the always-available navigation pane, represented by three horizontal lines that, when pressed, expands into an interactive table of contents of the questionnaire.



Saving your work

There is no need to press a button in order to save progress. The application automatically saves progress throughout the interview so that the interviewer could stop the interview at any moment and have their progress saved up until that point.

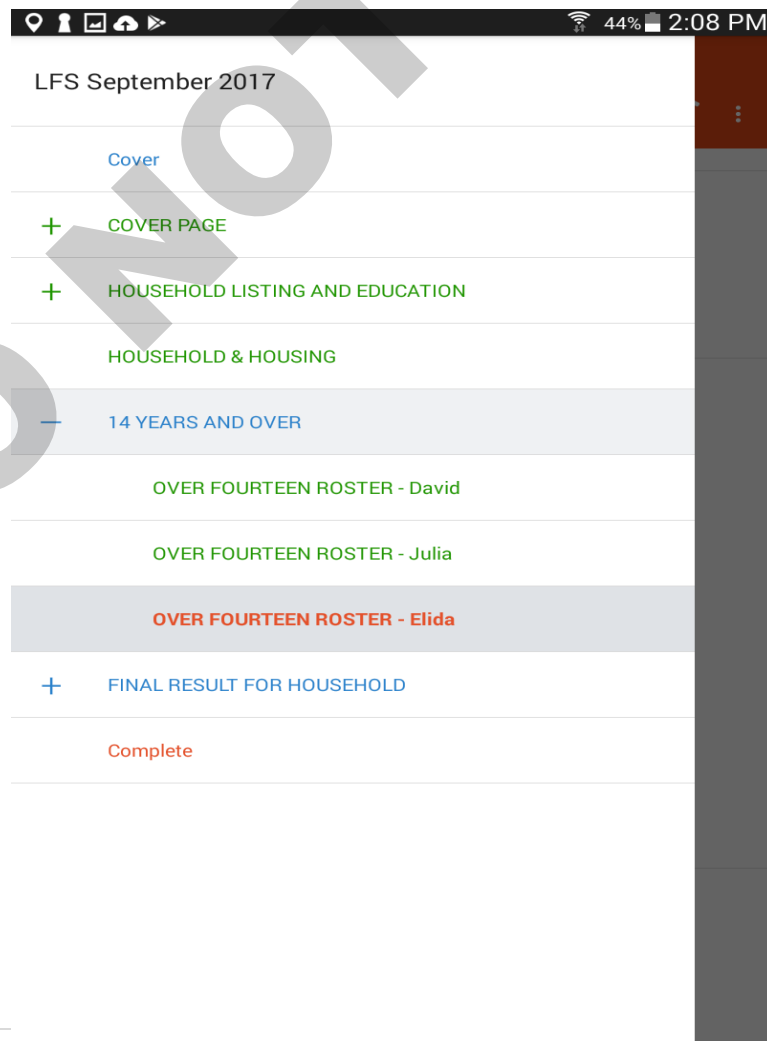
Checking that all questions have been answered

Quality control starts with the interviewer. The interviewer should thus do everything within their power to ensure that all questions are answered.

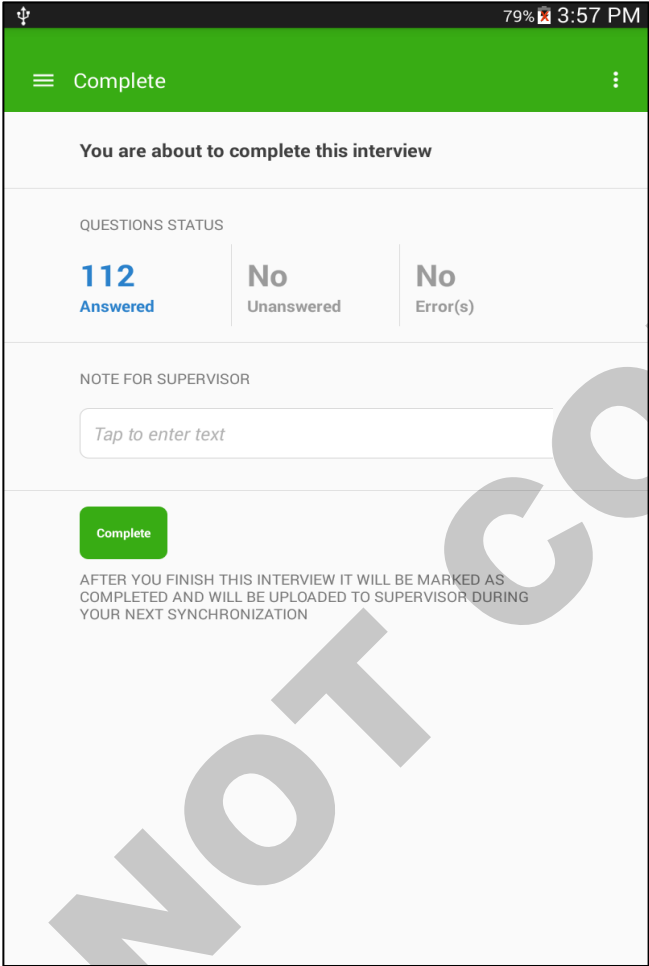
The interviewer application offers three ways to do this.

The **first** is the classic method that one might use with a paper questionnaire. The interviewer simply flips the questionnaire looking for unanswered questions or answers that have triggered red error messages.

The **second**, which concerns completeness, is to use the navigation panel as a gauge of whether any questions still need to be answered. Each element in the navigation panel is color-coded. Green indicates that a section is complete—that is, that all questions have been answered and none have invalid answers. Blue denotes incomplete—that is, that some question are unanswered. Red indicates that one or more questions in the answer have an invalid answer—that is, an answer that violates the validation condition.



The **third** method is to navigate to the module on the navigation pane named Complete. Once on that screen, the number of unanswered and invalid questions are displayed. The interviewer can identify the problem section/s by opening the navigation pane (as described above).



Checking that all answers are valid

In addition to confirming that a questionnaire is completely answered, the interviewer must also make sure that all answers make sense. There are two complementary ways of doing this.

While completing the questionnaire, the interviewer will see error messages whenever the answers provided are invalid. An invalid answer may be one that is outside of some expected range (e.g., age should be between 0 and 99) or one that conflicts with an answer provided elsewhere (e.g., age for person does not match in Household Listing with date of birth). The interviewer should, to the extent possible, correct any errors as soon as they arise.

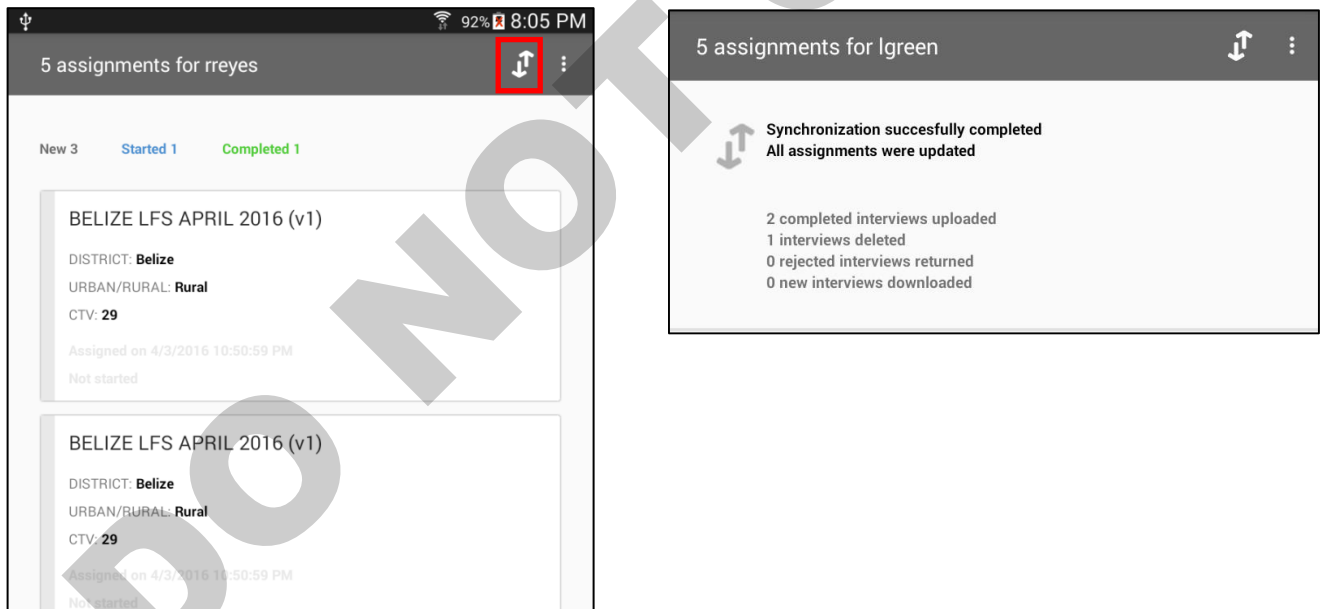
After completing the questionnaire, the interviewer should check that no errors have escaped his/her attention. To do this, the interviewer can follow the same protocol as in the third method above for confirming that all questions have been answered.

Marking a questionnaire as complete

A questionnaire is not automatically complete once all of the answers have been answered. To mark a questionnaire as complete, the interviewer must use the navigation pane to navigate to the module named Complete. Once on that screen, the interviewer then needs to click on the Complete button. This will mark the questionnaire as complete and be reflected in the status of that assignment on the interviewer's Dashboard.

Synchronization: Sending completed interviews, receiving new ones

The synchronization button is how the interviewer initiates an information exchange between their tablet and their supervisor's laptop. Synchronization performs two tasks. First, it automatically pushes any completed assignment to the supervisor for review. Second, it automatically pulls all new assignments and data collection instruments onto the interviewer's tablet. After synchronization is complete, the number of new assignments received, number of completed interviews sent, and so on are clearly displayed.



Appendix

Tablet Device Overview

