Use of CAPI for agricultural surveys

Intermediate Designer 1: Special Qs, Validation and C#
Overview

• Special question types (GPS, barcode, picture)
• Data validation
• Basic C# syntax for creating validation and enablement conditions
Learning Objectives

• Know what validation conditions and messages are
• Apply basic C# syntax for creating validation and enablement conditions
Special question types
Special question types

• 3 types for now:
  – GPS
  – Barcode
  – Picture
Special question types: GPS

**Designer**

**Interviewer**
Special question types: Barcode

**Question Type**

- QR Barcode

**Barcode of the gift given to the household**

- **Designer**

- **Barcode of the gift given to the household**
  - ISBN 978-1-4648-0133-4
  - SKU 210133

- **Interviewer**
Special question types: Photo

Designer

Interviewer

Photo graph product

Tap to take a photo
Data validation
Data validation: description

• Data validation expressions are to:
  – Confirm responses are consistent, and/or responses meet realistic expectations
  – Examples
    • A man cannot be pregnant. *Consistent w/ gender, enabled when household member is male.*
    • No one can be more than 110 years old, and younger than 0. *Realistic expectations (likelihood).*

• These expressions are written in C# in the validation condition field.
Data validation: description

• What happens when validation is violated?
• A warning message is shown to enumerator
Data validation: description

C#
Message enumerator sees if condition violated
Data validation: description

Value that violates condition

Message enumerator sees if condition violated
Basic C# syntax for creating validation and enablement conditions
Data validation: Building expressions

• How?
  – Connect a variable name with values or another variable using logical operators.
  – Connect expression creating multiple conditions using “||” or “&&”

• Example
  age > 18 || age < 65
Data validation: Building expressions

• Steps:
  1. Identify unleash and recipient question
  2. Refer to operator table to identify operator
  3. Create expression using operators and variable names of unleash and recipient questions.
# Data validation: Operators

<table>
<thead>
<tr>
<th>Operator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;</td>
<td>Greater than</td>
</tr>
<tr>
<td>&lt;</td>
<td>Less than</td>
</tr>
<tr>
<td>==</td>
<td>Equal too</td>
</tr>
<tr>
<td>!=</td>
<td>Not equal to</td>
</tr>
<tr>
<td>&lt;=</td>
<td>Less than or equal to</td>
</tr>
<tr>
<td>&gt;=</td>
<td>Greater than or equal to</td>
</tr>
<tr>
<td>&amp;&amp;</td>
<td>and</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>`variableName==1</td>
<td></td>
</tr>
<tr>
<td><code>variableName.InList(2, 3)</code></td>
<td>(single select) contains in</td>
</tr>
<tr>
<td><code>variableName.Contains(1)</code></td>
<td>(multiselect) single values</td>
</tr>
<tr>
<td><code>variableName.ContainsAny(1, 3)</code></td>
<td>(multiselect) single values, multivalues</td>
</tr>
</tbody>
</table>

Operators depend on type of UNLEASH QUESTION!
Data Validation examples

Question type: Numeric
Variable name: M3_Q6
Variable label: Age of the holder
Question text: How old are you?
Type: Integer
Data Validation examples

• Validation condition, we want the response to be less than 100 and positive.
Enablement and validation

Question type: Numeric
Variable name: M3_Q22
Variable label: Age of the manager
Question text: How old is %M3_Q19%
Enablement and validation

- **Enable** only if there is a manager
- **Validate** that value is less one 100 and positive.
Enablement and validation

Question type: Categorical: Single-select
Variable name: M3_Q18
Variable label: Does the holding have a manager?
Question text:
1. Yes
2. No, the holder is the manager

Question type: Numeric
Variable name: M3_Q22
Variable label: Age of the manager
Question text:
How old is %M3_Q19%
Enablement and validation

Question type
- Numeric

Variable label
- Age of the manager

Question text
- How old is %M3_Q19%?

Instruction
- In years

Enabling condition
- M3_Q18 == 1

Validation condition
- (M3_Q22 < 100) && (M3_Q22 > -1)

Error message
- Please verify the entered age of respondent is correct.
Enablement: Another Example

<table>
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<tr>
<th>Question type</th>
<th>Variable name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Categorical: Multi-select</td>
<td>M5_Q9</td>
</tr>
</tbody>
</table>

Variable label: Impact on farming activity

Question text:

How did the labour shortage affect your farming activity?

<table>
<thead>
<tr>
<th>Number</th>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Reduce productivity</td>
</tr>
<tr>
<td>2</td>
<td>Limit cultivated land</td>
</tr>
<tr>
<td>3</td>
<td>Reduce product quality</td>
</tr>
<tr>
<td>4</td>
<td>Reduce marketable surplus</td>
</tr>
<tr>
<td>5</td>
<td>Other</td>
</tr>
</tbody>
</table>

Add option

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Show strings
### Data validation: Operators

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Enablement and validation

Question text

If other, please specify

Pattern (?)

ADD INTERVIEWER INSTRUCTION

- Enabling condition (?)  □ Hide if disabled (?)

M5_Q9.Contains(5)

ADD NEW VALIDATION RULE
Questions?