

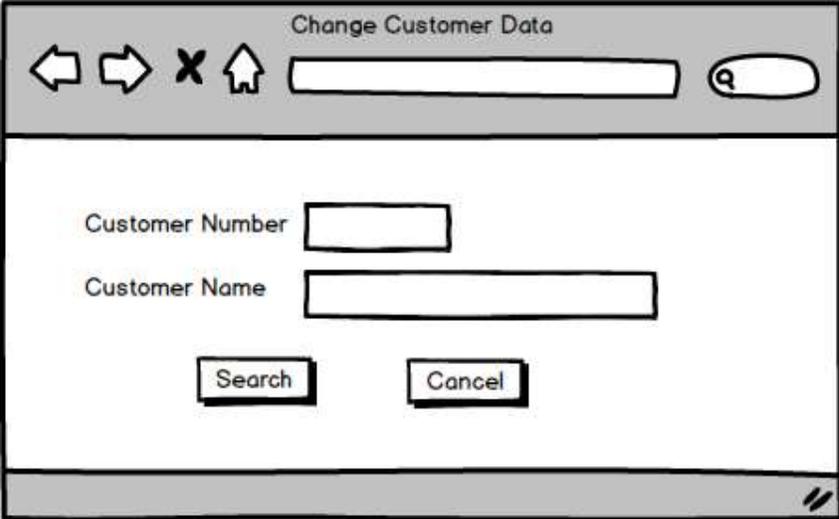
22 SELECTION SCREENS AND CHANGING DATA WITH A SEARCH KEY

This example treats a change function whose objective is twofold: A user should be able to change customer data but, before he does this, he should first be able to select the customer in a user-friendly way. From a functional standpoint, this can be realized in different ways. This section will discuss two different implementations of this functionality and will indicate how counting should take place in both situations.

22.1 Selection via a separate selection screen

Problem description

Using a menu, the user indicates that he wants to change customer data. The application subsequently presents screen 1 on which the user must enter a unique customer number or a (part of a) customer name. The user should not enter both.

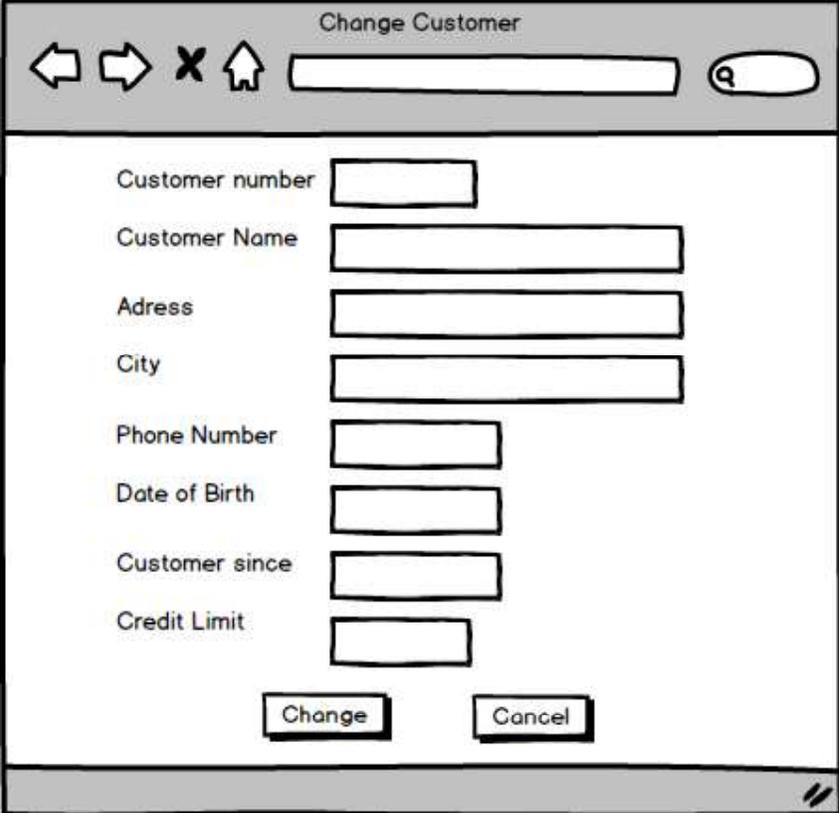


The screenshot shows a window titled "Change Customer Data". The title bar contains four navigation icons: a left arrow, a right arrow, a close 'X' icon, and a home icon. To the right of these icons is a search input field with a magnifying glass icon. Below the title bar, the main area contains two input fields: "Customer Number" with a small rectangular input box, and "Customer Name" with a larger rectangular input box. At the bottom of the main area, there are two buttons: "Search" and "Cancel". The window has a standard OS-style border with a small icon in the bottom right corner.

Screen 1

When a unique customer number is entered, the data for the customer concerned appears on the change screen. (See screen 2.)

When a customer name (or a part of a customer name) is entered, the application retrieves all customers with that name. If only one customer is found, the data of that customer appears immediately on the change screen (screen 2).



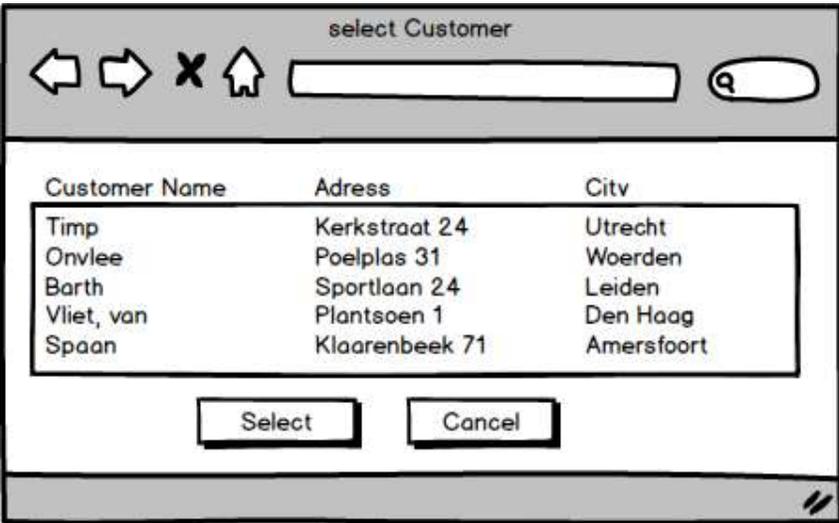
The screenshot shows a mobile application screen titled "Change Customer". At the top, there is a navigation bar with icons for back, forward, close, and home, followed by a search input field with a magnifying glass icon. Below the navigation bar, the screen contains several form fields for customer data: "Customer number", "Customer Name", "Adress", "City", "Phone Number", "Date of Birth", "Customer since", and "Credit Limit". At the bottom of the form area, there are two buttons: "Change" and "Cancel".

Screen 2

If several customers are found, they appear on the selection screen. (See screen 3.)

After the user enters the customer desired via the Choice field (screen 3), more extensive data of that customer appears on the change screen (screen 2).

The customer data can then be changed via screen 2.



The screenshot shows a mobile application screen titled "select Customer". At the top, there is a navigation bar with icons for back, forward, close, and home, followed by a search input field with a magnifying glass icon. Below the navigation bar, the screen displays a table of customer data. At the bottom of the table area, there are two buttons: "Select" and "Cancel".

Customer Name	Adress	City
Timp	Kerkstraat 24	Utrecht
Onvlee	Poelplas 31	Woerden
Barth	Sportlaan 24	Leiden
Vliet, van	Plantsoen 1	Den Haag
Spaan	Klaarenbeek 71	Amersfoort

Screen 3

Does the option to select data make up a part of the option to change data, or is it a separate function? Is a separate external input counted for entering the customer desired? Is the display of the customer data a separate external inquiry? How many functions should be counted in total?

Discussion

If the correct customer data is displayed on the change screen (screen 2) as a result of a customer number having been entered on screen 1, then the display of the data to be changed is part of the external input "Change Customer". This display is not counted as an individual external inquiry.

Counting is carried out as follows, however, when the user enters a non-unique customer name and customers meeting this criterion appear on screen 3, after which the customer to be changed can be chosen. Searching for the customer via customer name results in a displayed selection of customers on the selection screen (screen 3). This selection is not determined fully in size beforehand; i.e., the size of the selection varies depending on how many customers meet the selection criterion (name). The customer desired can then be selected. This display of selected customers on a separate screen is seen as additional functionality.

Since the logical layout of this overview is different, an additional function is counted; because the output varies in size, one external output should be counted.

Sometimes an application retrieves only one customer when a user selects via customer name. When this happens, the application does not display the selection screen (screen 3). Instead, it immediately retrieves the detailed data that screen 2 displays. This is merely an optimization and is therefore considered to be part of the external output counted for the selection screen (screen 3). No additional external output or external inquiry is counted for this.

After the user has made a selection on screen 3, all the data for the customer selected is displayed on screen 2, after which changes can be made. The display of data for the customer selected on screen 2 (just as when selecting via customer number) is seen as a part of the change function and is not an individual external inquiry.

Indicating the selected customer via the Choice field does not result in a separate external input.

The change function is the same in both cases, and is therefore counted as one external input.

Solution

Count one external input for the change function.

Count one external output for displaying the customers that meet the selection criterion.

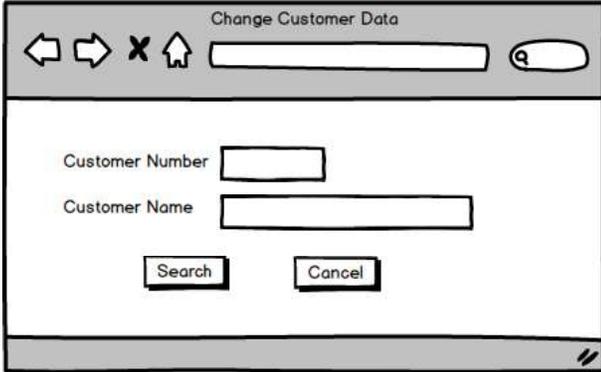
References to the standard

4.16, 4.17, 7.2.a, 7.2.n, 7.2.x, 7.3.d, 8.2.a, 8.2.c, 8.2.q, 8.2.u, 8.3.a, 8.3.b and 9.2.j

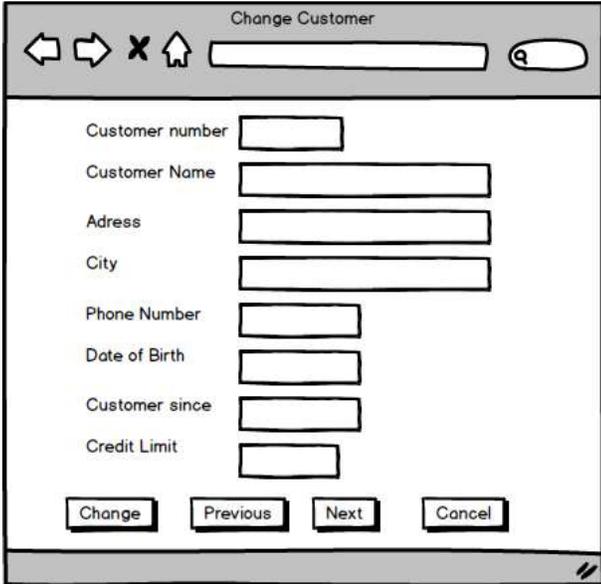
22.2 Selection via the change screen

Problem description

Using a menu, the user indicates that he wants to change customer data. The application subsequently presents screen 1 on which the user must enter a unique customer number or a customer name (but not both). The change function then has the screen sequence illustrated below.



After entering one of the two selection criteria, the data of the (first) customer that meets the criterion appears on screen 2. If Customer Number is used as the selection criterion, then only one customer can satisfy the criterion. Function keys are not active in such a case. If Customer Name is used as the selection criterion, however, a number of customers may satisfy the criterion. The user will not receive the kind of overview screen he did in the previous example in order to select a customer, but instead will be able to use the function keys PF2 and PF3 to browse through the customers selected until he has found the one he wants.



Are external outputs or external inquiries counted for this external input (i.e., for the ability to change customer data)? How many functions should be counted in total?

Discussion

If the correct customer data is displayed on the change screen (screen 2) as a result of a customer number having been entered on screen 1, then the display of the data to be changed is part of the external input *Change Customer*. The display is not counted as an individual external inquiry.

Analyzing must be carried out as follows when a user can enter a non-unique customer name on screen 1, browse through the customers on screen 2 until the correct one has been found, and then change the data of the customer. When the user searches for a customer via customer name, this search may result in the selection of a number of customers that can be displayed on the change screen via the function keys. This selection is not fully determined in size beforehand; i.e., the size of the selection varies depending on how many customers meet the selection criteria. The customer desired can then be selected. The display of the selected customers is seen as additional functionality. An additional function is identified because the functionality provided is in fact the same as in the previous illustration in which the selected customers were represented on an overview screen, and because the display and ability to browse through the selected customers entails a different logical processing than when data is merely presented and changed. More concretely, one external output should be identified because the output varies in size.

Sometimes it occurs that an application retrieves only one customer when a user selects data via customer name, in which case the function keys for browsing are not active. Such a situation is considered to be a part of the external output that is counted for selecting. The situation does not result in an additional external output or external inquiry.

The change function is the same in both cases and is therefore counted as one external input.

Solution

Count one external input for the change function.

Count one external output for the ability to browse through the customers that meet the selection criterion.

References to the standard

4.17, 7.2.a, 7.2.n, 7.2.x, 7.3.d, 8.2.a, 8.2.c, 8.2.q, 8.2.u, 8.3.a, 8.3.b and 9.2.j