**Functional Requirements**

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**# Initial state**

**Definition**: The user can access the *Homepage* of the computer database application with a proper url and Internet connectivity using different browsers. Then the system will show the main page to the user and display the **title “Play sample application — Computer database”**, but if the user made a mistake in the url then he/she will be seeing a message “**Action not found**”.

Upon success the list of existing records of computers is listed in pages (max 10 on a page), current focus on the first page. The whole set of main functionalities is accessible. Browsing through the pages, adding a new computer, filtering displayed lists by computer name. Selecting a computer to edit its record or delete a computer.

**Inputs: url :** [**http://computer-database.herokuapp.com/computers**](http://computer-database.herokuapp.com/computers)

**Outputs:** Home page launched and displayed successfully with all UI components: homepage **title, ‘Play sample application - Computer database’**, **‘<Number\_of\_computers> found’ title**, **table with registered computers** displayed in pages, the first page initially shown (max 10 per page) as well as filter text field **Filter by computer name...**, filter submit button **Filter by name**, **Add a new computer** button, **Previous** and **Next** page display buttons, **Displaying x to y of <number\_of \_computers>**.

**Pre condition**: For the user to be able to use this system, he/she must have a valid url to access the computer database, access to Internet and a Chrome browser installed.

**Post condition:** The user will reach the *Home page* of the application with all main functionalities. The title **‘Play sample application — Computer database’** is shown on top left of the home page. Under it is displayed the number of all computers that have been registered till the moment **“<Number of computers> computers found”** (<Number of computers> is dynamic depending on the total number of records in the DB). Under it a text field **Filter by computer name...** for filter input and a button **Filter by name** to apply the filter on its right. On the same line on the right a button **“Add a new computer”** is displayed. Beneath is shown the **table with all computers** registered shown in pages. Initially the first page is displayed ( if all computers are N and N < 10 only one page is available). Computer names are clickable and bring to the *‘Edit a computer or delete a computer’* page. Browsing through the pages buttons functionality available on the bottom right.(previous and next buttons, **“Displaying x to y from <total number of computers>** ” , where x = 1 at initial state, y = 10 if N >= 10, message displayed in the middle, dynamic change of x and y depending on the page). Previous button disabled, next button enabled if all computers N > 10 else enabled.

**# Filter by name**

**Definition**: For the user to be able to filter the list of computers, he/she is already at

the #Initial state of the app, *Home page* of the application is successfully loaded. The user can filter the list of computers by name or substring of a computer name. Text field for computer name **Filter by computer name…** and a submit button **Filter by Name** are shown under title **“<Number of computers> computers found”.** The button is clickable and the text field is enabled for typing. The user can filter by typing a filtering string in the text field **Filter by computer name…** and then clicking **Filter by Name** button. Upon those actions the list of the computers is updated according to the filtering condition. Number of computers becomes equal to the number of items in the result list after filtration. Number of computers = number of computers from filtering result set. **“<Number of computers found\_after\_filtering> computers found”**. Under it a text field **Filter by computer name...** with maintained entry the filter string applied. The **table with all computers** shows the first page of the computers list after the filtering condition is applied. Initially the first page is displayed. If all computers are N and N < 10 only one page is available). Browsing through the pages buttons functionality available on the bottom right: **Previous** and **Next** buttons, “**Displaying x to y from <total number of computers\_return after filtering>** ” , where x = 1, y = 10 if N >= 10, else y = N (total number of computers return from filtering). **Previous** button disabled, **Next** button enabled only if all computers after filtering are N > 10 else **Next** button is disabled. Upon no result return from filtering, **No Computers found** title is shown. Under it a text field **Filter by computer name...** with maintained entry the filter string applied. List of computers is replaced by a message “**Nothing to display”.** No computer list is shown.

**Inputs:** String condition for filtering**.** No limitations on the string characters.

**Outputs:** The user is on the *Home page*. The list of the computers is updated according to the filtering condition. Number of computers becomes equal to the number of items in the result list. Number of computers = number of computers from filtering result set. **“<Number of computers found\_after\_filtering> computers found”**. Under it a text field **Filter by computer name...** with maintained entry the filter string applied. The **table with all computers** shows the first page of the computers list after the filtering. Initially the first page is displayed. If all computers are N and N < 10 only one page is available. Browsing through the pages buttons functionality available on the bottom right: **Previous** and **Next** buttons, “**Displaying x to y from <total number of computers\_return after filtering>** ” , where x = 1, y = 10 if N >= 10, else y = N (total number of computers return from filtering). **Previous** button disabled, **Next** button enabled only if all computers after filtering are N > 10 else **Next** button is disabled. Upon no result return from filtering, **No Computers found** title is shown instead of **“<Number of computers> computers found”** title. Under it a text field **Filter by computer name...** with maintained entry the filter string applied. List of computers is replaced by a message “**Nothing to display”.**

**Pre condition**: The user must have already launched the application at Initial state successfully. *Home page* of the application is loaded. Text field for computer name **Filter by computer name…** and a submit button **Filter by Name** are shown.

**Post condition:** The user will be on *Home page* of the application with a list of computers displayed according to the applied filtering condition. The filtering string remains in the **Filter by computer name…** text field. Number\_of\_computers\_found=Number\_of\_computers\_found\_after\_filtering. Its value is replaced in title **“<Number of computers found=Number of computers found\_after\_filtering> computers found”** and inthe text between **Previous** and **Next** buttons on the bottom right of the page“**Displaying x to y from <total number of computers\_return after filtering>** ”

**# Add a new computer**

**Definition**: For the user to be able to add a new computer, he/she has to have successfully launched the **Home page** of the app, then has clicked on the **“Add a new computer”** button and has reaches the *Add a new computer page*  with a title **‘Add a computer’** and under it a form to input the data necessary for a new computer record. The form contains text fields **Computer name** (marked as Required in grey), **Introduced Date**, **Discontinued date**, **Company drop down** selector with pre-populated entries. On the bottom of the form are shown button **‘Create this computer’** and button **‘Cancel’**. All buttons are clickable and text fields enabled for typing, the dropbox is functional and picked items can be selected. Only **Computer name** is a mandatory field for a successful new record. The user can submit the new computer by clicking the **‘Create this computer’** buttonor can cancel the process by clicking the **‘Cancel’** button. When wrong entries are inserted or computer name entry is missing, after the submit button is clicked, error fields are marked in pink. When a new computer is submitted successfully, the user is sent to the **Home page**. Where the number of computers found is increased with one. Title is updated **“<Number of computers = Number of computers +1> computers found”**. Under it a confirmation message **‘Done! Computer <name> has been created’** is shown. Text between **Previous** and **Next** buttons on the bottom right of the page is updated “**Displaying x to y from <total number of computers = total number of computers + 1>** ” , where x = 1, y = 10 if N >= 10, else y = N where **N = total number of computers + 1. Previous** button disabled, **Next** button enabled only if N > 10.

**Inputs:** Computer name, introduced date, discontinued date and company selection.

**Outputs:**  The new record is accepted and the user is sent to the *Home page* with a displayed confirmation message. Title is updated **“<Number of computers = Number of computers +1> computers found”**. Under it confirmation message **‘Done! Computer <name\_of\_the\_new\_computer> has been created’** is shown. Text between **Previous** and **Next** buttons is updated “**Displaying x to y from <total number of computers = total number of computers + 1>** ” , where x = 1, y = 10 if N >= 10, else y = N where **N = total number of computers + 1.**

**Pre condition**: The user must have already launched the application and have clicked on the **‘Add a new computer button’** from the *Home page*. The user is on the *Add a new computer page*.

**Post condition:** The user has successfully created a new computer entry. He/she is on the *Home page.* Where the new created computer is added to the list. The number of computers found has increased with one. The user will be able to find the new computer in the updated list.

**# Edit a new computer**

**Definition**: For the user to be able to modify an existing computer, he/she has to have successfully launched the **Home page** of the app, has at least one record in the list of computers, then has clicked on a computer name from the list and has reaches the *Edit computer page* with a title **‘Edit computer’** and under it a form to input and modify the data necessary for the updated computer record. The form contains text fields **Computer name** (marked as Required in grey), **Introduced Date**, **Discontinued date**, **Company drop down** selector with all companies available to choose from.The form is with pre populated data with the picked up computer details. On the bottom under the form are shown button **‘Save this computer’** and button **‘Cancel’**. The user is able to modify and enter a computer name, Introduced data, Discontinue date and to select a company and submit the updated record by clicking the button **‘Save this computer’**.

All buttons are clickable and text fields enabled for typing, the dropbox is functional and picked items can be selected. Only **Computer name** is a mandatory field for a successful submit of an updated record. The user can submit the new computer or can cancel the process by clicking the **‘Cancel’.** When **‘Cancel’ button** is clicked the user will be sent to the *Home page* at #initial state.No messages and no changes are shown, the picked up computer can still be found in the list with unchanged details.

When on the *Edit computer page* wrong entries are inserted for modifications or computer name entry is missing after modifications, on submit button click, the error fields are marked in pink.

When a modified computer is submitted successfully, the user is sent to the **Home page** where the number of computers found remains the same. Under the title **“<Number of computers> computers found”**, a confirmation message **‘Done! Computer <name> has been updated’** is shown.The user will be able to find the updated computer in the list and see the changes in its record.

**Inputs:** Computer name, introduced date, discontinued date and company selection.

**Outputs:** The updated record is accepted and the user is sent to the **Home page** where the number of computers found remains the same. Under the title **“<Number of computers> computers found”**, a confirmation message **‘Done! Computer <name> has been updated’** is shown.The user will be able to find the updated computer in the list and see the introduced changes in its record.

**Pre-condition**: The user has to have successfully launched the **Home page** of the app, has at least one record in the list of computers, then has clicked on a computer name from the list and has reaches the *Edit computer page* with a title **‘Edit computer’** and under it a form to input and modify the data necessary for updating a computer record. The form contains text fields **Computer name** (marked as Required in grey), **Introduced Date**, **Discontinued date**, **Company drop down** selector with pre-populated entries. On the bottom under the form are shown button **‘Save this computer’** and button **‘Cancel’**.

**Post condition:** The computer record is updated successfully. The user is sent to the *Homepage* of the application with a confirmation message  *’Done! Computer <the updated computer name> has been updated’.* The user will be able to find the new computer in the updated list.

**# Delete a computer**

**Definition**: For the user to be able to delete a new computer, he/she has to have successfully launched the **Home page** of the app, has at least one record in the list of computers, then has clicked on a computer name from the list and has reaches the *Edit computer page* with a title **‘Edit computer’** and under it a form to input and modify the data necessary for the computer record. The form contains text fields **Computer name** (marked as Required in grey), **Introduced Date**, **Discontinued date**, **Company drop down** selector for companies. The form is with pre populated data with the picked up computer details. On the bottom of the form are shown button **‘Create this computer’** and button **‘Cancel’**. To the right of the title **‘Edit Computer’,** **‘Delete this computer’** **button** is displayed. Buttons **Cancel** and **Delete this computer** are clickable. The user can delete the record for the picked computer by clicking the button **‘Delete this computer’** or can cancel the process by clicking the **Cancel button**, when he/she will be sent to the *Home page* at #initial state.No messages and no changes are shown, the picked up computer can still be found in the list with unchanged details.When the user clicks **‘Delete this computer’** **button,** the computer is deleted successfully.The user is sent to the *Home page* where the number of computers found is decreased with one. Title is updated **“<Number of computers = Number of computers - 1> computers found”**. Under it a confirmation message **‘Done! Computer has been deleted’** is shown. Text between **Previous** and **Next** buttons on the bottom right of the page is updated “**Displaying x to y from <total number of computers = total number of computers - 1>** ” , where x = 1, y = 10 if N >= 10, else y = N where **N = total number of computers - 1. Previous** button disabled, **Next** button enabled only if N > 10.

**Inputs:**

**Outputs:** The deleting of the record is accepted and the user is sent to the **Home page** where the number of computers found is reduced by 1. The title **“<Number of computers= numbers of computers - 1> computers found”** is updated with the decreased by 1 total number of computers. Under it a confirmation message **‘Done! Computer has been deleted’** is shown.The user will not be able to find the deleted computer in the list. Text between **Previous** and **Next** buttons on the bottom right of the page is updated “**Displaying x to y from <total number of computers = total number of computers - 1>** ” , where x = 1, y = 10 if N >= 10, else y = N where **N = total number of computers - 1. Previous** button disabled, **Next** button enabled only if N > 10.

**Pre condition**: The user has to have successfully launched the **Home page** of the app, has at least one record in the list of computers, then has clicked on a computer name from the list and has reaches the *Edit computer page* with a title **‘Edit computer’** and under it a form to input and modify the data necessary for updating a computer record. The form contains text fields **Computer name** (marked as Required in grey), **Introduced Date**, **Discontinued date**, **Company drop down** selector with pre-populated entries. On the bottom under the form are shown button **‘Save this computer’** and button **‘Cancel’**. To the right of the title **‘Edit Computer’,** **‘Delete this computer’** **button** is displayed. Buttons **Cancel** and **Delete this computer** are clickable.

**Post condition:** The deleting of the record is accepted and the user is sent to the **Home page** where the number of computers found is reduced by 1.The computer is deleted successfully and can not be found in the list of computers. Text containing the decreased number of computers is updated in the title **“<Number of computers= numbers of computers - 1> computers found”** and in text “**Displaying x to y from <total number of computers = total number of computers - 1>** ”

**# Navigation through different pages**

**Definition**: For the user to be able to navigate to different pages with computers he/she is already at the #initial state of the application

**Inputs:**

**Outputs:**

**Pre condition**: The user must have already launched the application. Then the system will show the main page to the user and display a “Add a new computer” button.

**Post condition:** The user will be on the main page of the application with a Unordered list element.

**# Cancel**

**Definition**: For the user to be able to navigate to different pages with computers he/she is already at the #initial state of the application

**Inputs:**

**Outputs:**

**Pre condition**: The user must have already launched the application. Then the system will show the main page to the user and display a “Add a new computer” button.

**Post condition:** The user will be on the main page of the application with a Unordered list element.