Bob the Builder Construction Company

~ User manual ~

1. Introduction

This is a brief introduction into the user manual used to guide the user throughout the system and give them an easy overview over all the functionality and possible options that are able to be used. User does not have to strictly follow the manual to achieve correct results.

2. Chapter Overview

1. Display the projects

Once the program loads, you will be greeted by the view of the ongoing projects list. This is the default view that will load every time you reopen the application. From here, you can select a few options. You can add a new project, open an existing one to get more details on it, update or edit it or you can simply delete it from the system.

For now let's focus on displaying, the rest will be covered further in the manual. The two buttons at the top labeled *Ongoing Projects* and *Completed Projects* are your main navigation tools for displaying projects that are either ongoing or have been marked as completed. Every time you press one of them, the list of projects will adjust accordingly and the filters you have applied will also be cleared.

2. Filter the projects

Once you have selected either the ongoing or completed projects list you can then apply filters using the panel on the right, to search for more specific projects.

A. Search by ID

Step 1. Enter the ID in the field at the top panel.

Step 2. Press Enter.

If there are no projects with matching ID an error will be shown. To reload projects, press Enter once the ID field is empty, press *Clear Filters* button or either *Ongoing Projects* or *Completed Projects* button.

B. Filter by start date

Step 1. Select the earliest start date using the first date picker on the right panel right under the *Search by ID* field.

Step 2. Select the latest start date using the second date picker.

Step 3. Press Enter on any of them or press the *Apply Filters* button at the bottom of the panel.

You can also choose if the results should be ordered in descending or ascending order for the date filter by selecting one of the two options right under the date pickers.

You do not have to choose the bottom or the maximal date, both fields can be left blank if you wish to not have an upper or lower bound. If you wish to further shorten the current range, enter the new dates and filter again. Once you wish to change the range of the search, remember to clear the filters first by pressing the *Clear Filters* button or either *Ongoing Projects* or *Completed Projects* button.

C. Filter by status

To filter by status, simply select one of the two buttons to search for projects behind or not behind the schedule. The buttons are located under the date search fields. Note that you can only select one button at a time.

To reset it. simply clear the filters first by pressing the *Clear Filters* button or either *Ongoing Projects* or *Completed Projects* button.

D. Filter by type

To filter by type, use the check boxes on the right panel that are located under the status buttons. To exclude the type from the displayed results, simply uncheck the box. To again include it check the box again.

If you wish to check all boxes on again click the *Clear Filters* button or either *Ongoing Projects* or *Completed Projects* button.

E. Filter by budget

Step 1. Enter the lowest budget value in the first field, located on the right panel under the type check boxes.

Step 2. Enter the upper bound of the range in the second field.

Step 3. Press Enter on any of them or press the *Apply Filters* button at the bottom of the panel.

The same as with the date, you don't have to fill both fields if you don't wish to have the bottom or the upper bound in your search. If you wish to further shorten the current range, enter the new budget values and filter again.
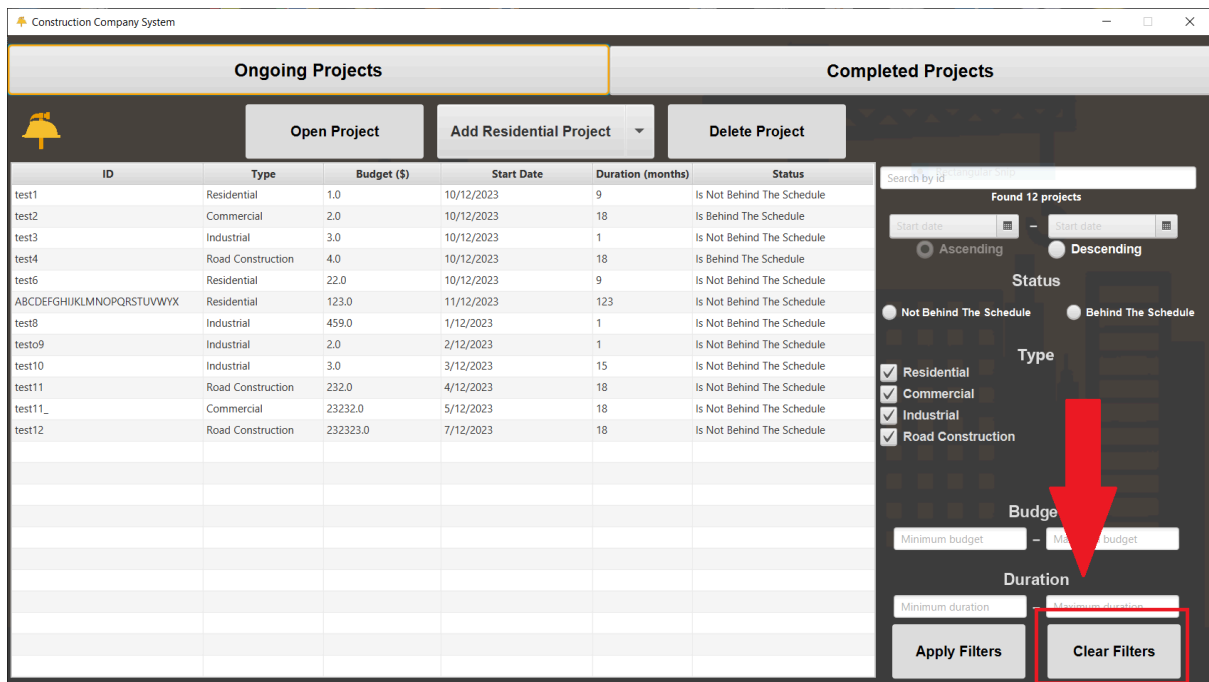
Once you wish to change the range of the search, remember to clear the filters first by pressing the *Clear Filters* button or either *Ongoing Projects* or *Completed Projects* button.
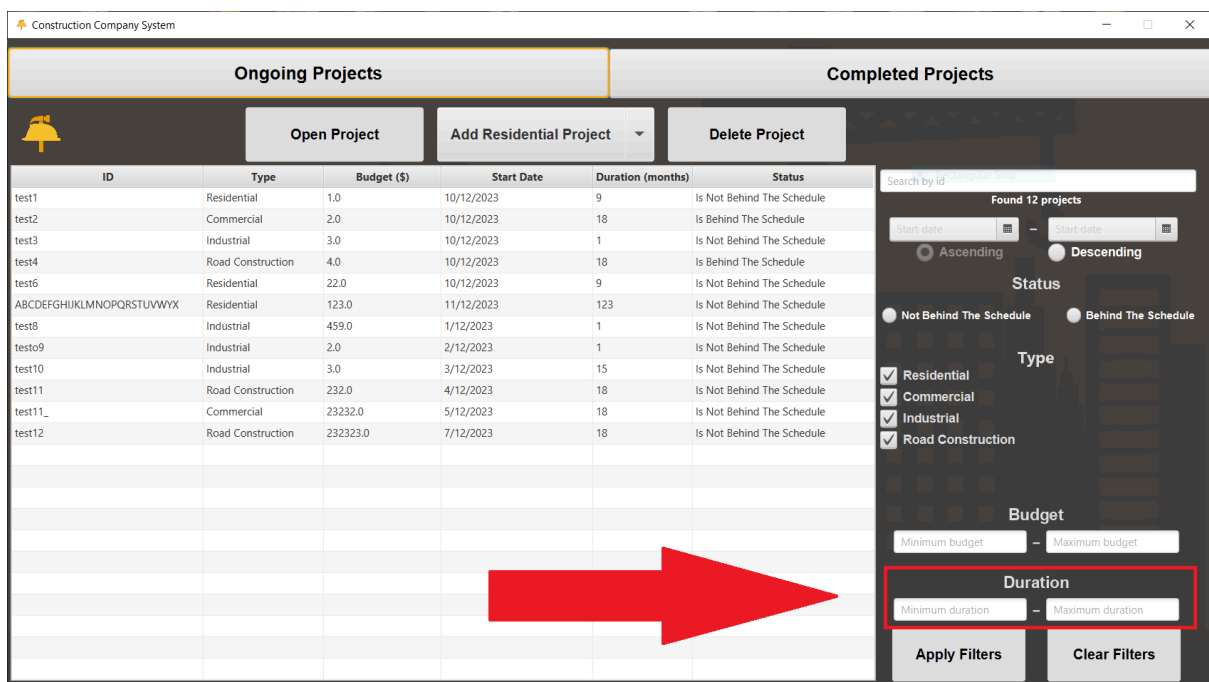
F. Filter by duration

Step 1. Enter the lowest duration value in the first field, located at the bottom of the panel.

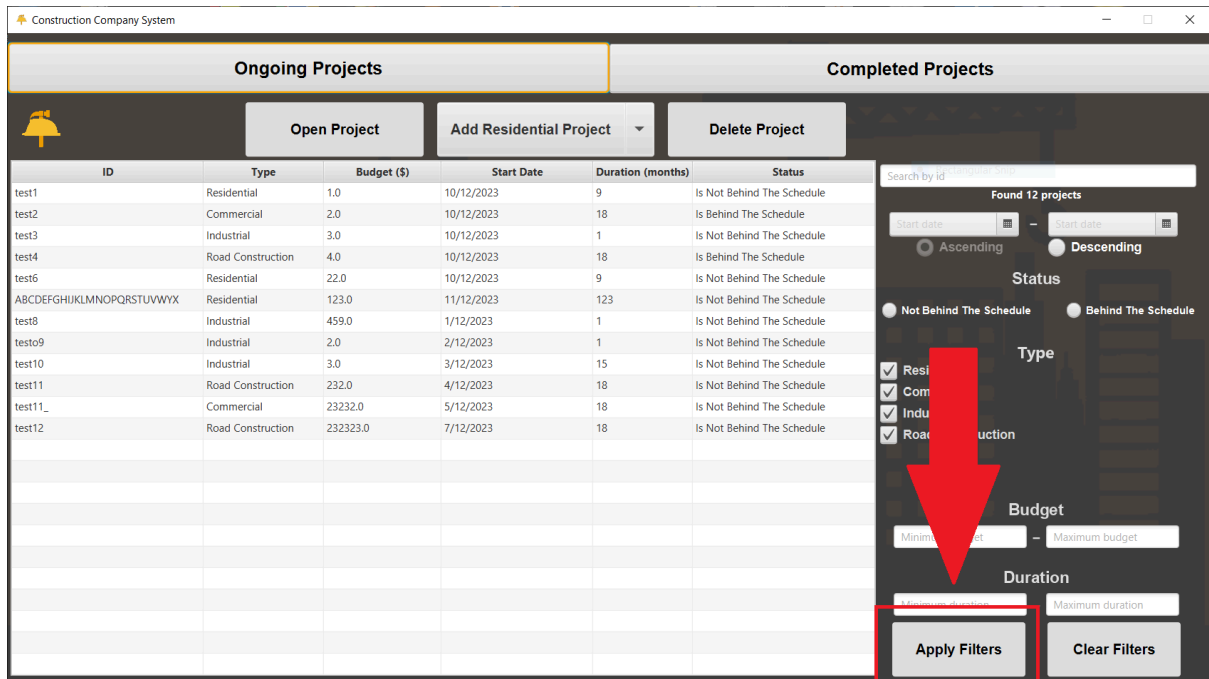Step 2. Enter the upper bound of the range in the second field.

Step 3. Press Enter on any of them or press the *Apply Filters* button at the bottom of the panel.

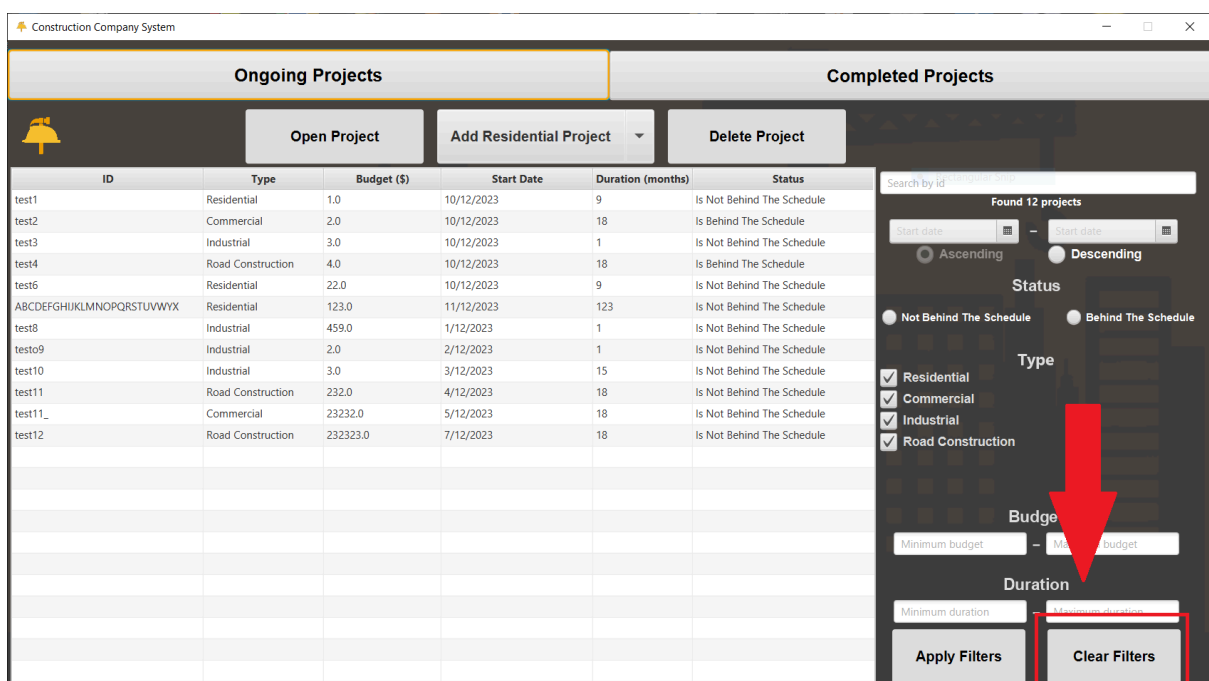The same as with the date and budget, you don't have to fill both fields if you don't wish to have the bottom or the upper bound in your search. If you wish to further shorten the current range, enter the new duration values and filter again.

Once you wish to change the range of the search, remember to clear the filters first by either pressing the *Clear Filters* button or either *Ongoing Projects* or *Completed Projects* button.

G. Apply multiple filters at the same time

Step 1. Fill out the fields with filters you wish to apply.

Step 2. Press the *Apply Filters* button at the bottom of the panel.

Alternatively, you can do it manually by hitting Enter in each field Once you wish to change the range of the search, remember to clear the filters first by pressing the *Clear Filters* button or either *Ongoing Projects* or *Completed Projects* button.

3. Add a new Project

When you want to create a new project, use the middle button located under the *Ongoing Projects* and *Completed Projects* buttons. Press it to add a project of type Residential or use the small arrow next to it for other options.

A. Add a Residential Project

Step 1. Press the *Add Residential Project* button.

Step 2. Enter the values.

Step 3. Press the *Add Project* button.

Note that some fields will have default values already entered, but they can be changed. This is the case with the start date as well: if it remains empty, the start date will be set to the current date. You can jump to the next field by pressing Enter; pressing Enter on the last field will automatically hit the *Add project* button for you.

If you enter an invalid data (e.g. letters, where the system requires numbers), the fields will be highlighted until you fix the issue. When entering illegal values, the system will display an error and allow you to fix the values in question.

B. Add an Industrial, Commercial or Road Construction Project

Step 1. Press the small arrow that is part of the *Add Residential Project* button.

Step 2. Select one of the options depending on what type you want to add.

Step 3. Enter the values.

Step 4. Press the Add Project button.

Note that some fields will have default values already entered, but they can be changed. This is the case with the start date as well: if it remains empty, the start date will be set to the current date. You can jump to the next field by pressing Enter; pressing Enter on the last field will automatically hit the *Add project* button for you.

If you enter an invalid data (e. g. letters, where the system requires numbers), the fields will be highlighted until you fix the issue. When entering illegal values, the system will display an error and allow you to fix the values in question.

4. Delete a project

Step 1. Select (click) the project from the list.

Step 2. Press the *Delete Project* button, located under the *Ongoing Projects* and *Completed Projects* buttons.

Step 3. Press *OK* in the new pop-up window.

Note that deleting a project is **permanent** and **cannot be undone**. Once the project is deleted, it is removed from the system completely, which frees up the ID it had been assigned.

5. Open a project

Step 1. Select (click) the project from the list.

Step 2. Press the *Open Project* button, located under the *Ongoing Projects* and *Completed Projects* buttons.

From here, you will have a few options:

- cancel and go back to the list you were looking at;
- update project's resources;
- edit project's details.

6. Update the resources

Step 1. Open the project (see chapter 5).

Step 2. Press the middle button labeled as *Update Resources*.

Step 3. Enter the values and optionally, add notes.

Step 4. Press the Update button.

You can jump to the next field by pressing Enter; pressing Enter on the last field will automatically hit the *Update* button for you.

If you enter an invalid data (e. g. letters, where the system requires numbers), the fields will be highlighted until you fix the issue. When entering illegal values, the system will display an error and allow you to fix the values in question.

When entering a negative value for the update, the system will ask for confirmation.

Note that if you don't want to add anything to a specific attribute you can leave it blank.

If you wish to cancel the update, simply press the *Cancel* button and confirm canceling.

When you either complete or cancel the update, you will be brought back to the project's details. Under the two buttons, there is a text area that will display the last updates you made to the project along with the notes, date and time.

Note that you do not have the option to update a project that has been marked as completed.
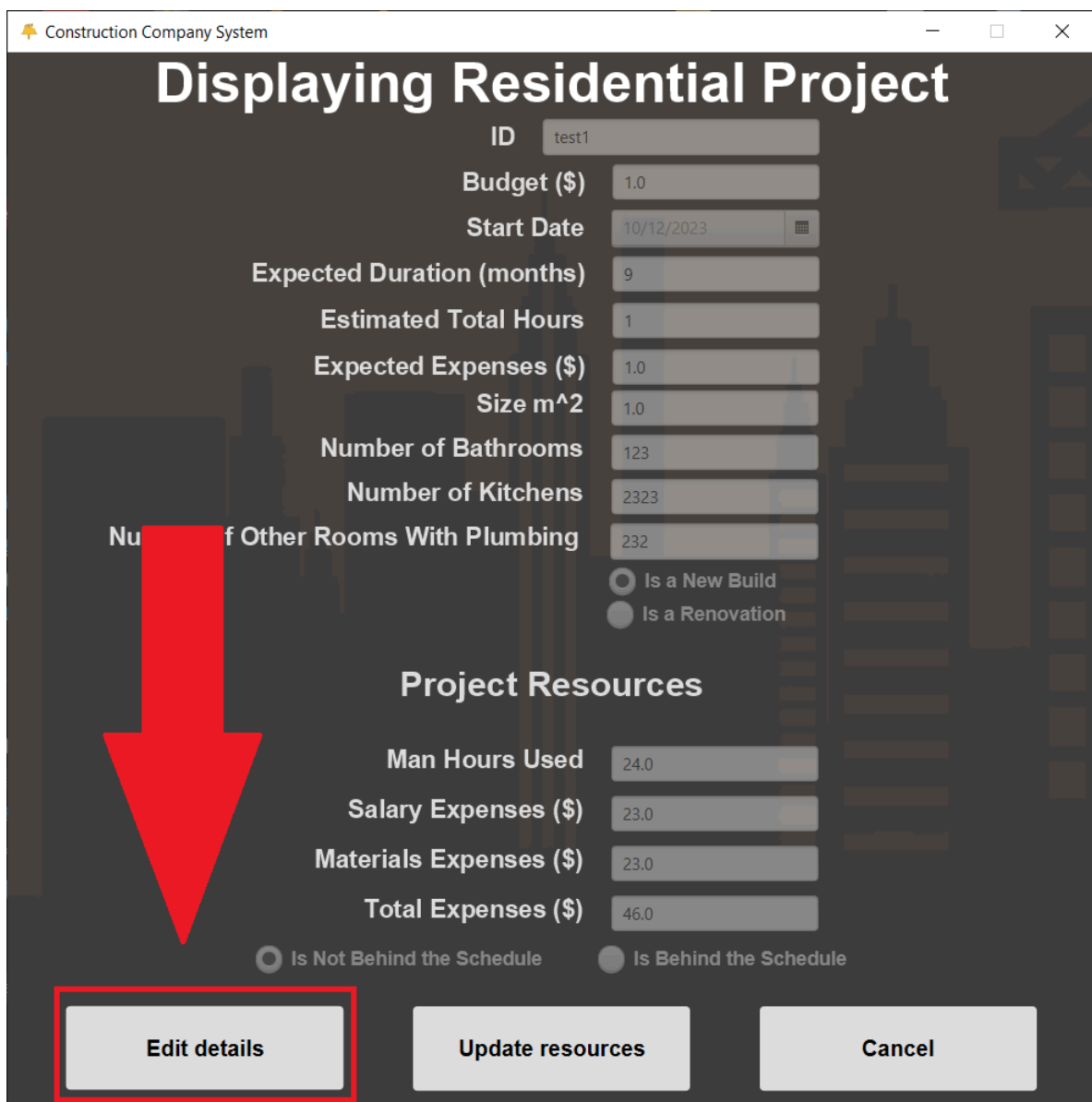
7. Edit the details

Step 1. Open the project (see chapter 5).

Step 2. Press the left button labeled as *Edit Details*.

Step 3. Change the values or/and mark the project as ongoing or completed (depending on current status), by pressing the middle button labeled accordingly: *Mark as Completed* or *Mark as Ongoing*.

Step 4. Press the *Save Edit* button.

Edit a Residential Project

ID	test1
Budget ($)	1.0
Start Date	10/12/2023
Expected Duration (months)	9
Estimated Total Hours	1
Expected Expenses ($)	1.0
Size m^2	1.0
Number of Bathrooms	2323
Number of Kitchens	2323
Number of Other Rooms With Plumbing	232

○ Is a New Build
○ Is a Renovation

Project Resources

Man Hours Used	24.0
Salary Expenses ($)	23.0
Materials Expenses ($)	23.0
Total Expenses ($)	46.0
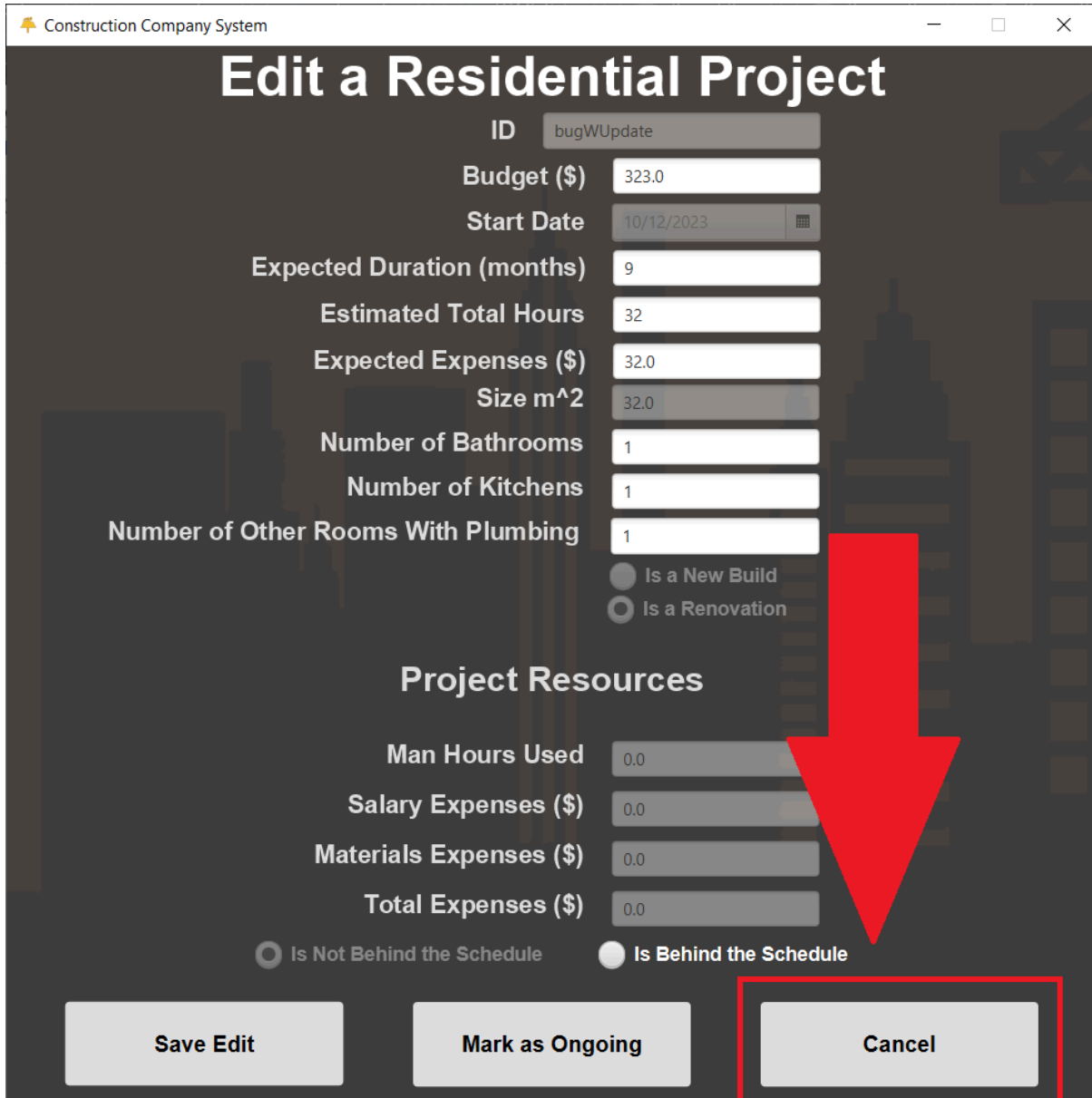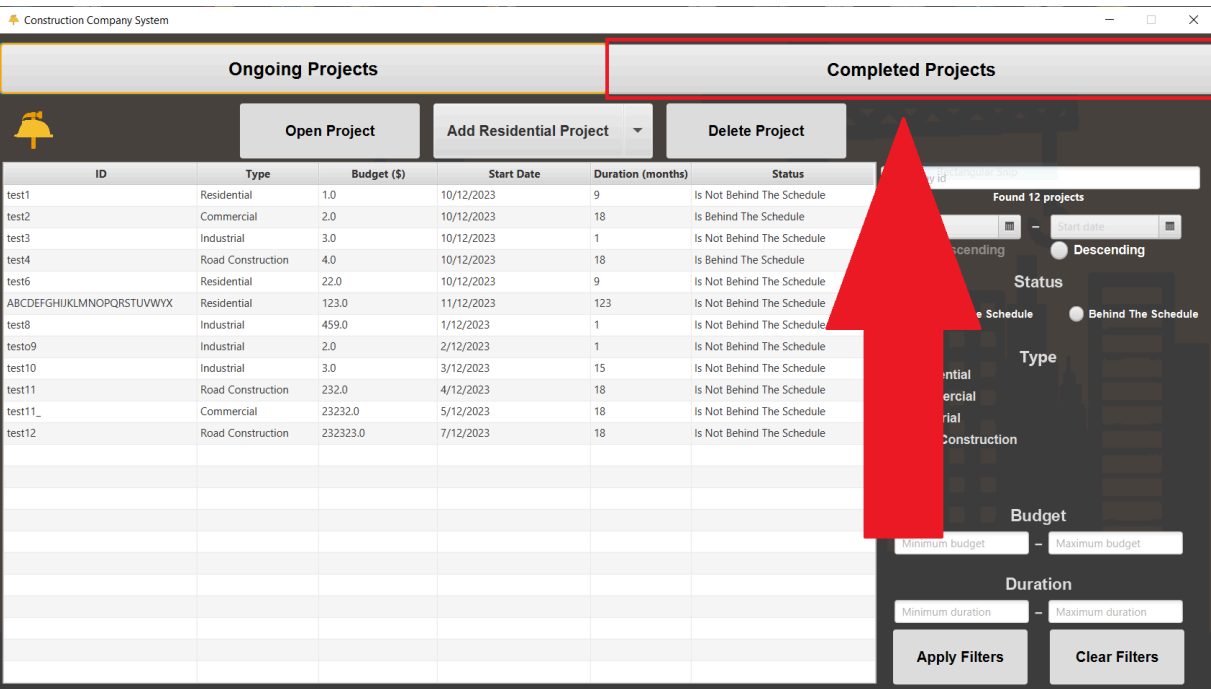
○ Is Not Behind the Schedule   ● Is Behind the Schedule

Save Edit	Mark as Completed	Cancel

If you enter invalid data (e.g. letters, where the system requires numbers) the fields will be highlighted until you fix the issue. When entering illegal values the system will display an error and allow you to fix the values in question.

Illegal values

Illegal values

OK

Upon doing so, the project will get moved to either the completed projects list or the ongoing list and you will be sent back to the list of projects.

To cancel the editing without saving the values, simply press the *Cancel* button and confirm the intention to leave. This will bring you back to the project's display window.

8. Access reports

Step 1. Press the Completed Projects button.

Step 2. Press the right button labeled as Reports. The system will display the average duration and expenses for each type of project, along with labels displaying how many projects of that specific type were completed.

If you wish to close the window press the *Back* button that will bring you back to the completed projects display.