Use-case 1

Name: start a level

Actors: Student

Goal: release the programmed robot to a level

Precondition: Student is in the main menu of the client app

Main success scenario:

1. The student clicks the ‘Choose a level’ button
2. List of available levels loaded from the server appears
3. The student clicks a level in the list
4. The code editor appears
5. Student enters the code for the robot
6. Student clicks the ‘Run’ button
7. The code is checked for syntactic errors by the system
8. The code is sent to the server and the level starts

Alternative scenario 1:

1. When check 7 failed (the code contains syntactic mistakes), show the errors and suggest to correct the code

Alternative scenario 2:

1. When unable to get levels in step 2 due to a network error, show student an error message
2. The main menu is shown again

Alternative scenario 3:

1. When unable to send the code to the server due to a network error, show student an error message
2. The code editor is shown again

Use-case 2

Name: save program code typed in code editor

Actors: Student

Goal: save program code to the hard drive

Precondition: Code editor is opened

Main success scenario:

1. The student clicks the ‘Save’ button
2. File explorer window appears
3. The student chooses where to save the file and clicks ‘OK’
4. The explorer window is closed and the source code file is saved

Use-case 3

Name: load program code to the code editor

Actors: Student

Goal: load program code from the hard drive

Precondition: Code editor is opened

Main success scenario:

1. The student clicks the ‘Load’ button
2. If there are unsaved changes, the student is asked if they should be saved first
3. File explorer window appears
4. The student chooses a source code file
5. The code appears in code editor

Use-case 4

Name: leave the level

Actors: Student

Goal: return from the level to the code editor

Precondition: Student is on a level

Main success scenario:

1. The student clicks the ‘Quit’ button
2. A window asking confirmation appears
3. The student confirms the intention to leave the level
4. The code editor appears with the same code as before entering the level

Use-case 5

Name: Leave the code editor

Actors: Student

Goal: Close the code editor and return to main menu

Precondition: Student is in the code editor

Main success scenario:

1. The student clicks the ‘Quit’ button
2. If there are unsaved changes to the code, the student is asked if they should be saved
3. The code editor is closed and main menu appears