#### Test Cases Air quality monitoring

#### User administration test case

- 1 Can create and delete user's accounts
  - ✓ An researcher account is created with user password
  - An administrator account is created with user and password
  - ✓ Error in creation: the user already exists
  - ✓ A researcher account is deleted
  - ✓ An administrator account is deleted.
  - ✓ Deletion error: the user does not exist
- 2 Register with a user name and password, as well as your profile.
  - ✓ You log in with username and password
  - ✓ Invalid user connection error. The user does not exist
  - ✓ Invalid password connection error. The password is incorrect

# 4 Modify password

- ✓ Successful password change: The user changes his password
- ✓ Password change error: Passwords are not the same

## Sensor administration

5 Add new sensors

Successful sensor registration: The new sensor is entered

- ✓ Error in sensor name: Invalid sensor name
- ✓ Latitude error: Invalid latitude value
- ✓ Length error: Invalid length value

8 Delete sensors admin user only

- ✓ Successful deletion: the sensor has been removed
- ✓ Non-existent sensor error: the sensor does not exist

## Data recovery

- 12 Data recovery according to the established filters and validating user
  - ✓ Successful recovery: The data of all the sensors is recovered in a period of time
  - ✓ Loading error: No information available in that period
- 13 Calculation of the averages according to the selected grouping (daily, weekly, monthly or annual)
  - ✓ Successful daily grouping: Hourly averages of all sensors are generated
  - Daily grouping error: Hourly averages cannot be calculated due to error in the values
  - ✓ Successful weekly grouping: Daily averages of all sensors are generated
  - ✓ Weekly grouping error: The averages per day cannot be calculated due to an error in the values
  - ✓ Successful monthly grouping: The weekly averages of all sensors are generated
  - Monthly grouping error: The averages per week cannot be calculated due to an error in the values
  - ✓ Successful annual grouping: Monthly averages of all sensors are generated
  - Annual grouping error: The averages per month cannot be calculated due to an error in the values

## Sensor map generator

- 19 Associate the sensor information with each pointer and display it on the screen
  - ✓ Successful recovery: The data of the specified sensor is recovered in a period of time
  - ✓ Loading error: There is no information available from that sensor in that period
  - ✓ Sensor error: The specified sensor does not exist