

# Smart Fan - BLE

## Functional Requirements

This document specifies deliverables and functional requirements for the Smart Fan App

### Revision History

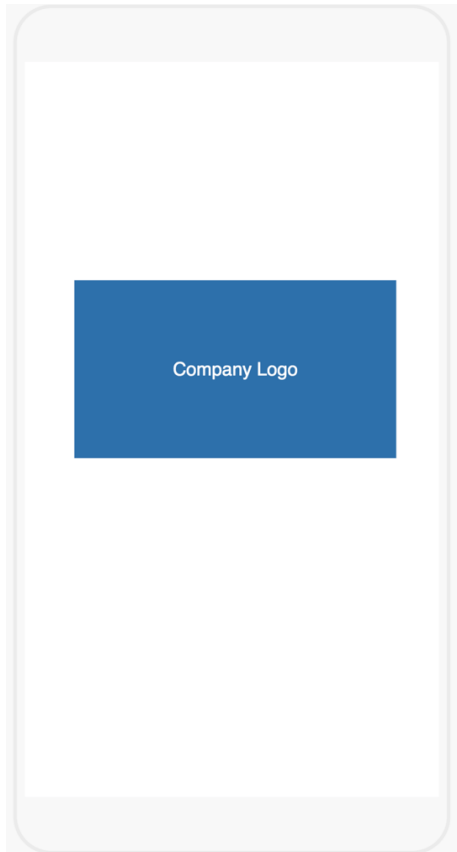
Date	Version	Description of Revision
24/08/2019	01.00	Initial document creation

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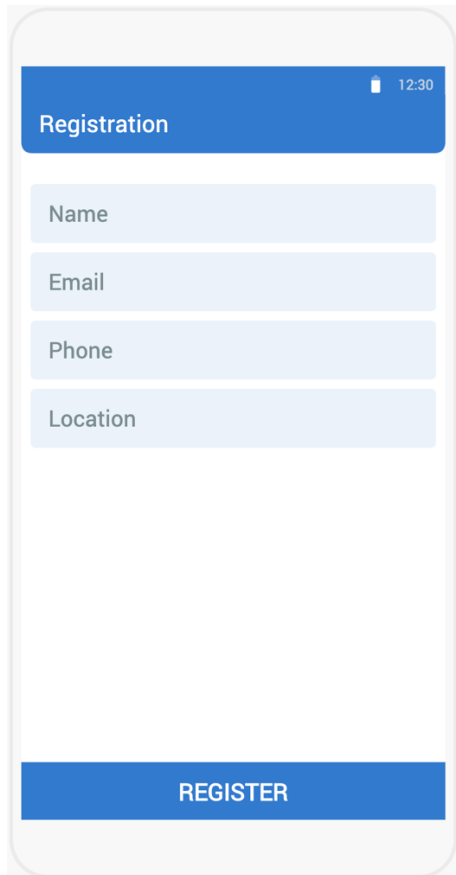
## Specification Details

### Section 1: Splash screen



- 1 displays logo and title as specified by client
  - 1.1 displays immediately upon start of the app
    - 1.1.1 remains visible until app is fully loaded, at which time it is:
    - 1.1.2 replaced by registration screen (see Section 2) if user is not registered already otherwise, replaced by Bluetooth status screen (section 4)

## Section 2: Registration Screen

A mobile app registration screen mockup. At the top, a blue header bar contains the word "Registration" in white. Below the header, there are four light blue input fields stacked vertically, labeled "Name", "Email", "Phone", and "Location". At the bottom of the screen, there is a blue button with the word "REGISTER" in white capital letters. The entire form is enclosed in a light gray rounded rectangle representing a smartphone.

2. Navigates from splash screen if user is not registered

2.1. All fields are mandatory

2.2. Basic validation to be done for all the fields

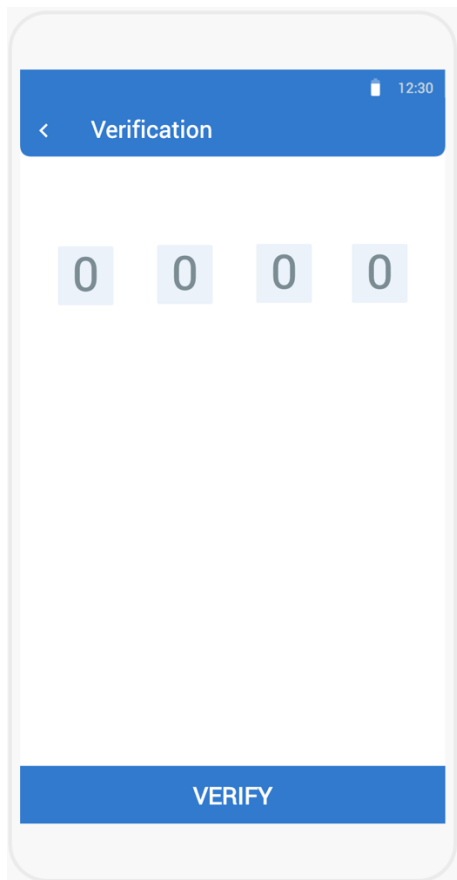
2.3. Email and Phone specific validation to be done

2.4. When the user taps REGISTER:

2.4.1. Store all the values locally and generate 4-digit random code (store locally for verification) and send SMS to the phone number provided in the phone field.

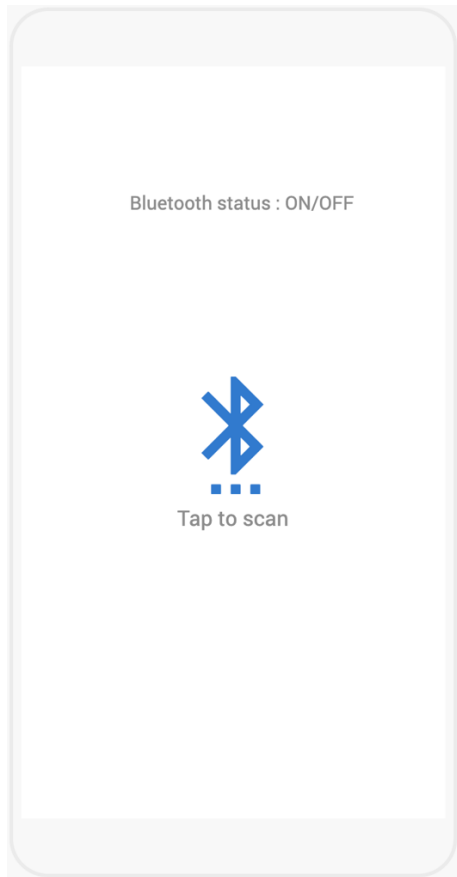
2.4.2. Once the SMS is sent, navigate the user to the verification screen (section 3)

## Section 3: Verification



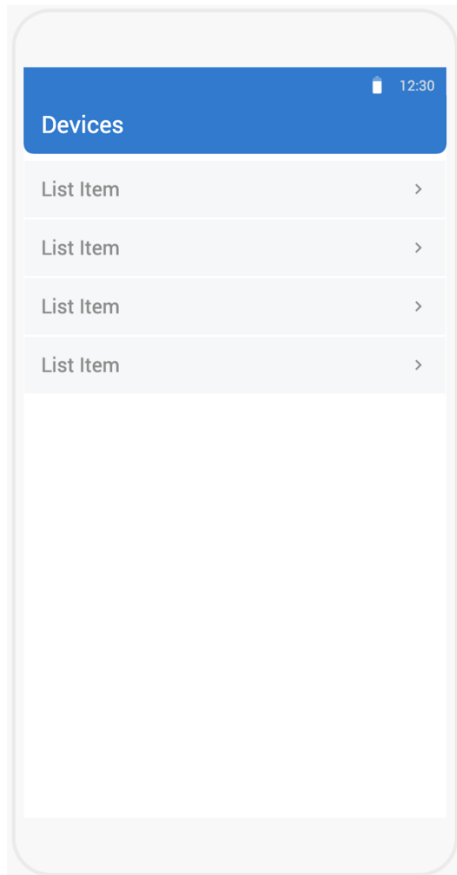
3. Navigates from registration screen (section 2)
  - 3.1 Enter the password the user received through SMS
  - 3.2 Basic validation to be done
  - 3.3 Once the user taps VERIFY, validate the randomly generated code that is store locally and the values entered in the text fields. If it is matching, then send the registration details to `cfappreceive@gmail.com`, from: `"cfappsend@gmail.com"`, subject: `"New User Registered"`, body: `"Hello, New user registered. \n Name: Username \n Email: Email \n Phone: Phone \n Location: Location \n Date: Date \n Client: Android App"`
  - 3.4 Navigate the user to the Bluetooth status screen (section 4)

## Section 4: Bluetooth status screen



- 4 Navigates either from section 1 or 3
  - 4.1. Show the device Bluetooth status in the status label
  - 4.2. When the user taps on Bluetooth button/icon, either display error message (if device is not supported/Bluetooth is off) or navigate the user to section 5

## Section 5: Device list screen

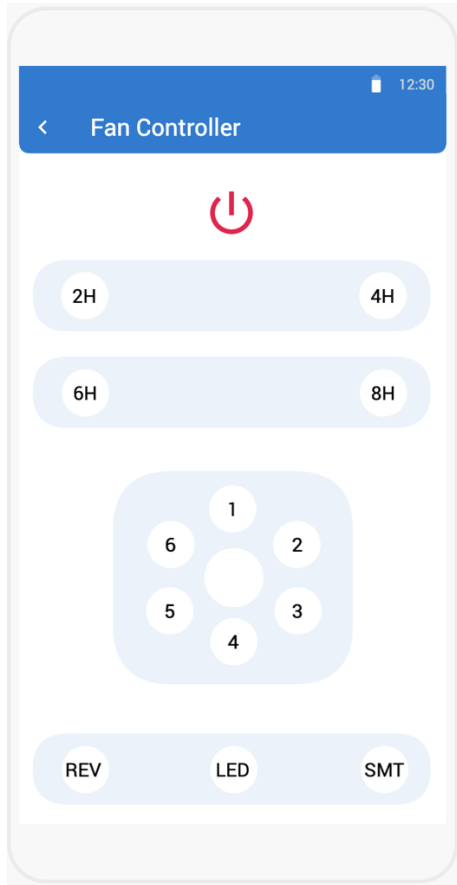


5. Navigates from section 5

5.1 Lists the scanned/available nearby Bluetooth devices

5.2 When the user taps any of the device from the list, pair the device and navigate to section 6

## Section 6: Fan controller screen



6. Navigates from section 5

6.1. In any point while in this screen if the device Bluetooth is tuned OFF:

6.1.1. Prompt error message “Device Bluetooth is tuned off. Please turn it ON from the phone settings”

6.1.2. Once the user turns ON, pair the device again

6.1.3. If it is not turned ON for 2 minutes interval, pop message “Phone Bluetooth is still OFF” and navigate the user to section 4

6.2. In any point while in this screen if the Bluetooth device is not responding/turned off/pair status is not paired:

6.2.1. Try to repair for 3 times each 10 second showing reconnecting message. If it fails to repair, navigate the user to section 5

6.3. If it successfully pairs, then user can control the fan. Below are the commands;

### Fan Controller Commands:

Note: All the commands will work only if is paired to Bluetooth device

**\*SaTbMcRdLeVfflggRhhh\***

Power ON/OFF button

- 0. Power OFF (Disable all buttons except Speed buttons)
- 1. Power ON (Enable all buttons)

## S – Speed, a (0...7)

- 0. Power Off
- 1. Power ON and Speed is 1
- 2. Speed 2
- 3. Speed 3
- 4. Speed 4
- 5. Speed 5
- 6. Speed 6
- 7. Turbo (Center button)

## T – Timer, b (0,2,4,6,8)

- 0. Timer off, 2. 2H, 4. 4H, 6. 6H, 8. 8H

## M – Smart, c (0 and 1)

- 0. Smart OFF (enable All Speed buttons)
- 1. Smart ON (disable All speed buttons)

## R – Reverse, d (0 and 1)

- 0. Reverse OFF
- 1. Reverse ON

## I – Indicator, gg (20,30,50 and 60) – Pop message

- 20. Over current
- 30. Over voltage
- 50. Motor failure
- 60. Over temperature



