Uasage Manual - Admin Dashboard Panel for Bikota Renting System

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Description

The Admin Dashboard Panel is a web platform which provides administration tools for the Bikota Renting Service including managing the mobile renting hardwares, viewing bike distribution on a map, viewing real-time renting statistics, sensor data and managing user preferences.

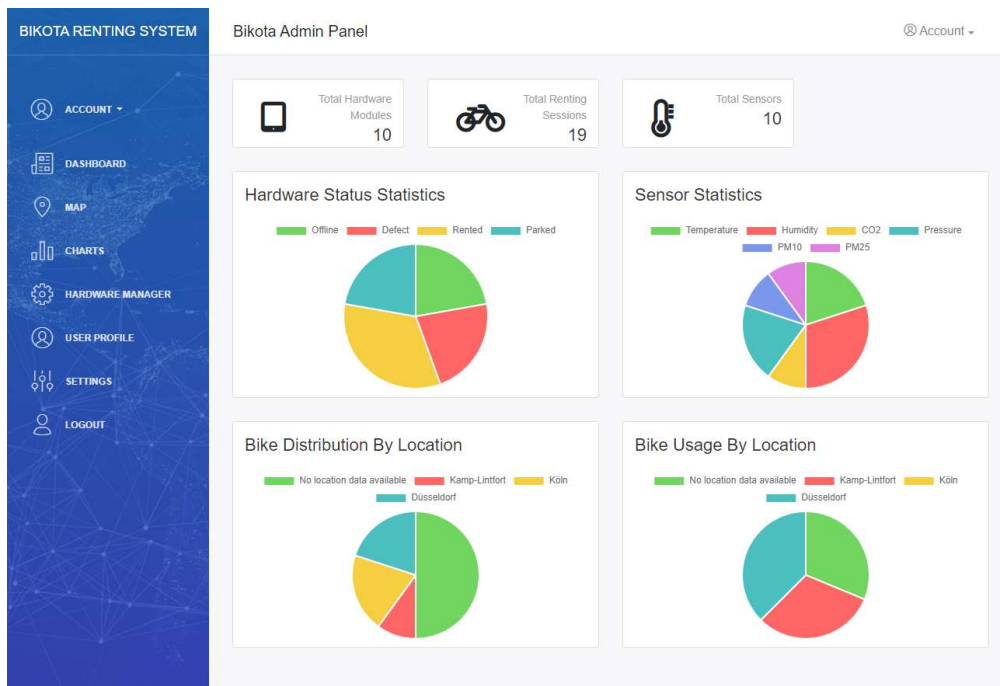Available currently at https://web.dev.iota.pw

Pages

This section describes the various pages available on the Admin Dashboard Panel and the operations that the system admin can perform on each page.

Dashboard

- On this page the system admin can view system statistics including:
  - Total number of hardware modules
  - Total number of renting sessions
  - Total number of sensors mounted on hardware modules
  - Bike status statistics pie chart
  - Sensor statistics pie chart
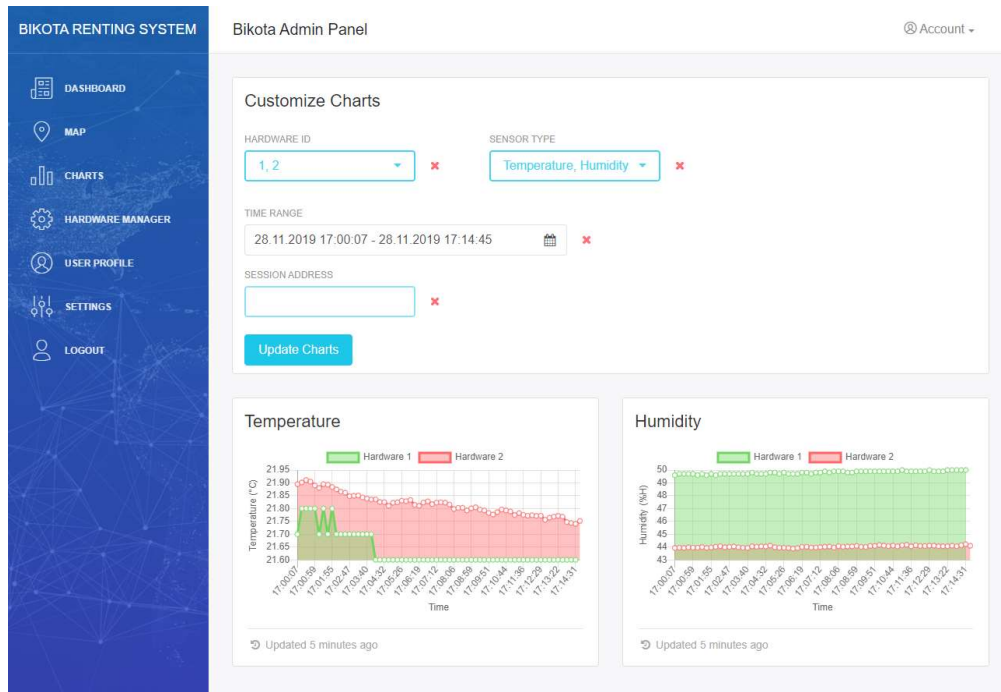 - Distribution of bike and bike usage by location stacked bar chart

Preview:

Charts

- On this page the system admin can view collected sensor data as line charts
- The admin can filter sensor data visualization using the input field/ date time picker and dropdown menus, by following parameters:
    - `Hardware ID` , the unique ID of a hardware module on the bike
    - `Session address` , the unique address of a renting session, which is a 81-character IOTA address that was used to receive payment for that specific renting session
    - `Sensor type` , the type of sensor(s) that is/are attached to a hardware module on the bike
    - and `Time range` , the date time interval within which the admin wishes to view the sensor data
- When a single hardware ID is selected, the corresponding sensors and session addresses related to that selected hardware will be updated in the Sensors type ⌄ and Session address ⌄ dropdown menus.
- When a single hardware ID and a session address is selected, the `Time range` date time picker will be disabled as each session has its own associated time interval.
- When a single hardware ID is selected and a time interval is provided/ picked, the Session address ⌄ dropdown menu will be disabled.
- When a single hardware ID is selected but no session address or time interval is provided, a default time interval of the last hour will be used for fetching data.
- When multiple hardware IDs are selected, the Session address ⌄ dropdown menu will be disabled as no 2 hardware modules share the same session address.
- The admin can clear the input fields and selections using the ✖ (Clear) icon next to each input field

- The admin has to click on the Update Charts button to apply the selected filters. A warning message will pop up if the admin clicks this button while inputs are missing or when no data is found for selected fiters.
- Sensor data corresponding to the selected filters will be displayed as line chart(s) with proper title, legend and labels. Each chart shows the data for only a single sensor type but for one or more hardwares or session addresses.
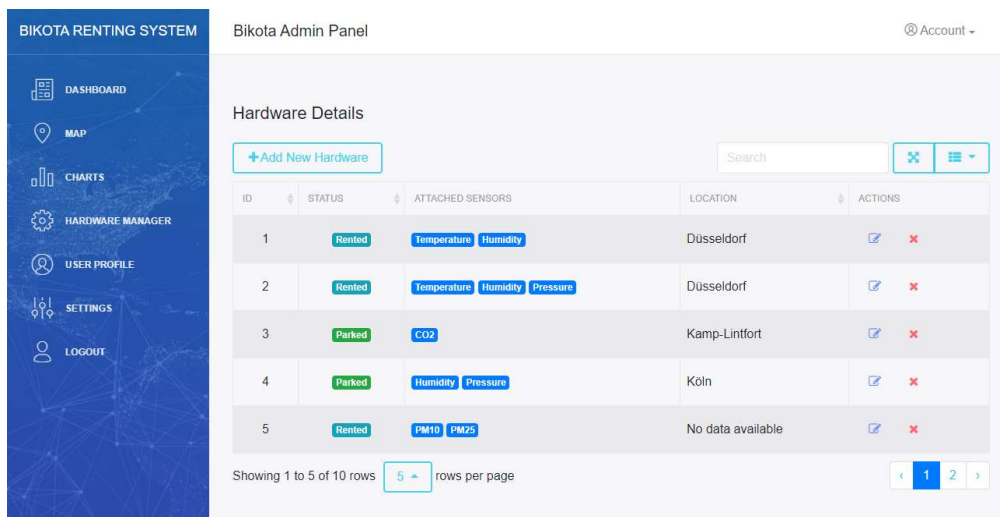
Preview:

Hardware Manager

- On this page the system admin can view a table which shows all details of every hardware module registered in the system. These includes:
  - `ID` , which is the unique ID of the hardware module
  - `Status` , which is the latest status of the hardware. The status property can only be 1 out of 4 values:
    - `parked` , meaning the bike carrying this hardware is in parking state and thus is available for rent
    - `rented` , meaning the bike carrying this hardware is in already in a renting session
    - `defect` , meaning this hardware module is reported defective and thus is not in operation
    - `offline` , meaning this hardware module is functional but not in operation
  - `Attached sensors` , which list all sensor types attached to this hardware module
  - `Location` , which is the latest city/ state/ region where this hardware module can be found
- The admin can additionally perform following actions for the table:
  - search within the table using the `Search` input field

- toggle fullscreen mode for the table using the ✕ toggle button
- select columns to show or hide in the table using the 📋✔ dropdown menu
- navigate between pages
- select the number of data rows to display per page using the 5⌃ dropup menu
- The admin can manage each hardware modules in the system using the `Actions` buttons in the corresponding row of the table including:
  - Edit details of the hardware using the 🖉 (Edit) button. A pop-up window will appear for user to make changes to the hardware.
  - Remove the hardware completely from the system using the ✖ (Clear) button. A pop-up window will appear for user to confirm this irreversible action.
- The admin can register new a hardware into the system using the + Add New Hardware button. A pop-up window will appear for user to enter details of the new hardware.
- A warning message will pop up in one of the following cases:
  - The admin tries to register a new hardware which has the same `hardware ID` as an existing one.
  - No `hardware ID` is given while editing existing hardware or adding new hardware
  - The system is unable to edit/ create/ remove the selected hardware
- A success message will pop up to notify if the selected hardware has been sucessfully edited in/ added to/ removed from the system.

Preview:

User Profile

- On this page the system admin can activate any of the 3 following sections to make changes to their account data:
  - `Edit profile` section, where account information can be updated including: Company, Username, Email address, First name, Last name, Address, City, Country, Postal code, Biography. A success message will pop up to notify if the profile is successfully updated in the system.

- `Change password` section, where the admin can change the account's password by typing in the current and the new passwords. A warning message will pop up if the current password(s) is/are incorrect or do not match.
- `Delete account` section, where the account can be deleted permanently upon providing the correct password. A success message will pop up to notify if the account is successfully removed from the system.

Preview:

Based on Flask Dashboard Light provided by **AppSeed**