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IoT-pot API-dokumentaatio

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harjoitustehtävä
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1 Monitoring app - <https://iot-pot.com>

1.1 /api/note/

Description: Creates a note for a specific device. The user must be authenticated and must own the device.

Method: POST

Auth Required: Yes

Request Body (JSON):

```
{
  "deviceId": "string", // Required
  "title": "string",    // Required
  "content": "string",  // Required
  "date": "string"      // Required (ISO 8601 format
                        recommended)
}
```

Responses:

Condition	Status	Response body
Ok	200	{"success": 1}
User not authenticated	400	{"success": 0, "error": "Not authorized"}
Missing deviceId	400	{"success": 0, "error": "No deviceId"}
Missing title	400	{"success": 0, "error": "No title"}
Missing content	400	{"success": 0, "error": "No content"}
Missing date	400	{"success": 0, "error": "No date"}
User not linked to device	400	{"success": 0, "error": "Not device owner"}
Internal DB error	400	{"success": 0, "error": "DB error object"}

1.2 /api/notesByDay/

Description: Fetches notes for a specific device filtered by a particular day. The user must be authenticated and must own the device.

Method: GET

Auth Required: Yes

Query string parameters:

Name	Required
deviceId	Yes
date	Yes

Example: /api/notesByDay?deviceId=abc123date=2025-04-27

Responses:

Condition	Status	Response body
Ok	200	{"success": 1, "notes": [...]}
User not authenticated	400	{"success": 0, "error": "Not authorized"}
Missing deviceId	400	{"success": 0, "error": "No deviceId"}
Missing date	400	{"success": 0, "error": "No date"}
User not linked to device	400	{"success": 0, "error": "Not device owner"}
Internal DB error	400	{"success": 0, "error": "DB error object"}

1.3 /api/notesByWeek/

Description: Fetches all notes for a specific device during a specific week of a specific year. The user must be authenticated and must own the device.

Method: GET

Auth Required: Yes

Query string parameters:

Name	Required
deviceId	Yes
weekNumber	Yes
year	Yes

Example: /api/notesByWeek?deviceId=abc123weekNumber=17year=2025

Responses:

Condition	Status	Response body
Ok	200	{"success": 1 "notes": [...]}
User not authenticated	400	{"success": 0, "error": "Not authorized"}
Missing deviceId	400	{"success": 0, "error": "No deviceId"}
Missing week	400	{"success": 0, "error": "No week"}
Missing year	400	{"success": 0, "error": "No year"}
User not linked to device	400	{"success": 0, "error": "Not device owner"}
Internal DB error	400	{"success": 0, "error": "DB error object"}

1.4 /api/notesByMonth/

Description: Fetches all notes for a specific device during a specific month of a specific year. The user must be authenticated and must own the device.

Method: GET

Auth Required: Yes

Query string parameters:

Name	Required
deviceId	Yes
month	Yes
year	Yes

Example: /api/notesByWeek?deviceId=abc123month=4year=2025

Responses:

Condition	Status	Response body
Ok	200	{"success": 1 "notes": [...]}
User not authenticated	400	{"success": 0, "error": "Not authorized"}
Missing deviceId	400	{"success": 0, "error": "No deviceId"}
Missing month	400	{"success": 0, "error": "No month"}
Missing year	400	{"success": 0, "error": "No year"}
User not linked to device	400	{"success": 0, "error": "Not device owner"}
Internal DB error	400	{"success": 0, "error": "DB error object"}

1.5 /api/measurementsByDay/

Description: Fetches all measurements for a specific device during a date. The user must be authenticated and must own the device.

Method: GET

Auth Required: Yes

Query string parameters:

Name	Required
deviceId	Yes
date	Yes

Example: /api/measurementsByDay?deviceId=abc123date= 2025-04-27

Responses:

Condition	Status	Response body
Ok	200	{"success": 1 "notes": [...]}
User not authenticated	400	{"success": 0, "error": "Not authorized"}
Missing deviceId	400	{"success": 0, "error": "No deviceId"}
Missing date	400	{"success": 0, "error": "No date"}
User not linked to device	400	{"success": 0, "error": "Not device owner"}
Internal DB error	400	{"success": 0, "error": "DB error object"}

1.6 /api/measurementsByWeek/

Description: Fetches all measurements for a specific device during a date. The user must be authenticated and must own the device.

Method: GET

Auth Required: Yes

Query string parameters:

Name	Required
deviceId	Yes
weekNumber	Yes
year	Yes

Example: /api/measurementsByDay?deviceId=abc123date= 2025-04-27

Responses:

Condition	Status	Response body
Ok	200	{"success": 1 "notes": [...]}
User not authenticated	400	{"success": 0, "error": "Not authorized"}
Missing deviceId	400	{"success": 0, "error": "No deviceId"}
Missing week number	400	{"success": 0, "error": "No week"}
Missing year	400	{"success": 0, "error": "No year"}
User not linked to device	400	{"success": 0, "error": "Not device owner"}
Internal DB error	400	{"success": 0, "error": "DB error object"}

1.7 /api/measurementsByMonth/

Description: Fetches all measurements for a specific device during a specific month and year. The user must be authenticated and must own the device.

Method: GET

Auth Required: Yes

Query string parameters:

Name	Required
deviceId	Yes
month	Yes
year	Yes

Example: /api/measurementsByMonth?deviceId=abc123month= 2year=2024

Responses:

Condition	Status	Response body
Ok	200	{"success": 1 "notes": [...]}
User not authenticated	400	{"success": 0, "error": "Not authorized"}
Missing deviceId	400	{"success": 0, "error": "No deviceId"}
Missing month	400	{"success": 0, "error": "No month"}
Missing year	400	{"success": 0, "error": "No year"}
User not linked to device	400	{"success": 0, "error": "Not device owner"}
Internal DB error	400	{"success": 0, "error": "DB error object"}

1.8 /api/watering/

Description: Adds a watering log entry to the database for a specific device, if the device is linked to a user.

Method: GET

Auth Required: Yes

Request Body (JSON):

```
{
  "deviceId": "string",          // Required
  "amount": "number",           // Required
}
```

Responses:

Condition	Status	Response body
Ok	200	{"success": 1}
Missing parameters	400	{"success": 0, "error": "No params"}
No device found	400	{"success": 0, "error": "No device found"}
No user linked to device	400	{"success": 0, "error": "No user for device"}
Internal DB error	400	{"success": 0, "error": "DB error object"}

1.9 /api/wateringByDay/

Description: Fetches all waterings for a specific device during a date. The user must be authenticated and must own the device.

Method: GET

Auth Required: Yes

Query string parameters:

Name	Required
deviceId	Yes
date	Yes

Example: /api/wateringsByDay?deviceId=abc123date= 2025-04-27

Responses:

Condition	Status	Response body
Ok	200	{"success": 1, "data": [...]}
Missing parameters	400	{"success": 0, "error": "No params"}
Internal DB error	400	{"success": 0, "error": "DB error object"}

1.10 /api/wateringByWeek/

Description: Fetches all waterings for a specific device during a specific week and year. The user must be authenticated and must own the device.

Method: GET

Auth Required: Yes

Query string parameters:

Name	Required
deviceId	Yes
weekNumber	Yes
year	Yes

Example: /api/wateringsByWeek?deviceId=abc123weekNumber=2year=2024

Responses:

Condition	Status	Response body
Ok	200	{"success": 1, "data": [...]}
User not authenticated	400	{"success": 0, "error": "Not authorized"}
Missing deviceId	400	{"success": 0, "error": "No deviceId"}
Missing week number	400	{"success": 0, "error": "No week"}
Missing year	400	{"success": 0, "error": "No year"}
User not linked to device	400	{"success": 0, "error": "Not device owner"}
Internal DB error	400	{"success": 0, "error": "DB error object"}

1.11 /api/wateringByMonth/

Description: Fetches all waterings for a specific device during a specific month and year. The user must be authenticated and must own the device.

Method: GET

Auth Required: Yes

Query string parameters:

Name	Required
deviceId	Yes
month	Yes
year	Yes

Example: /api/wateringsByMonth?deviceId=abc123month= 2year=2024

Responses:

Condition	Status	Response body
Ok	200	{"success": 1, "data": [...]}
User not authenticated	400	{"success": 0, "error": "Not authorized"}
Missing deviceId	400	{"success": 0, "error": "No deviceId"}
Missing month	400	{"success": 0, "error": "No month"}
Missing year	400	{"success": 0, "error": "No year"}
User not linked to device	400	{"success": 0, "error": "Not device owner"}
Internal DB error	400	{"success": 0, "error": "DB error object"}

1.12 /api/notify/

Description: Sends a notification email related to a specific device (soil moisture low, water overflow detected, or tank empty). The user must provide a valid email, device ID, and notification type.

Method: POST

Auth Required: No

Request Body (JSON):

```
{
  "deviceId": "string", // Required
  "email": "string",     // Required (must be a valid email
                        address)
  "type": "string"       // Required ("soil-moisture",
                        "overflow", or "tank-empty")
}
```

Responses:

Condition	Status	Response body
Ok	200	{"success": 1 "notes": [...]}
Missing deviceId, email, or type	400	{"success": 0, "error": "Invalid pa-rams"}
Invalid notification type	400	{"success": 0, "error": "Invalid ty-pe"}
Invalid email format	400	{"success": 0, "error": "Invalid email"}
Missing Mailgun API key	400	{"success": 0, "error": "Invalid API-key"}
Device not found	400	{"success": 0, "error": "No device found"}
Device not linked to any user	400	{"success": 0, "error": "No user connected to device"}
Mailgun API error or other server error	400	{"success": 0, "error": "DB error object"}

1.13 /api/unlink/[id]

Description: Disconnects (unlinks) a user from a specific device in the DB. The user must be authenticated and must own the device to unlink it.

Method: PATCH

Auth Required: Yes

URL path parameters:

Parameter	Type	Required	Description
id	string	Yes	The deviceId of the device to unlink

Example URL: /api/device/unlink/abc123

Responses:

Condition	Status	Response body
Ok	200	{"success": 1 "notes": [...]}
User not authenticated	400	{"success": 0, "error": "Not authorized"}
Missing deviceId	400	{"success": 0, "error": "No deviceId"}
User not device owner	400	{"success": 0, "error": "No device owner"}
DB error	400	{"success": 0, "error": "DB error object"}

2 Configuration app 192.168.0.1

2.1 /(GET)

Description: Serves the main compressed HTML page (the user interface).

Method: GET

Responses:

Status	Response
200	Gzipped HTML content Content-Encoding: gzip

2.2 /connection-status(GET)

Description: Returns current WiFi connection status, IP address, gateway, and SSID.

Method: GET

Responses:

Status	Response JSON
200	<pre>{ "connection-status": WiFiStatusNumber, "ip": "192.168.1.x", "gateway": "192.168.1.1", "ssid": "YourNetworkName" }</pre>

2.3 /device-id(GET)

Description: Returns the devices unique identifier (hex string).

Method: GET

Responses:

Status	Response JSON
200	<pre>{ "device-id": "C0DC9FBD4D74" }</pre>

2.4 /email-address(GET)

Description: Returns the stored email address if set.

Method: GET

Responses:

Status	Response JSON
200	<pre>{ "email": "user@example.com" }</pre>

2.5 /router-credentials(POST)

Description: Stores new WiFi router SSID and password to device storage.

Method: POST

Request Parameters (x-www-form-urlencoded):

Name	TYPE	Required
ssid	String	Yes
pwd	String	Yes

Responses:

Condition	Status	Response
Ok	200	{"success": 1}
No SSID or PWD	400	{"success": 0}

2.6 /watering-amount(GET)

Description: Returns the amount of water to be dispensed.

Method: GET

Responses:

Condition	Status	Response JSON
Ok	200	<pre>{ "watering-amount": number }</pre>

2.7 /watering-amount(POST)

Description: Stores the amount of water to be dispensed.

Method: POST

Request Parameters (x-www-form-urlencoded):

Name	TYPE	Required
watering-amount	String	Yes

Responses:

Condition	Status	Response
Ok	200	{"success": 1}

2.8 /watering-treshold(GET)

Description: Returns the soil moisture threshold for automatic watering.

Method: GET

Responses:

Condition	Status	Response JSON
Ok	200	<pre>{ "watering-treshold": number }</pre>

2.9 /watering-treshold(POST)

Description: Stores the soil moisture threshold value for automatic watering.

Method: POST

Request Parameters (x-www-form-urlencoded):

Name	TYPE	Required
watering-treshold	String	Yes

Responses:

Condition	Status	Response
Ok	200	{"success": 1}
Missing parameters	400	{"success": 0}

2.10 /notification-triggers(GET)

Description: Returns the current notification trigger settings (soil moisture, tank empty, overflow).

Method: GET

Responses:

Condition	Status	Response JSON
Ok	200	<pre>{ "notification-soil-moisture-threshold": boolean, "notification-water-tank-empty": boolean, "notification-water-overflow": boolean }</pre>