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## **IoT-pot API-dokumentaatio**

TIES4571 IoT-projekti  
harjoitustehtävä  
29. toukokuuta 2025

**Jyväskylän yliopisto**  
**Informaatioteknologian tiedekunta**  
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**Työn nimi:** IoT-pot API-dokumentaatio

**Työ:** TIES4571 IoT-projekti harjoitustehtävä

**Sivumäärä:** 19

**Tiivistelmä:** TIES4571-kurssin IoT-projektiin tuotteen API-dokumentaatio

**Avainsanat:** IoT-projekti, kotipuutarha, API, dokumentaatio

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# Sisällys

<b>1</b>	<b>Monitoring app - <a href="https://iot-pot.com">https://iot-pot.com</a></b>	<b>1</b>
1.1	/api/note/ . . . . .	1
1.2	/api/notesByDay/ . . . . .	2
1.3	/api/notesByWeek/ . . . . .	3
1.4	/api/notesByMonth/ . . . . .	4
1.5	/api/measurementsByDay/ . . . . .	5
1.6	/api/measurementsByWeek/ . . . . .	6
1.7	/api/measurementsByMonth/ . . . . .	7
1.8	/api/watering/ . . . . .	8
1.9	/api/wateringByDay/ . . . . .	9
1.10	/api/wateringByWeek/ . . . . .	10
1.11	/api/wateringByMonth/ . . . . .	11
1.12	/api/notify/ . . . . .	12
1.13	/api/unlink/[id] . . . . .	13
<b>2</b>	<b>Configuration app 192.168.0.1</b>	<b>14</b>
2.1	/(GET) . . . . .	14
2.2	/connection-status(GET) . . . . .	14
2.3	/device-id(GET) . . . . .	15
2.4	/email-address(GET) . . . . .	15
2.5	/router-credentials(POST) . . . . .	16
2.6	/watering-amount(GET) . . . . .	17
2.7	/watering-amount(POST) . . . . .	17
2.8	/watering-treshold(GET) . . . . .	18
2.9	/watering-treshold(POST) . . . . .	18
2.10	/notification-triggers(GET) . . . . .	

# 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=abc123&weekNumber=17&year=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=abc123&weekNumber=2&year=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 params"}
Invalid notification type	400	{"success": 0, "error": "Invalid type"}
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 (unlink) 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	{ "connection-status": WiFiStatusNumber, "ip": "192.168.1.x", "gateway": "192.168.1.1", "ssid": "YourNetworkName" }

## 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	{ "watering-amount": number }

## 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-threshold(GET)

**Description:** Returns the soil moisture threshold for automatic watering.

**Method:** GET

**Responses:**

Condition	Status	Response JSON
Ok	200	{ "watering-threshold": number }

## 2.9 /watering-threshold(POST)

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

**Method:** POST

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

Name	Type	Required
watering-threshold	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>