

Programming Project Databases - Rapport 2

Groep 4

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1 Status

Alle verplichte toepassingen zijn geïmplementeerd. De login en registratie, de administrator interface en ook de basis van het sociale aspect zijn afgewerkt.

Het volgende waar we aan zullen werken is het verder toevoegen van features voor het sociale aspect en ook meer customisatie opties voor de households, en meer weergave toepassingen.

2 Design

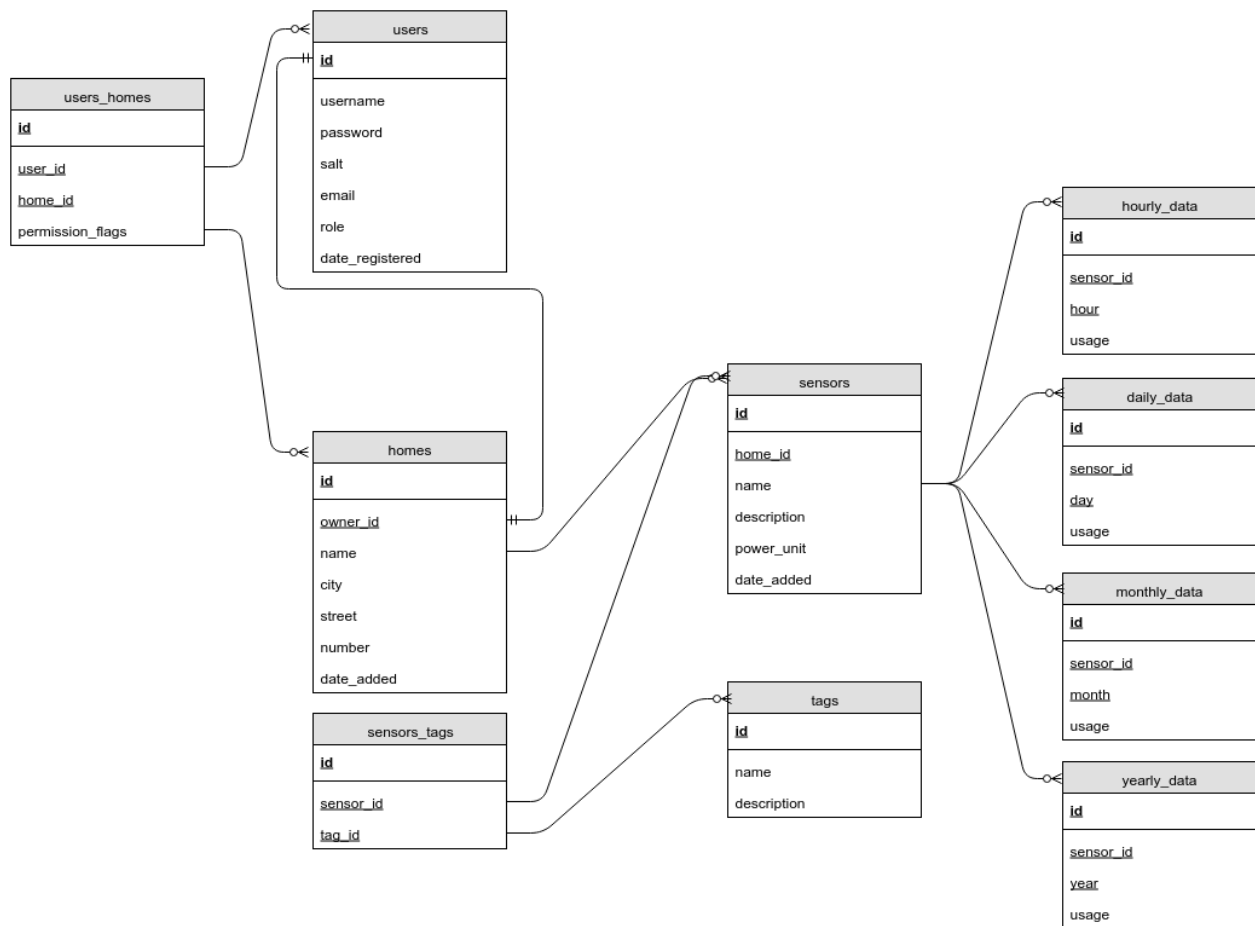
2.1 Keuzes

We hebben tot nu toe vooral gewerkt aan de verplichte toepassingen omdat we die al eerst willen afhebben voor we starten aan de extra features. Maar we zullen meer aan deze beginnen werken nu dat al het noodzakelijke gebeurd is.

We hebben gekozen voor een interface dat zeer gemakkelijk is om mee te werken zodat de gebruikers zo min mogelijk problemen zal ondervinden. Simpele knoppen en duidelijke text en grafieken maakt het voor de gebruiker efficient en snel om mee te werken.

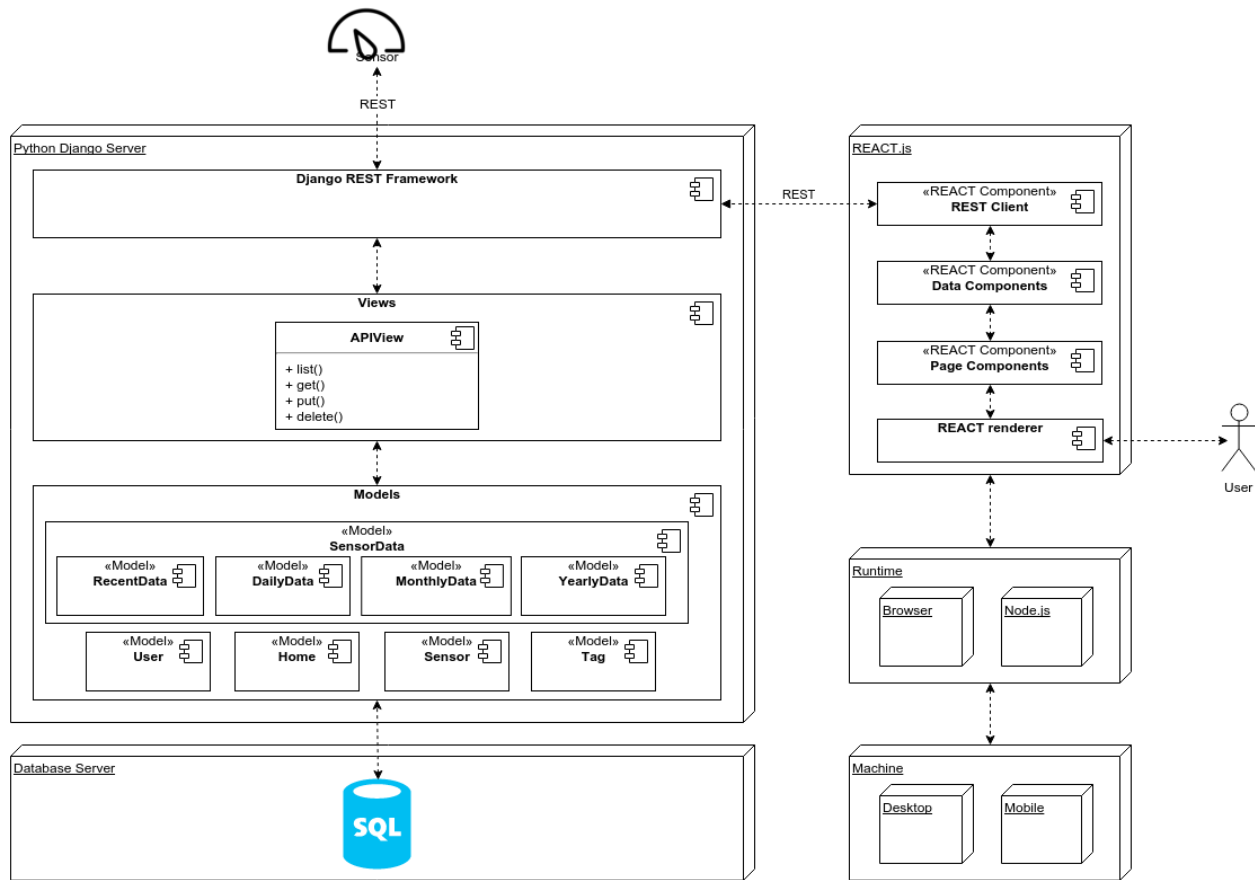
We hebben het sociale aspect nog vrij minimaal gehouden, maar hebben nog veel ruimte open gelaten om extra features toe te voegen die ervoor zullen zorgen dat communiceren met anderen veel vlotter kan verlopen.

2.2 Database Schema



Figuur 1: Het 'Entity Relation Diagram'.

2.3 UML Schema



Figuur 2: Deployment diagram voor server (links) en client (rechts).

3 Product

3.1 Basisvereisten

Al de basisvereisten zijn geïmplementeerd.

De login en registratie zijn afgewerkt en ook de administrator interface werkt. Met deze interface kan men gegevens op grote schaal opvragen en bekijken om een beter zicht te krijgen op het algemeen verbruik van de gebruikers. Het sociale aspect is ook toegevoegd, dit zorgt ervoor dat het mogelijk is om groepen en vrienden toe te voegen en om berichten te plaatsen.

3.2 Extra functionaliteit

Er is nog geen extra functionaliteit klaar.

4 Planning

Het eerste waar we aan zullen werken is het toevoegen van kleine extra features aan de basisvereisten om het gebruik te vergemakkelijken. Zo zullen we bijvoorbeeld het sociale aspect verder uitwerken met toepassingen zoals persoonlijke berichten.

We zullen natuurlijk ook extra toepassingen toevoegen waar we aan denken als we bezig zijn met het uiterken van deze eerste features.

5 Appendix

5.1 SQL Queries

5.1.1 Households

```
/* list all households */
SELECT homes.id, homes.owner_id, homes.name, homes.country, homes.
    city, homes.zipcode, homes.street, homes.house_number, homes.
    date_added
FROM homes;
```

```
/* retrieve household by home ID */
SELECT homes.id, homes.owner_id, homes.name, homes.country, homes.
    city, homes.zipcode, homes.street, homes.house_number, homes.
    date_added
FROM homes
WHERE homes.id = $ID;
```

```
/* retrieve household by user ID */
SELECT homes.id, homes.owner_id, homes.name, homes.country, homes.
    city, homes.zipcode, homes.street, homes.house_number, homes.
    date_added
FROM homes
INNER JOIN users_homes
ON (homes.id = users_homes.home_id)
WHERE users_homes.user_id = $ID;
```

5.1.2 Sensors

```
/* list all sensors */
SELECT sensors.id, sensors.home_id, sensors.name, sensors.
    description, sensors.power_unit, sensors.date_created
FROM sensors;
```

```
/* retrieve sensor by id */
SELECT sensors.id, sensors.home_id, sensors.name, sensors.
    description, sensors.power_unit, sensors.date_created
FROM sensors
```

```
WHERE sensors.id = $ID;
```

```
/* retrieve sensors by tag id */  
SELECT sensors.id, sensors.home_id, sensors.name, sensors.  
    description, sensors.power_unit, sensors.date_created  
FROM sensors  
INNER JOIN sensors_tags  
ON (sensors.id = sensors_tags.sensor_id)  
WHERE sensors_tags.tag_id = $ID;
```

5.1.3 Sensor Tags

```
/* list all tags */  
SELECT tags.id, tags.name, tags.description  
FROM tags;  
  
/* retrieve tag by id */  
SELECT tags.id, tags.name, tags.description  
FROM tags  
WHERE tags.id = $ID;  
  
/* retrieve tags for a given sensor (by id) */  
SELECT tags.id, tags.name, tags.description  
FROM tags  
INNER JOIN sensors_tags  
ON (tags.id = sensors_tags.tag_id)  
WHERE sensors_tags.sensor_id = $ID;
```

5.1.4 Sensor Data

```
/* list the sum total usage of all sensors for each minute of today  
    for a given user */  
SELECT recent_data.timestamp, sensors.home_id AS home_id, homes.name  
    AS home_name, SUM(recent_data.usage) AS usage  
FROM recent_data  
INNER JOIN sensors  
ON (recent_data.sensor_id = sensors.id)  
INNER JOIN homes ON (sensors.home_id = homes.id)  
WHERE (homes.owner_id = $ID AND recent_data.timestamp >= DATE_SUB(  
    NOW(), INTERVAL 1 DAY) AND recent_data.timestamp < NOW() )  
GROUP BY recent_data.timestamp, sensors.home_id, homes.name  
ORDER BY home_id ASC, recent_data.timestamp ASC;  
  
/* Aggregate all minutely data from today into one record for all  
    sensors */  
INSERT INTO daily_data (sensor_id, timestamp, usage, n_measurements)
```

```

SELECT recent_data.sensor_id, CONCAT(DATE(NOW()), ' 00:00:00') AS
    new_date, AVG(recent_data.usage), SUM(recent_data.n_measurements)
FROM recent_data
WHERE ( recent_data.timestamp >= new_date AND recent_data.timestamp
    < DATE_ADD(new_date, INTERVAL 1 DAY) )
GROUP BY recent_data.sensor_id

```

5.2 SQL Database Structure

```

--
-- Tabelstructuur voor tabel 'account_emailaddress'
--

CREATE TABLE IF NOT EXISTS 'account_emailaddress' (
    'id' int(11) NOT NULL,
    'email' varchar(254) NOT NULL,
    'verified' tinyint(1) NOT NULL,
    'primary' tinyint(1) NOT NULL,
    'user_id' int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

-----

--
-- Tabelstructuur voor tabel 'account_emailconfirmation'
--

CREATE TABLE IF NOT EXISTS 'account_emailconfirmation' (
    'id' int(11) NOT NULL,
    'created' datetime(6) NOT NULL,
    'sent' datetime(6) DEFAULT NULL,
    'key' varchar(64) NOT NULL,
    'email_address_id' int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

-----

--
-- Tabelstructuur voor tabel 'authtoken_token'
--

CREATE TABLE IF NOT EXISTS 'authtoken_token' (
    'key' varchar(40) NOT NULL,
    'created' datetime(6) NOT NULL,
    'user_id' int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

```

```

-- -----
--
-- Tabelstructuur voor tabel 'auth_group'
--

CREATE TABLE IF NOT EXISTS 'auth_group' (
    'id' int(11) NOT NULL,
    'name' varchar(80) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

-- -----
--
-- Tabelstructuur voor tabel 'auth_group_permissions'
--

CREATE TABLE IF NOT EXISTS 'auth_group_permissions' (
    'id' int(11) NOT NULL,
    'group_id' int(11) NOT NULL,
    'permission_id' int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

-- -----
--
-- Tabelstructuur voor tabel 'auth_permission'
--

CREATE TABLE IF NOT EXISTS 'auth_permission' (
    'id' int(11) NOT NULL,
    'name' varchar(255) NOT NULL,
    'content_type_id' int(11) NOT NULL,
    'codename' varchar(100) NOT NULL
) ENGINE=InnoDB AUTO_INCREMENT=76 DEFAULT CHARSET=latin1;

--
-- Gegevens worden ge xporteerd voor tabel 'auth_permission'
--

INSERT INTO 'auth_permission' ('id', 'name', 'content_type_id', '
    codename') VALUES
(1, 'Can_ add_ log_ entry', 1, 'add_logentry'),
(2, 'Can_ change_ log_ entry', 1, 'change_logentry'),

```

```

(3, 'Can_delete_log_entry', 1, 'delete_logentry'),
(4, 'Can_add_permission', 2, 'add_permission'),
(5, 'Can_change_permission', 2, 'change_permission'),
(6, 'Can_delete_permission', 2, 'delete_permission'),
(7, 'Can_add_group', 3, 'add_group'),
(8, 'Can_change_group', 3, 'change_group'),
(9, 'Can_delete_group', 3, 'delete_group'),
(10, 'Can_add_user', 4, 'add_user'),
(11, 'Can_change_user', 4, 'change_user'),
(12, 'Can_delete_user', 4, 'delete_user'),
(13, 'Can_add_content_type', 5, 'add_contenttype'),
(14, 'Can_change_content_type', 5, 'change_contenttype'),
(15, 'Can_delete_content_type', 5, 'delete_contenttype'),
(16, 'Can_add_session', 6, 'add_session'),
(17, 'Can_change_session', 6, 'change_session'),
(18, 'Can_delete_session', 6, 'delete_session'),
(19, 'Can_add_site', 7, 'add_site'),
(20, 'Can_change_site', 7, 'change_site'),
(21, 'Can_delete_site', 7, 'delete_site'),
(22, 'Can_add_token', 8, 'add_token'),
(23, 'Can_change_token', 8, 'change_token'),
(24, 'Can_delete_token', 8, 'delete_token'),
(25, 'Can_add_email_address', 9, 'add_emailaddress'),
(26, 'Can_change_email_address', 9, 'change_emailaddress'),
(27, 'Can_delete_email_address', 9, 'delete_emailaddress'),
(28, 'Can_add_email_confirmation', 10, 'add_emailconfirmation'),
(29, 'Can_change_email_confirmation', 10, 'change_emailconfirmation'
),
(30, 'Can_delete_email_confirmation', 10, 'delete_emailconfirmation'
),
(31, 'Can_add_social_application', 11, 'add_socialapp'),
(32, 'Can_change_social_application', 11, 'change_socialapp'),
(33, 'Can_delete_social_application', 11, 'delete_socialapp'),
(34, 'Can_add_social_account', 12, 'add_socialaccount'),
(35, 'Can_change_social_account', 12, 'change_socialaccount'),
(36, 'Can_delete_social_account', 12, 'delete_socialaccount'),
(37, 'Can_add_social_application_token', 13, 'add_socialtoken'),
(38, 'Can_change_social_application_token', 13, 'change_socialtoken'
),
(39, 'Can_delete_social_application_token', 13, 'delete_socialtoken'
),
(40, 'Can_add_cors_model', 14, 'add_corsmodel'),
(41, 'Can_change_cors_model', 14, 'change_corsmodel'),
(42, 'Can_delete_cors_model', 14, 'delete_corsmodel'),
(43, 'Can_add_home', 15, 'add_home'),

```



```

(44, 'Can_change_home', 15, 'change_home'),
(45, 'Can_delete_home', 15, 'delete_home'),
(46, 'Can_add_sensor', 16, 'add_sensor'),
(47, 'Can_change_sensor', 16, 'change_sensor'),
(48, 'Can_delete_sensor', 16, 'delete_sensor'),
(49, 'Can_add_sensors_tags', 17, 'add_sensorstags'),
(50, 'Can_change_sensors_tags', 17, 'change_sensorstags'),
(51, 'Can_delete_sensors_tags', 17, 'delete_sensorstags'),
(52, 'Can_add_tag', 18, 'add_tag'),
(53, 'Can_change_tag', 18, 'change_tag'),
(54, 'Can_delete_tag', 18, 'delete_tag'),
(55, 'Can_add_users_homes', 19, 'add_usershomes'),
(56, 'Can_change_users_homes', 19, 'change_usershomes'),
(57, 'Can_delete_users_homes', 19, 'delete_usershomes'),
(58, 'Can_add_yearly_data', 20, 'add_yearlydata'),
(59, 'Can_change_yearly_data', 20, 'change_yearlydata'),
(60, 'Can_delete_yearly_data', 20, 'delete_yearlydata'),
(61, 'Can_add_monthly_data', 21, 'add_monthlydata'),
(62, 'Can_change_monthly_data', 21, 'change_monthlydata'),
(63, 'Can_delete_monthly_data', 21, 'delete_monthlydata'),
(64, 'Can_add_daily_data', 22, 'add_dailydata'),
(65, 'Can_change_daily_data', 22, 'change_dailydata'),
(66, 'Can_delete_daily_data', 22, 'delete_dailydata'),
(67, 'Can_add_recent_data', 23, 'add_recentdata'),
(68, 'Can_change_recent_data', 23, 'change_recentdata'),
(69, 'Can_delete_recent_data', 23, 'delete_recentdata'),
(70, 'Can_add_friend_request', 24, 'add_friendrequest'),
(71, 'Can_change_friend_request', 24, 'change_friendrequest'),
(72, 'Can_delete_friend_request', 24, 'delete_friendrequest'),
(73, 'Can_add_post', 25, 'add_post'),
(74, 'Can_change_post', 25, 'change_post'),
(75, 'Can_delete_post', 25, 'delete_post');

```

-- -----

```

--
-- Tabelstructuur voor tabel 'auth_user'
--

```

```

CREATE TABLE IF NOT EXISTS 'auth_user' (
    'id' int(11) NOT NULL,
    'password' varchar(128) NOT NULL,
    'last_login' datetime(6) DEFAULT NULL,
    'is_superuser' tinyint(1) NOT NULL,
    'username' varchar(30) NOT NULL,

```

```

    'first_name' varchar(30) NOT NULL,
    'last_name' varchar(30) NOT NULL,
    'email' varchar(254) NOT NULL,
    'is_staff' tinyint(1) NOT NULL,
    'is_active' tinyint(1) NOT NULL,
    'date_joined' datetime(6) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

-- -----

--
-- Tabelstructuur voor tabel 'auth_user_groups'
--

CREATE TABLE IF NOT EXISTS 'auth_user_groups' (
    'id' int(11) NOT NULL,
    'user_id' int(11) NOT NULL,
    'group_id' int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

-- -----

--
-- Tabelstructuur voor tabel 'auth_user_user_permissions'
--

CREATE TABLE IF NOT EXISTS 'auth_user_user_permissions' (
    'id' int(11) NOT NULL,
    'user_id' int(11) NOT NULL,
    'permission_id' int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

-- -----

--
-- Tabelstructuur voor tabel 'daily_data'
--

CREATE TABLE IF NOT EXISTS 'daily_data' (
    'id' int(11) NOT NULL,
    'timestamp' datetime(6) NOT NULL,
    'usage' int(11) NOT NULL,
    'n_measurements' int(11) NOT NULL,
    'sensor_id' int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

```

```

-- -----

--
-- Tabelstructuur voor tabel 'friend_requests'
--

CREATE TABLE IF NOT EXISTS 'friend_requests' (
  'id' int(11) NOT NULL,
  'status' int(11) NOT NULL,
  'date_sent' datetime(6) NOT NULL,
  'receiver_id' int(11) NOT NULL,
  'sender_id' int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

-- -----

--
-- Tabelstructuur voor tabel 'homes'
--

CREATE TABLE IF NOT EXISTS 'homes' (
  'id' int(11) NOT NULL,
  'name' varchar(64) NOT NULL,
  'country' varchar(2) NOT NULL,
  'city' varchar(64) NOT NULL,
  'zipcode' varchar(16) NOT NULL,
  'street' varchar(64) NOT NULL,
  'house_number' varchar(8) NOT NULL,
  'date_added' datetime(6) NOT NULL,
  'owner_id' int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

-- -----

--
-- Tabelstructuur voor tabel 'messages'
--

CREATE TABLE IF NOT EXISTS 'messages' (
  'id' int(11) NOT NULL,
  'content' longtext NOT NULL,
  'plot' longtext NOT NULL,
  'date_sent' datetime(6) NOT NULL,
  'receiver_id' int(11) NOT NULL,

```

```

    'sender_id' int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

-- -----

--
-- Tabelstructuur voor tabel 'monthly_data'
--

CREATE TABLE IF NOT EXISTS 'monthly_data' (
    'id' int(11) NOT NULL,
    'timestamp' datetime(6) NOT NULL,
    'usage' int(11) NOT NULL,
    'n_measurements' int(11) NOT NULL,
    'sensor_id' int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

-- -----

--
-- Tabelstructuur voor tabel 'recent_data'
--

CREATE TABLE IF NOT EXISTS 'recent_data' (
    'id' int(11) NOT NULL,
    'timestamp' datetime(6) NOT NULL,
    'usage' int(11) NOT NULL,
    'n_measurements' int(11) NOT NULL,
    'sensor_id' int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

-- -----

--
-- Tabelstructuur voor tabel 'sensors'
--

CREATE TABLE IF NOT EXISTS 'sensors' (
    'id' int(11) NOT NULL,
    'name' varchar(64) NOT NULL,
    'description' varchar(256) NOT NULL,
    'power_unit' varchar(3) NOT NULL,
    'date_created' datetime(6) NOT NULL,
    'home_id' int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

```

```

-- -----

--
-- Tabelstructuur voor tabel 'sensors_tags'
--

CREATE TABLE IF NOT EXISTS 'sensors_tags' (
  'id' int(11) NOT NULL,
  'date_created' datetime(6) NOT NULL,
  'sensor_id' int(11) NOT NULL,
  'tag_id' int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

-- -----

--
-- Tabelstructuur voor tabel 'tags'
--

CREATE TABLE IF NOT EXISTS 'tags' (
  'id' int(11) NOT NULL,
  'name' varchar(64) NOT NULL,
  'description' varchar(256) NOT NULL,
  'date_created' datetime(6) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

-- -----

--
-- Tabelstructuur voor tabel 'users_homes'
--

CREATE TABLE IF NOT EXISTS 'users_homes' (
  'id' int(11) NOT NULL,
  'permission_flags' int(11) NOT NULL,
  'date_created' datetime(6) NOT NULL,
  'home_id' int(11) NOT NULL,
  'user_id' int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

-- -----

--
-- Tabelstructuur voor tabel 'yearly_data'

```

```

--

CREATE TABLE IF NOT EXISTS 'yearly_data' (
    'id' int(11) NOT NULL,
    'timestamp' datetime(6) NOT NULL,
    'usage' int(11) NOT NULL,
    'n_measurements' int(11) NOT NULL,
    'sensor_id' int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

--
-- Indexen voor ge xporteerde tabellen
--

--
-- Indexen voor tabel 'account_emailaddress'
--
ALTER TABLE 'account_emailaddress'
    ADD PRIMARY KEY ('id'),
    ADD UNIQUE KEY 'email' ('email'),
    ADD KEY 'account_emailaddress_user_id_2c513194_fk_auth_user_id' ('
        user_id');

--
-- Indexen voor tabel 'account_emailconfirmation'
--
ALTER TABLE 'account_emailconfirmation'
    ADD PRIMARY KEY ('id'),
    ADD UNIQUE KEY 'key' ('key'),
    ADD KEY '
        account_ema_email_address_id_5b7f8c58_fk_account_emailaddress_id
        ' ('email_address_id');

--
-- Indexen voor tabel 'authtoken_token'
--
ALTER TABLE 'authtoken_token'
    ADD PRIMARY KEY ('key'),
    ADD UNIQUE KEY 'user_id' ('user_id');

--
-- Indexen voor tabel 'auth_group'
--
ALTER TABLE 'auth_group'
    ADD PRIMARY KEY ('id'),

```

```

ADD UNIQUE KEY 'name' ('name');

--
-- Indexen voor tabel 'auth_group_permissions'
--
ALTER TABLE 'auth_group_permissions'
  ADD PRIMARY KEY ('id'),
  ADD UNIQUE KEY 'auth_group_permissions_group_id_0cd325b0_uniq' ('
    group_id','permission_id'),
  ADD KEY '
    auth_group_permissi_permission_id_84c5c92e_fk_auth_permission_id
    ' ('permission_id');

--
-- Indexen voor tabel 'auth_permission'
--
ALTER TABLE 'auth_permission'
  ADD PRIMARY KEY ('id'),
  ADD UNIQUE KEY 'auth_permission_content_type_id_01ab375a_uniq' ('
    content_type_id','codename');

--
-- Indexen voor tabel 'auth_user'
--
ALTER TABLE 'auth_user'
  ADD PRIMARY KEY ('id'),
  ADD UNIQUE KEY 'username' ('username');

--
-- Indexen voor tabel 'auth_user_groups'
--
ALTER TABLE 'auth_user_groups'
  ADD PRIMARY KEY ('id'),
  ADD UNIQUE KEY 'auth_user_groups_user_id_94350c0c_uniq' ('user_id
    ','group_id'),
  ADD KEY 'auth_user_groups_group_id_97559544_fk_auth_group_id' ('
    group_id');

--
-- Indexen voor tabel 'auth_user_user_permissions'
--
ALTER TABLE 'auth_user_user_permissions'
  ADD PRIMARY KEY ('id'),
  ADD UNIQUE KEY 'auth_user_user_permissions_user_id_14a6b632_uniq'
    ('user_id','permission_id'),

```

```

ADD KEY '
    auth_user_user_perm_permission_id_1fbb5f2c_fk_auth_permission_id
    ' ('permission_id');

--
-- Indexen voor tabel 'daily_data'
--
ALTER TABLE 'daily_data'
    ADD PRIMARY KEY ('id'),
    ADD KEY 'daily_data_d96d866a' ('sensor_id');

--
-- Indexen voor tabel 'friend_requests'
--
ALTER TABLE 'friend_requests'
    ADD PRIMARY KEY ('id'),
    ADD KEY 'friend_requests_receiver_id_6e370850_fk_auth_user_id' ('
        receiver_id'),
    ADD KEY 'friend_requests_sender_id_e02b64d5_fk_auth_user_id' ('
        sender_id');

--
-- Indexen voor tabel 'homes'
--
ALTER TABLE 'homes'
    ADD PRIMARY KEY ('id'),
    ADD KEY 'homes_owner_id_32e87e52_fk_auth_user_id' ('owner_id');

--
-- Indexen voor tabel 'messages'
--
ALTER TABLE 'messages'
    ADD PRIMARY KEY ('id'),
    ADD KEY 'messages_receiver_id_874b4e0a_fk_auth_user_id' ('
        receiver_id'),
    ADD KEY 'messages_sender_id_dc5a0bbd_fk_auth_user_id' ('sender_id
        ');

--
-- Indexen voor tabel 'monthly_data'
--
ALTER TABLE 'monthly_data'
    ADD PRIMARY KEY ('id'),
    ADD KEY 'monthly_data_d96d866a' ('sensor_id');

```



```

--
-- Indexen voor tabel 'recent_data'
--
ALTER TABLE 'recent_data'
  ADD PRIMARY KEY ('id'),
  ADD KEY 'recent_data_d96d866a' ('sensor_id');

--
-- Indexen voor tabel 'sensors'
--
ALTER TABLE 'sensors'
  ADD PRIMARY KEY ('id'),
  ADD KEY 'sensors_home_id_1b6b9891_fk_homes_id' ('home_id');

--
-- Indexen voor tabel 'sensors_tags'
--
ALTER TABLE 'sensors_tags'
  ADD PRIMARY KEY ('id'),
  ADD KEY 'sensors_tags_sensor_id_ec6d5d5a_fk_sensors_id' ('sensor_id'),
  ADD KEY 'sensors_tags_76f094bc' ('tag_id');

--
-- Indexen voor tabel 'tags'
--
ALTER TABLE 'tags'
  ADD PRIMARY KEY ('id');

--
-- Indexen voor tabel 'users_homes'
--
ALTER TABLE 'users_homes'
  ADD PRIMARY KEY ('id'),
  ADD KEY 'users_homes_home_id_6d8097a2_fk_homes_id' ('home_id'),
  ADD KEY 'users_homes_user_id_c35d6efe_fk_auth_user_id' ('user_id')
  ;

--
-- Indexen voor tabel 'yearly_data'
--
ALTER TABLE 'yearly_data'
  ADD PRIMARY KEY ('id'),
  ADD KEY 'yearly_data_sensor_id_349bf5e9_fk_sensors_id' ('sensor_id');

```

```

--
-- AUTO_INCREMENT voor ge xporteerde tabellen
--

--
-- AUTO_INCREMENT voor een tabel 'account_emailaddress'
--
ALTER TABLE 'account_emailaddress'
  MODIFY 'id' int(11) NOT NULL AUTO_INCREMENT;
--
-- AUTO_INCREMENT voor een tabel 'account_emailconfirmation'
--
ALTER TABLE 'account_emailconfirmation'
  MODIFY 'id' int(11) NOT NULL AUTO_INCREMENT;
--
-- AUTO_INCREMENT voor een tabel 'auth_group'
--
ALTER TABLE 'auth_group'
  MODIFY 'id' int(11) NOT NULL AUTO_INCREMENT;
--
-- AUTO_INCREMENT voor een tabel 'auth_group_permissions'
--
ALTER TABLE 'auth_group_permissions'
  MODIFY 'id' int(11) NOT NULL AUTO_INCREMENT;
--
-- AUTO_INCREMENT voor een tabel 'auth_permission'
--
ALTER TABLE 'auth_permission'
  MODIFY 'id' int(11) NOT NULL AUTO_INCREMENT,AUTO_INCREMENT=76;
--
-- AUTO_INCREMENT voor een tabel 'auth_user'
--
ALTER TABLE 'auth_user'
  MODIFY 'id' int(11) NOT NULL AUTO_INCREMENT;
--
-- AUTO_INCREMENT voor een tabel 'auth_user_groups'
--
ALTER TABLE 'auth_user_groups'
  MODIFY 'id' int(11) NOT NULL AUTO_INCREMENT;
--
-- AUTO_INCREMENT voor een tabel 'auth_user_user_permissions'
--
ALTER TABLE 'auth_user_user_permissions'
  MODIFY 'id' int(11) NOT NULL AUTO_INCREMENT;

```

```

--
-- AUTO_INCREMENT voor een tabel 'daily_data'
--
ALTER TABLE 'daily_data'
  MODIFY 'id' int(11) NOT NULL AUTO_INCREMENT;
--
-- AUTO_INCREMENT voor een tabel 'friend_requests'
--
ALTER TABLE 'friend_requests'
  MODIFY 'id' int(11) NOT NULL AUTO_INCREMENT;
--
-- AUTO_INCREMENT voor een tabel 'homes'
--
ALTER TABLE 'homes'
  MODIFY 'id' int(11) NOT NULL AUTO_INCREMENT;
--
-- AUTO_INCREMENT voor een tabel 'messages'
--
ALTER TABLE 'messages'
  MODIFY 'id' int(11) NOT NULL AUTO_INCREMENT;
--
-- AUTO_INCREMENT voor een tabel 'monthly_data'
--
ALTER TABLE 'monthly_data'
  MODIFY 'id' int(11) NOT NULL AUTO_INCREMENT;
--
-- AUTO_INCREMENT voor een tabel 'recent_data'
--
ALTER TABLE 'recent_data'
  MODIFY 'id' int(11) NOT NULL AUTO_INCREMENT;
--
-- AUTO_INCREMENT voor een tabel 'sensors'
--
ALTER TABLE 'sensors'
  MODIFY 'id' int(11) NOT NULL AUTO_INCREMENT;
--
-- AUTO_INCREMENT voor een tabel 'sensors_tags'
--
ALTER TABLE 'sensors_tags'
  MODIFY 'id' int(11) NOT NULL AUTO_INCREMENT;
--
-- AUTO_INCREMENT voor een tabel 'tags'
--
ALTER TABLE 'tags'
  MODIFY 'id' int(11) NOT NULL AUTO_INCREMENT;

```

```

--
-- AUTO_INCREMENT voor een tabel 'users_homes'
--
ALTER TABLE 'users_homes'
  MODIFY 'id' int(11) NOT NULL AUTO_INCREMENT;
--
-- AUTO_INCREMENT voor een tabel 'yearly_data'
--
ALTER TABLE 'yearly_data'
  MODIFY 'id' int(11) NOT NULL AUTO_INCREMENT;
--
-- Beperkingen voor ge xporteerde tabellen
--

--
-- Beperkingen voor tabel 'account_emailaddress'
--
ALTER TABLE 'account_emailaddress'
  ADD CONSTRAINT '
    account_emailaddress_user_id_2c513194_fk_auth_user_id' FOREIGN
    KEY ('user_id') REFERENCES 'auth_user' ('id');

--
-- Beperkingen voor tabel 'account_emailconfirmation'
--
ALTER TABLE 'account_emailconfirmation'
  ADD CONSTRAINT '
    account_ema_email_address_id_5b7f8c58_fk_account_emailaddress_id
    ' FOREIGN KEY ('email_address_id') REFERENCES '
    account_emailaddress' ('id');

--
-- Beperkingen voor tabel 'authtoken_token'
--
ALTER TABLE 'authtoken_token'
  ADD CONSTRAINT 'authtoken_token_user_id_35299eff_fk_auth_user_id'
    FOREIGN KEY ('user_id') REFERENCES 'auth_user' ('id');

--
-- Beperkingen voor tabel 'auth_group_permissions'
--
ALTER TABLE 'auth_group_permissions'
  ADD CONSTRAINT '
    auth_group_permissi_permission_id_84c5c92e_fk_auth_permission_id
    ' FOREIGN KEY ('permission_id') REFERENCES 'auth_permission' ('

```

```

        id'),
    ADD CONSTRAINT '
        auth_group_permissions_group_id_b120cbf9_fk_auth_group_id'
        FOREIGN KEY ('group_id') REFERENCES 'auth_group' ('id');

--
-- Beperkingen voor tabel 'auth_permission'
--
ALTER TABLE 'auth_permission'
    ADD CONSTRAINT '
        auth_permissi_content_type_id_2f476e4b_fk_django_content_type_id
        ' FOREIGN KEY ('content_type_id') REFERENCES '
        django_content_type' ('id');

--
-- Beperkingen voor tabel 'auth_user_groups'
--
ALTER TABLE 'auth_user_groups'
    ADD CONSTRAINT '
        auth_user_groups_group_id_97559544_fk_auth_group_id' FOREIGN
        KEY ('group_id') REFERENCES 'auth_group' ('id'),
    ADD CONSTRAINT 'auth_user_groups_user_id_6a12ed8b_fk_auth_user_id'
        FOREIGN KEY ('user_id') REFERENCES 'auth_user' ('id');

--
-- Beperkingen voor tabel 'auth_user_user_permissions'
--
ALTER TABLE 'auth_user_user_permissions'
    ADD CONSTRAINT '
        auth_user_user_perm_permission_id_1fbb5f2c_fk_auth_permission_id
        ' FOREIGN KEY ('permission_id') REFERENCES 'auth_permission' ('
        id'),
    ADD CONSTRAINT '
        auth_user_user_permissions_user_id_a95ead1b_fk_auth_user_id'
        FOREIGN KEY ('user_id') REFERENCES 'auth_user' ('id');

--
-- Beperkingen voor tabel 'daily_data'
--
ALTER TABLE 'daily_data'
    ADD CONSTRAINT 'daily_data_sensor_id_c70d4260_fk_sensors_id'
        FOREIGN KEY ('sensor_id') REFERENCES 'sensors' ('id');

--
-- Beperkingen voor tabel 'friend_requests'

```

```

--
ALTER TABLE 'friend_requests'
  ADD CONSTRAINT '
    friend_requests_receiver_id_6e370850_fk_auth_user_id' FOREIGN
    KEY ('receiver_id') REFERENCES 'auth_user' ('id'),
  ADD CONSTRAINT 'friend_requests_sender_id_e02b64d5_fk_auth_user_id
    ' FOREIGN KEY ('sender_id') REFERENCES 'auth_user' ('id');

--
-- Beperkingen voor tabel 'homes'
--
ALTER TABLE 'homes'
  ADD CONSTRAINT 'homes_owner_id_32e87e52_fk_auth_user_id' FOREIGN
    KEY ('owner_id') REFERENCES 'auth_user' ('id');

--
-- Beperkingen voor tabel 'messages'
--
ALTER TABLE 'messages'
  ADD CONSTRAINT 'messages_receiver_id_874b4e0a_fk_auth_user_id'
    FOREIGN KEY ('receiver_id') REFERENCES 'auth_user' ('id'),
  ADD CONSTRAINT 'messages_sender_id_dc5a0bbd_fk_auth_user_id'
    FOREIGN KEY ('sender_id') REFERENCES 'auth_user' ('id');

--
-- Beperkingen voor tabel 'monthly_data'
--
ALTER TABLE 'monthly_data'
  ADD CONSTRAINT 'monthly_data_sensor_id_5f3ceaa9_fk_sensors_id'
    FOREIGN KEY ('sensor_id') REFERENCES 'sensors' ('id');

--
-- Beperkingen voor tabel 'recent_data'
--
ALTER TABLE 'recent_data'
  ADD CONSTRAINT 'recent_data_sensor_id_4cb30b35_fk_sensors_id'
    FOREIGN KEY ('sensor_id') REFERENCES 'sensors' ('id');

--
-- Beperkingen voor tabel 'sensors'
--
ALTER TABLE 'sensors'
  ADD CONSTRAINT 'sensors_home_id_1b6b9891_fk_homes_id' FOREIGN KEY
    ('home_id') REFERENCES 'homes' ('id');

```

```

--
-- Beperkingen voor tabel 'sensors_tags'
--
ALTER TABLE 'sensors_tags'
  ADD CONSTRAINT 'sensors_tags_sensor_id_ec6d5d5a_fk_sensors_id'
    FOREIGN KEY ('sensor_id') REFERENCES 'sensors' ('id'),
  ADD CONSTRAINT 'sensors_tags_tag_id_7ab85af9_fk_tags_id' FOREIGN
    KEY ('tag_id') REFERENCES 'tags' ('id');

--
-- Beperkingen voor tabel 'users_homes'
--
ALTER TABLE 'users_homes'
  ADD CONSTRAINT 'users_homes_home_id_6d8097a2_fk_homes_id' FOREIGN
    KEY ('home_id') REFERENCES 'homes' ('id'),
  ADD CONSTRAINT 'users_homes_user_id_c35d6efe_fk_auth_user_id'
    FOREIGN KEY ('user_id') REFERENCES 'auth_user' ('id');

--
-- Beperkingen voor tabel 'yearly_data'
--
ALTER TABLE 'yearly_data'
  ADD CONSTRAINT 'yearly_data_sensor_id_349bf5e9_fk_sensors_id'
    FOREIGN KEY ('sensor_id') REFERENCES 'sensors' ('id');

```