



HÁSKÓLINN Í REYKJAVÍK  
REYKJAVÍK UNIVERSITY

REYKJAVÍK UNIVERSITY

FINAL PROJECT

# **Usage Management System for an API Accessible Icelandic OCRs**

## **Setup manual**

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# 1 Introduction

## 1.1 about this manual

This manual describes how to set up this project locally.

## 2 Setting up locally

### 2.1 Getting the code

The code is stored in a private GitLab repo owned by Ásta Gísladóttir. Please send an email to either [astag18@ru.is](mailto:astag18@ru.is) or [kolfinna17@ru.is](mailto:kolfinna17@ru.is) to be granted access.

The code can be cloned using either SSH:

```
git clone git@gitlab.com:astag18/lokaverkefni-ocr.git
```

or HTTPS: `git clone https://gitlab.com/astag18/lokaverkefni-ocr.git`

The code from the repository has a folder called `tesseract`. It contains a minimal version of the google tesseract OCR. Any other OCR can be downloaded and installed instead for local deployment. The google tesseract one can be downloaded from the following link to get the full edition or to add languages other than english/icelandic:

<https://github.com/UB-Mannheim/tesseract/wiki>

The chosen tesseract needs to be added to environment variable `PATH` so that the `pytesseract` can use it. If the `PATH` is not working correctly the `pytesseract` file can also be modified to point to the OCR. Line 26 in the `pytesseract` file needs to be hardcoded to point to the `tessereact.exe` file:

```
tesseract_cmd = "path/to/tesseract.exe"
```

### 2.2 Setting up envornment requirements

The python command depends on the version you have installed on your computer. These commands will be using = `pip` to install all packages.

- Have pyhton 3.6 or above installed and in the `PATH`
- install virtual environment to contain the pyhton packages for the project.
  - `py -m pip install virtualenv`
- Create an virtual environment folder in the parent folder of the git repo you just fetched.
  - `virtualenv NameOfEnvironmentFolder`
  - `run ./NameOfEnvironmentFolder / Scripts / activate`
  - run the following commands to install necessary packages
    - \* `py -m pip install --upgrade pip`
    - \* `py -m pip install django==2.1.1`
    - \* `py -m pip install django-allauth==0.41.0`
    - \* `py -m pip install django-rest-framework`
    - \* `py -m pip install numpy`
    - \* `py -m pip install Pillow`
    - \* `py -m pip install pytesseract`
    - \* `py -m pip install opencv-python`

## 2.3 Creating SQLite database

The git file comes with the basic database set up. It contains four user types already set up and one superuser: email = ocrdev20@gmail.com, password = admin. If any changes are made to models, these two commands need to be run:

- py manage.py makemigrations
- py manage.py migrate

The command to create a new superuser is:

- py manage.py createsuperuser

```
(env) C:\Users\Lenovo\ocr-loka\lokaverkefni-ocr>py manage.py createsuperuser
Email address: ivarerbestur@gmail.com
Password:
Password (again):
Superuser created successfully.

(env) C:\Users\Lenovo\ocr-loka\lokaverkefni-ocr>
```

Figure 1: Create Superuser

If the database is deleted completely you may run into errors when setting it up again unless the user type and uses\_available lines in models are commented out for the first migration and superuser setup.

## 2.4 Deploying the Site Locally

The website can now be deployed locally using the command: py manage.py runserver

A new version of the GDPR agreement can be uploaded from the admin backend, go to: <http://127.0.0.1:8000/admin> and log in using a superuser account.

## 2.5 Email Confirmation Configuration

Upon sign up an email confirmation is sent. The email settings are changed in OCRdev/settings.py file:

```
EMAIL_HOST_USER = DEFAULT_FROM_EMAIL = "ocrdev20@gmail.com"
EMAIL_HOST_PASSWORD = "Lj0slesari"
```

These two can be changed out for any gmail/password combination. The current example email being sent out can be modified by changing the file at: templates/account/email/email\_confirmation.txt