Employee management application

A Python web app made using the Flask framework and a MySQL database designed to help a company's HR department to manage its employees.

Key Features

For a standard employee:

- A login page that checks the user inputs
- Profile page that shows all key data about the logged employee
- A form that allows an employee to clock in all the task he / she did, these tasks can be edited afterwards

For an Employees from the H.R. department:

- A table that lists all the employees still under contract
  - These employees' data can be edited
  - An employee can also be archived, thus he / she won't appear in the list anymore
- A form made to add new a employee to the list

All the persistent data are stored in the database `db_employees`.

Planned Features

- Generation of payslips on PDF format at the end of a month
  - After payslips have been generated the inserted tasks cannot be edited anymore
  - The employees can see and download their payslips
  - If an employee's work time is lower that the one required by his / her contract, the app sends a warning email to this employee his / her supervisor.

Installation

Web app

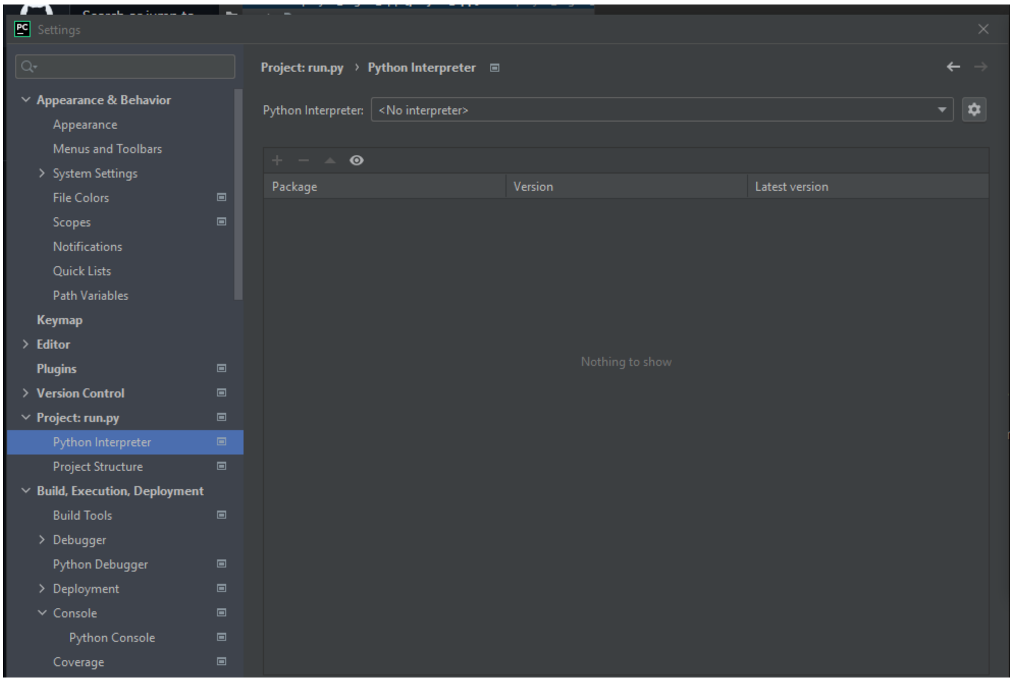
This software uses Python 3.9 with the requirements listed under `/code/emyploee_app_mgmt/requirements.txt` .

Note: some of these packages are automatically installed when you install some main libraries (e.g. Flask, Flask-SQLAlchemy) but they won't be necessarily used.

It is assumed that you have Python 3.9 installed and youd added it to your PATH variable.

1. The project can be found under `/code/employee_mgmt_app`
2. Download the required packages with `pip install -r requirements.txt` or uses the virtualenv at `code/employee_mgmt_app/env`
   - if you want to use the existing virtualenv environment as the project's interpreter:

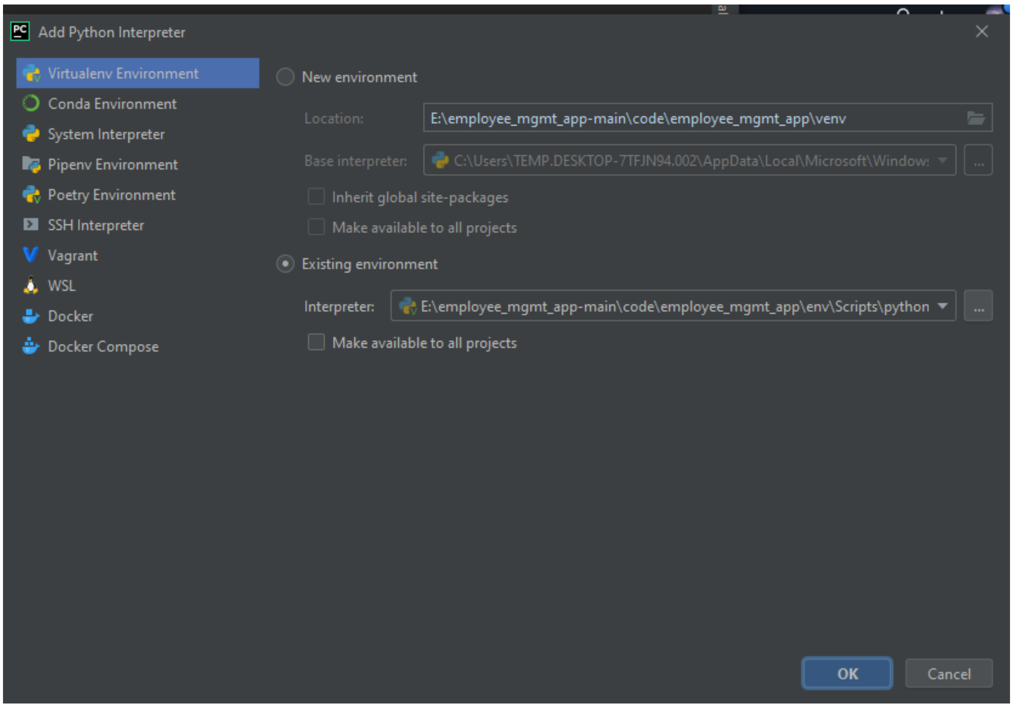
1. First you need to add it to the list of interpreters:



Python Interpreter: <No interpreter>

Package	Version	Latest version

Nothing to show



○ New environment

Location: E:\employee_mgmt_app-main\code\employee_mgmt_app\venv

Base interpreter: C:\Users\TEMP.DESKTOP-7TFJN94.002\AppData\Local\Microsoft\Window:

□ Inherit global site-packages

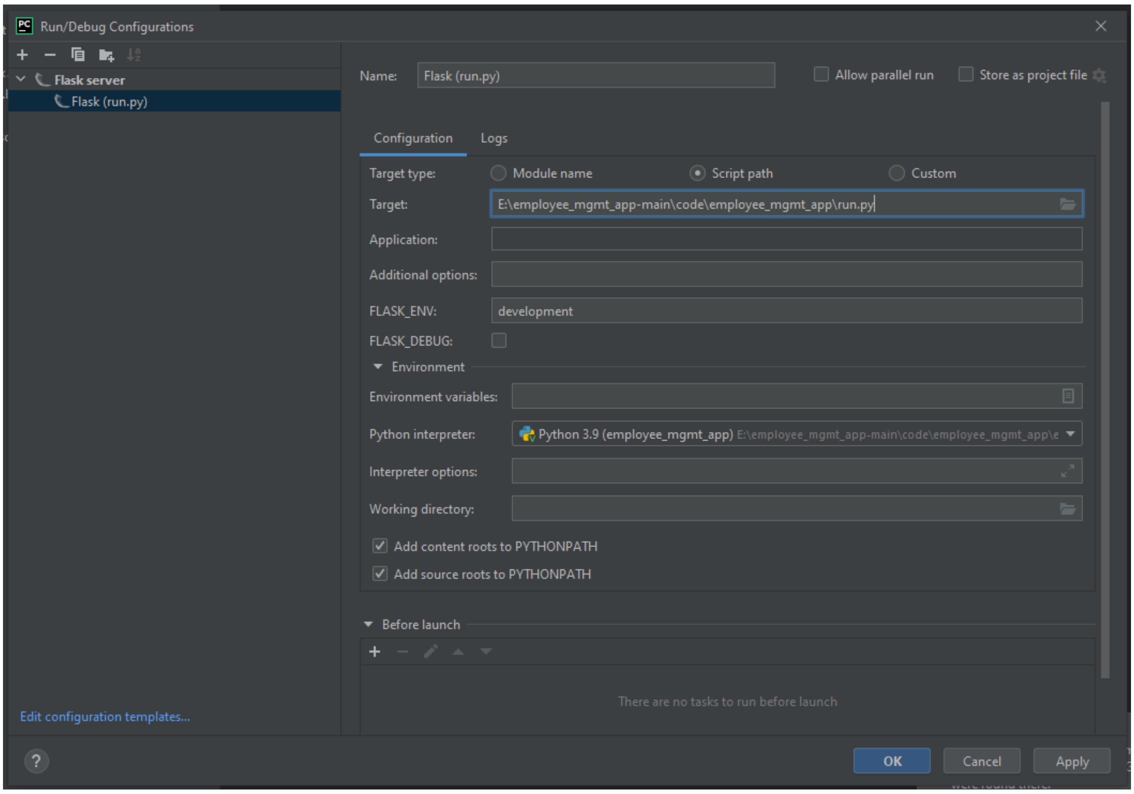
□ Make available to all projects

● Existing environment

Interpreter: E:\employee_mgmt_app-main\code\employee_mgmt_app\env\Scripts\python

□ Make available to all projects

2. Then configure the project to run using this interpreter



Run/Debug Configurations

Flask server

Flask (run.py)

Name: Flask (run.py) □ Allow parallel run □ Store as project file

Configuration Logs

Target type: ○ Module name ● Script path ○ Custom

Target: E:\employee_mgmt_app-main\code\employee_mgmt_app\run.py

Application:

Additional options:

FLASK_ENV: development

FLASK_DEBUG: □

Environment

Environment variables:

Python interpreter: Python 3.9 (employee_mgmt_app) E:\employee_mgmt_app-main\code\employee_mgmt_app\e

Interpreter options:

Working directory:

☑ Add content roots to PYTHONPATH

☑ Add source roots to PYTHONPATH

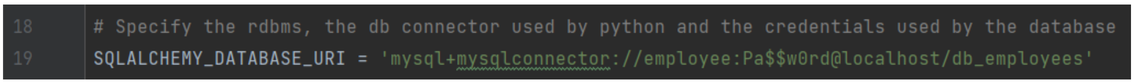
Before launch

There are no tasks to run before launch

Edit configuration templates...

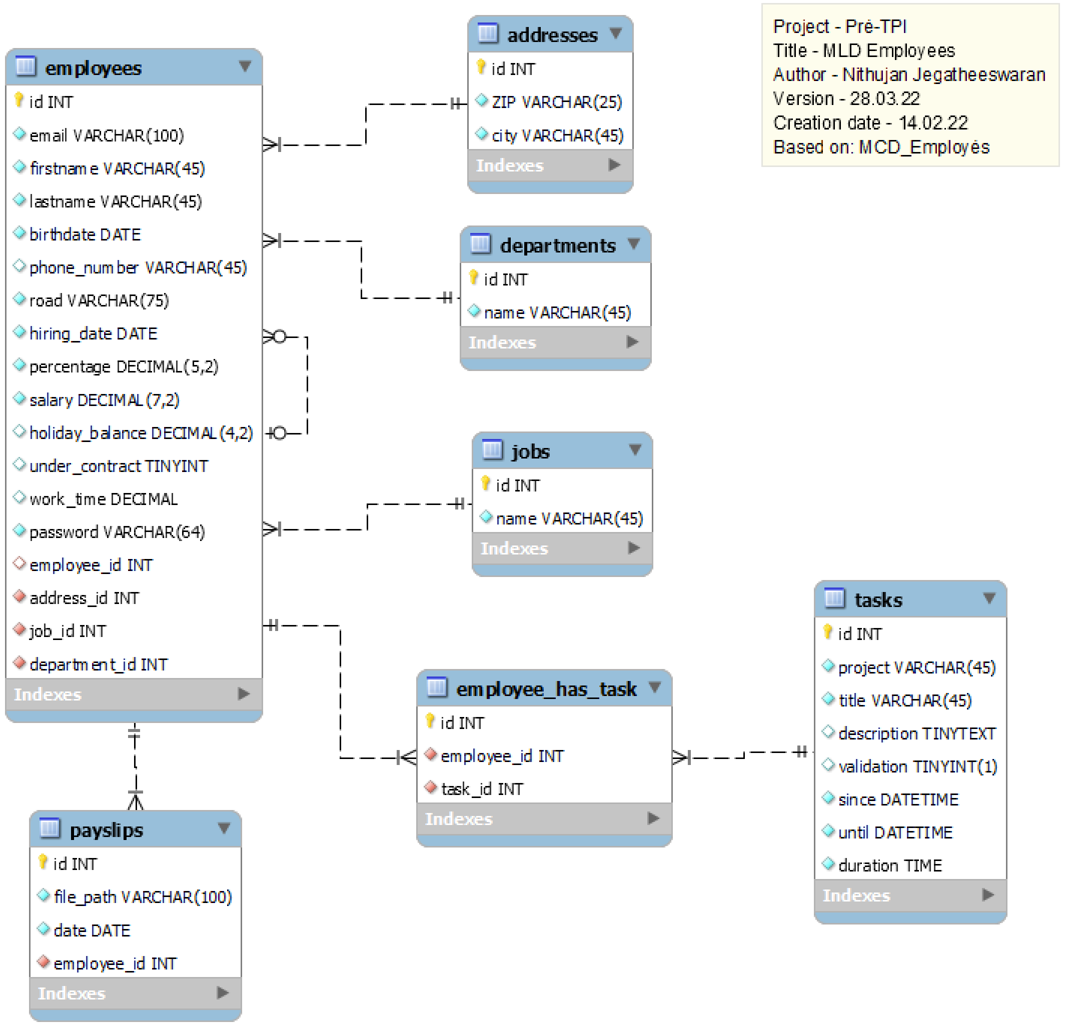
Database

- Use a MySQL server such as HeidiSQL
- Create the database `db_employees` with the scripts `/data/db_tables_creation_with_drop.sql` and populate it with `/data/updated_data.sql`
- Don't forget to change the credientials in `/code/employee_mgmt_app/config.py` , default are `employee: Pa$$wOrd`



```
# Specify the rdbms, the db connector used by python and the credentials used by the database
SQLALCHEMY_DATABASE_URI = 'mysql+mysqlconnector://employee:Pa$$w0rd@localhost/db_employees'
```

- The changes in the database made by the application can be seen when you compare the data of the script `/data/DataGeneration_dbforge.sql` which only contains auto-generated data.
- This is the database's structure:



Project - Pré-TPI
Title - MLD Employees
Author - Nithujan Jegatheeswaran
Version - 28.03.22
Creation date - 14.02.22
Based on: MCD_Employés

Run

To run this project you can use PyCharm with the configuration described above or if your OS is Windows you can simply run it with `code/employee_mgmt_app/runner.bat`