Installation and Usage Guide

Batch Attendance Python3 module

<https://github.com/jkelley-blackboard/attendance-REST-Python3>

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**Before you start:**

While it is part of step 3, it might make sense to verify that you are able to install Python3 before you start. If you don’t have local PC permission, better to find out early.

# Register Application

## Sign Up and/or Log In (<https://developer.anthology.com/>)

## Register Application

* Click the (+) icon and select “Manual Registration”
* Fill out the Form:
  + Name and Description: give it a meaningful name and useful description. The name will show in Blackboard REST configuration interface.
  + Domain: the domain of the Blackboard system(s). eg. “blackboard.com, myschool.edu”
  + Do not enable the LTI 1.3 switch. Leave it off.
* When you submit the form it will return a list of details. Copy the following to a note pad:
  + Application ID
  + Key
  + Secret

(Note this will be the only time/place you can see the secret. If you lose it you will need to create another Key/Secret pair.)

# Prepare Blackboard

## Create a System Role with noted privileges

Name it something like “Attendance Integration” and give it a meaningful description. If you share admin responsibilities, include your name.

“Permit” the following privileges:

* User management by Web Services
* Administrator Panel (Courses) > Courses
* Course/Organization Control Panel (Tools) > Attendance > View Attendance
* Course/Organization Control Panel (Customization) > Properties
* Administrator Panel (Courses) > Courses > Edit > Enrollments

See this link for displaying entitlements on the privileges page in Blackboard: <https://docs.anthology.com/docs/blackboard/rest-apis/getting-started/getting-started-with-entitlements#mapping-entitlements-with-privileges>

Note that the code in this module only uses GET requests, so it will not make any changes to data.

## Create a user and assign the new roll

If you don’t already have a naming convention for integration accounts, you might want to start one. Give the account meaningful values, indicate its purpose, assign the “Attendance Integration” system role.

## Create Integration in Blackboard

Create the REST integration from the Admin Page: REST API Integrations -> Create Integration

* Select “Click Integration” link in top left corner
* Enter the Application ID
* Enter the username for the user you just created
* Select NO for both ‘End User Access’ and ‘Authorized To Act As User’ and Submit
* This will create an integration with the Name from step 1.

For extra security, set this integration to unavailable when not in use.

# Setup local environment

## Install Python3

<https://www.python.org/downloads/>

I used 3.11.0 when I wrote this code. If you already have any 3.x installed, it should work fine. If you want to install the latest 3.x.version it should work as well.

## Create a working folder

Your choice – give it a meaningful name.

## Download and prep files from GitHub

### Create or update the **properties.ini** file

* KEY = value from above
* SECRET = value from above
* HOST = Hostname of your test system (mytest.blackboard.com )

### Create or Update the **list.csv** file

Each row of the file should be a course ID value as you would see in the GUI. For testing I recommend at least one of each:

* Not a course
* A course without attendance records
* A course with full attendance records
* A course with partial attendance records
* A parent course (merge) with attendance records

## Establish and configure a virtual environment

### Activate a virtual environment.

* Open CMD window for your working directory
* Type **1\_attendance\_setup.bat** and hit enter key
* This will
  + install or update python’s helper **pip** program
  + create a folder with the name **venv\_batch\_attendance**
* You will see your cmd prompt prefixed with *(venv\_batch\_attendance)*
* (To escape the virtual environment type “deactivate” or close CMD window)

### Install the required modules.

* Type **2\_attendance\_requirements.batfile** and hit enter key
* This will
  + install or update **pip** for the virtual environment.
  + install the required modules listed in the **attendance\_requirements.txt** file

# Run the program

## Execute the script

* Type ***batch\_attendance3.py properties.ini list.csv***
* This will
  + Start logging to the CMD console
  + Create a date-time folder
  + Write a log file and the output.csv files to the folder