Prerequisites:

**Packages:** GDAL, numpy, tkinter

**Folders:**

**Rasters**

The program will look for rasters in the .tif format in the 'rasters' in folder in the main directory. You may add or remove raster options as you see fit.

The default rasters included with this demo are>

Rasters:

* Honolulu\_GAT.tif:  Depth grid developed for Honolulu City/County based on potential inundation from the Great Aleutian tsunami scenario.
* NYC.tif:  Depth grid created for the 5 Boroughs of New York City based on the FEMA 100 year mapping.

**UDF:**

**This folder contains some sample UDF input files:**

HNL\_UDF\_OpenHazus.csv:  A csv file containing (>80K) buildings with required attributes

NYC\_UDF\_OpenHazus.csv:  A csv file containing (>800K) buildings with required attributes

Lookup Tables

The program will look for the lookup tables in the .csv format in the 'lookuptables' folder in the main directory.

1. **How to start:**

Double click on OpenHazus\_POC.bat in the main directory.

A windowed GUI should launch with field inputs.

A console log should also launch; check here for errors.

1. **The GUI:**

The GUI of the program allows for custom field mapping and checking. If valid input UDF (in a .csv format) is not selected, the fields will be color coded as RED.

If an input UDF is selected the, the program will search through the input UDF’s field names and cross-check them against what is currently in the corresponding text entry box. It also checks against the default name of the field, according to its field name on the left of the entry box.

If the field is colored YELLOW, that field is has not been successfully mapped, but is NOT critical.

If the field is colored RED and a UDF is already selected, the field has not been usefully mapped and IS critical.

If the field is colored GREEN, the field has been mapped successfully.

1. **Input:**

CSV file with fields corresponding to program requirements.

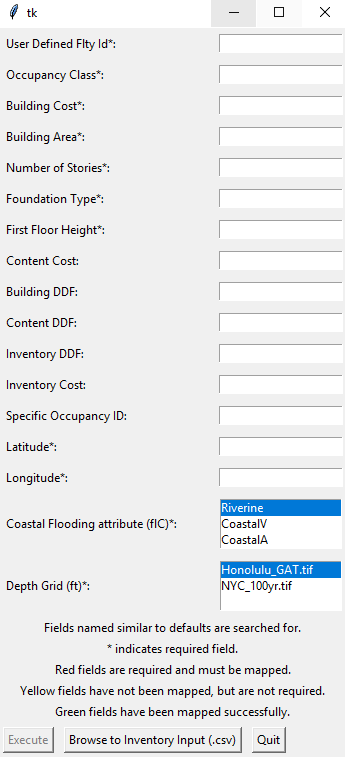
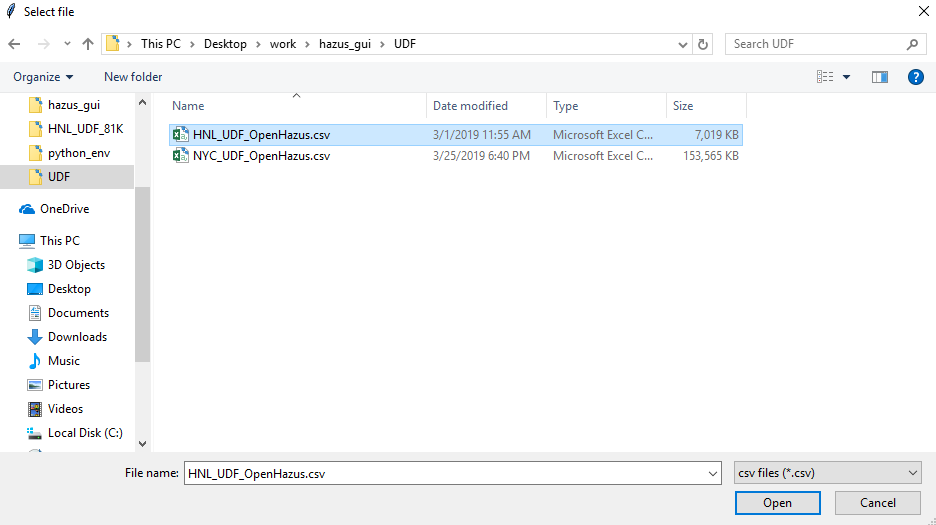
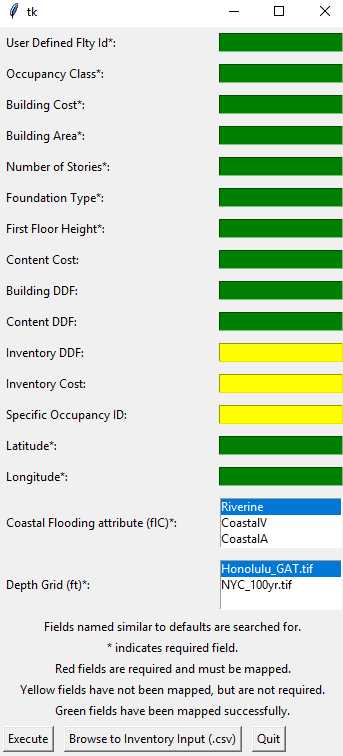
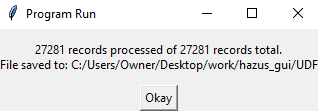
You will be asked to browse for this file. The included UDF folder has some ready-to-go samples with pre-mapped fields.

1. **Output:**

If the program runs successfully, you will find the final product in .csv file-format in the same location of the original input .csv file. The name should be the original name of the .csv file with an added \_RASTERNAME to the end.

**DEMO INSTRUCTIONS:**

Open the program using OpenHazus\_POC.bat,

1. leave all the entry text fields blank select the Honolulu\_GAT.tif raster. The window should look like this: 
2. press the "Browse to Inventory Input (.csv)" button and go to the UDF folder in the main directory and pick the HNL\_UDF\_OpenHazus.csv. It should look something like this: 
3. open it, the window should then look like this: 
4. double-click on the HNL\_UDF.csv file, then press execute. After the program finished you should have a summary window like this: 

Wait for the program to run (check the log window for any changes or errors),

then go to the HNL\_UDF folder for the new processed .csv file, named HNL\_UDF\_gat\_feet1.csv

**Troubleshooting:**

If the required fields aren't found using either the given or default field names, the program cannot run. Send log info to the administration.

If a raster file is not selected, the program cannot run, and will give an error.

If a .csv file is not selected, the program cannot run, and will give an error.

NOTES:

Rasters used for processing must have coordinate systems of either Latitude, Longitude, or UTM. The input UDF must be in Latitude Longitude format.

Raster files and input .csv files must share the same coordinate system or the program will fail to run.

For example, if the raster file in question is using a UTM coordinate system, and the input .csv has fields mapped to latitude and longitude, the program will fail to run.