Photo-mozaic-ator documentation

About

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Course: Programming in C# NPRG035
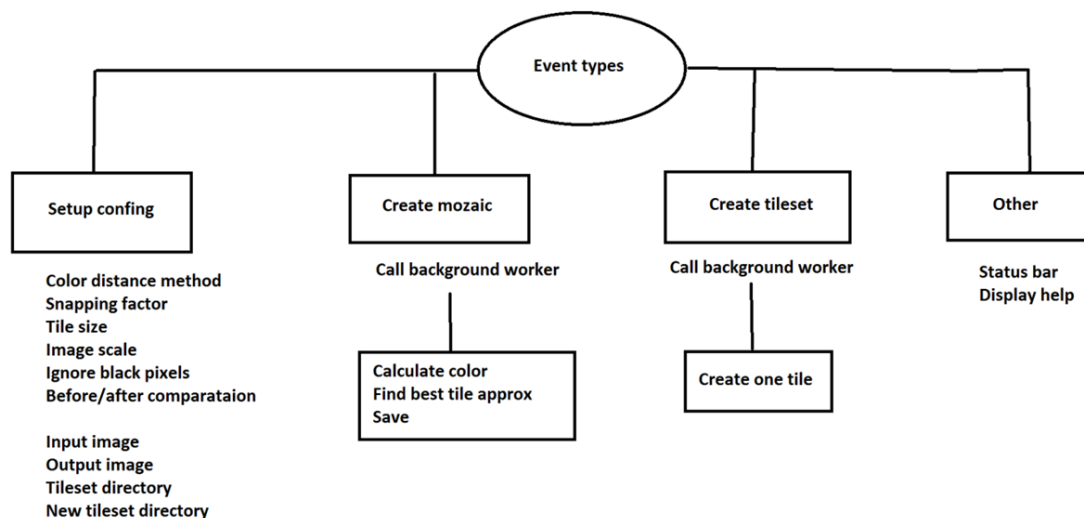
Language: C#

Framework: Windows Forms Application

Abstract

Goal of this project was to create user friendly windows application for creating mozaics from photos.

Events

Because the program is written in WinForms framework it's mainly event driven. This is a map of events sorted to few cathegories.
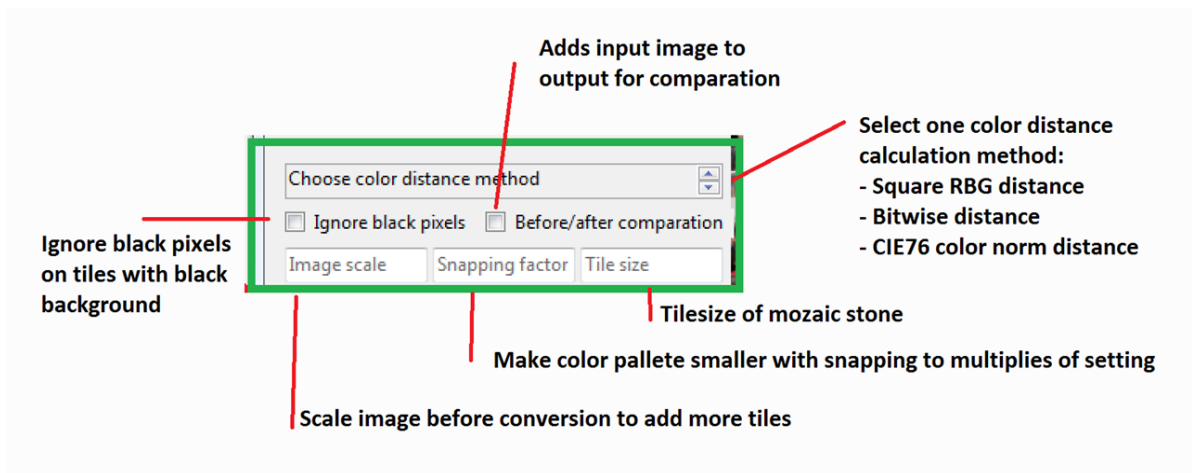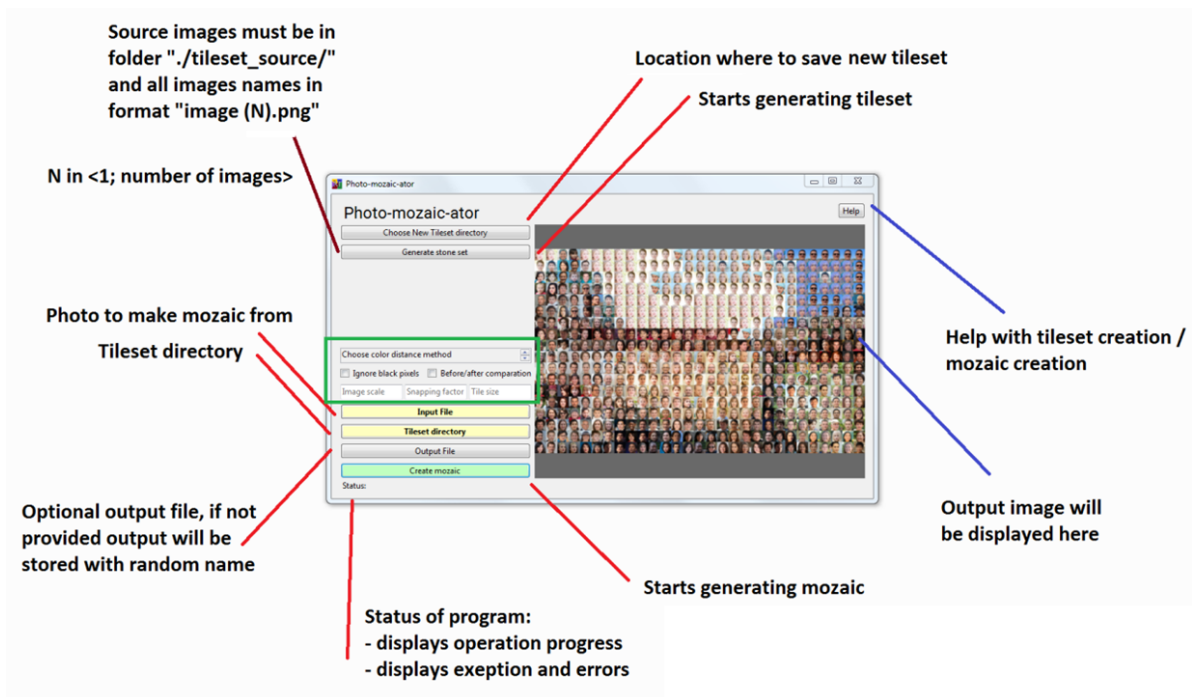

Color distance strategies

There are currently 3 available color distance metrics:

- Square RBG metric
- Bitwise distance
- CIE76 color metric

How to work with program

Interface annotations (top)

Source images must be in folder "./tileset_source/" and all images names in format "image (N).png"

N in <1; number of images>

Location where to save new tileset

Starts generating tileset

Photo-mozaic-ator

Choose New Tileset directory
Generate stone set

Help

Photo to make mozaic from

Tileset directory

Choose color distance method
Ignore black pixels   Before/after comparation
Image scale   Snapping factor   Tile size
Input File
Tileset directory
Output File
Create mozaic
Status:

Optional output file, if not provided output will be stored with random name

Help with tileset creation / mozaic creation

Output image will be displayed here

Starts generating mozaic

Status of program:
- displays operation progress
- displays exeption and errors

Interface annotations (bottom)

Adds input image to output for comparation

Select one color distance calculation method:
- Square RBG distance
- Bitwise distance
- CIE76 color norm distance

Choose color distance method
Ignore black pixels   Before/after comparation
Image scale   Snapping factor   Tile size

Ignore black pixels on tiles with black background

Tilesize of mozaic stone

Make color pallete smaller with snapping to multiplies of setting

Scale image before conversion to add more tiles

Sources of tiles and project

- Source code https://github.com/LukasCaha/Photo-mozaic-ator
- Pokemon dataset https://lukascaha.com/pokemon/pokemon_images.zip • Needs to be tiled
  - Tiled http://lukascaha.com/mozaicator/pokemon.zip
- People dataset https://thispersondoesnotexist.com/
  - Needs to be scraped and then tiled
  - Tiled http://lukascaha.com/mozaicator/people.zip
- Minecraft blocks tileset http://lukascaha.com/mozaicator/minecraft.zip
  - Ready to go
- Rubiks cube tiles http://lukascaha.com/mozaicator/rubiks.zip