

Assignment 1: Due on 7th April 2024, 11:59 PM

Identifying Parallelizable Phases with Multiprocessing

Objective:

Student will work to identify phases within a project that can be parallelized using multiprocessing in Python.

Project:

Project: Image Processing

1. Open a Text file and read Image URL.
 2. Download a set of images.
 3. Resize each image to a specific size.
 4. Apply a grayscale filter to each image.
 5. Save the processed images to a new folder.
 6. Generate a report summarizing the number of images processed and average processing time per image.
- Run the Project Sequential without multiprocessing and note the execution time.
 - Run the Project with multiprocessing and note the execution time.
 - Use the Amdahl's Law and report the speed up.

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https://cdn.photographylife.com/wp-content/uploads/2014/09/Nikon-D750-Image-Samples-2.jpg
https://my.alfred.edu/zoom/_images/foster-lake.jpg
https://wallpapercave.com/wp/wp2858553.jpg
https://wallpaperset.com/w/full/0/d/5/183330.jpg
https://pixy.org/src/477/4774988.jpg
https://photographylife.com/wp-content/uploads/2020/01/iPhone-11-Pro-Image-Sample-71.jpg
https://pixy.org/src/20/201310.jpg
https://images4.alphacoders.com/115/thumb-1920-115716.jpg
https://cdn.wallpapersafari.com/43/42/IwWBH3.jpg
https://wallpapercave.com/wp/wp2593765.jpg
https://www.pixelstalk.net/wp-content/uploads/2016/10/Free-hd-cartoon-wallpapers.jpg
https://wallpapercave.com/wp/j108bCz.jpg
https://wallpapertag.com/wallpaper/full/7/b/6/868461-desktop-backgrounds-scenery-1920x1200-720p.jpg
https://wallpapercave.com/wp/WIKDCoh.jpg
https://wallpapertag.com/wallpaper/full/9/d/1/116307-beautiful-scenery-wallpaper-2560x1600.jpg
https://getwallpapers.com/wallpaper/full/7/7/c/257695.jpg
https://wallpapercave.com/wp/wp3478460.jpg
https://wallpapercave.com/wp/wp5181391.jpg
https://wallpapercave.com/wp/eqq3Dvp.jpg
https://wallpapercave.com/wp/CRU71Jc.jpg
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Submission on Moodle:

You are required to submit both Code file and screenshot that shows execution time of both codes and Speed up.