Journal Report 21
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Period 1, White

Daily Log

Monday March 9th

This week, I'm starting on Scott Joplin's "The Entertainer" and creating variation in fingering for the piece depending on hand size. With my code right now, it fingers most of the piece in a satisfactory manner.

Tuesday March 10th

While working with "The Entertainer," I realized the many leaps and jumps in the piece doesn't really lend itself well to trying different variations (since it's mostly restricted to one possible fingering). Instead, I'm working with Chopin's "Waltz in B Minor." The first run with the code I had produced surprisingly workable fingering, except for some snags toward the end where the "distribute fingers" method didn't work as successfully.

Thursday March 12th

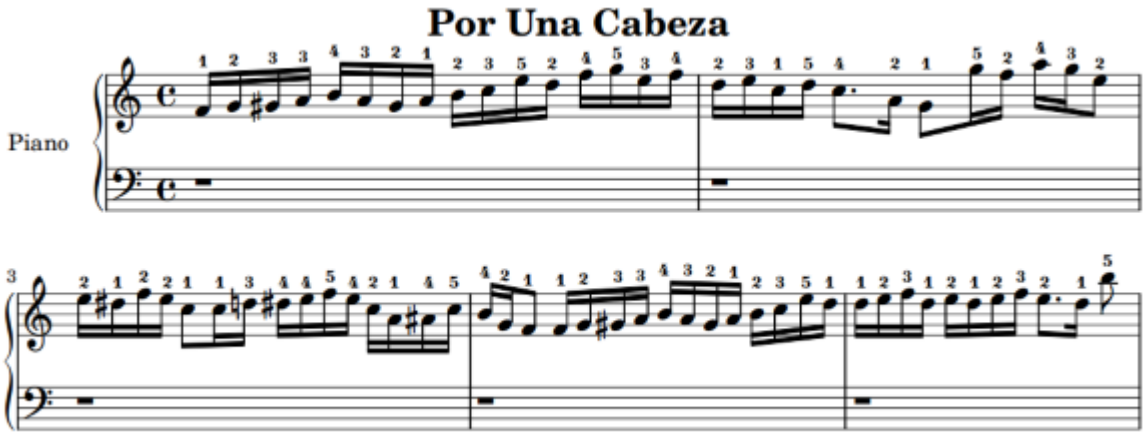
To create variation, I have to change how my hand position dictionaries are are created, which means I need to change how I break a piece into sections. The question has always been how to do so. Originally, I had the idea to shorten my motif to create variations, but this method randomly created change without an a method of evaluating whether the fingering produced was better suited to a large or small hand. Instead, I came up with the idea of extending the threshold of creating a lateral shift section. Before, that threshold had been set to 7 (a fifth in musical terms), but by changing that based on a user's hand span (most people can handle 12, an octave, and larger hands can handle even more), I can create variation that also automatically knows what size hand it would be suitable for. It's not as simple as just changing that one number in my code, though, because it causes the code that does static sections to completely crash - I'll have to change my second round scanning.

Timeline

Date	Goal	Met
February 28th	Be able to finger and output ”Por Una Cabeza.”	I fixed the thumbs on black key problem, but still need to iron out some problems.
March 6th	Finish ”Por Una Cabeza” and integrate new version of ”place fingering” method with the motif algorithm to generate fingering variations	I finished Por Una Cabeza and fixed some output problems in LilyPond
March 13th	Integrate new version of ”place fingering” method with the motif algorithm to generate fingering variations	–
March 20th	Evaluate whether a given fingering is better suited for a large or small hand	–
March 27th	Be able to handle monophonic and polyphonic music in one staff	–

Reflection

Below is a before-and-after comparison of how my code fingers and outputs ”Por Una Cabeza.”



Piano
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