Milestone Three—Data Structures and Algorithms

For the data structure and algorithm category, I want to enhance the gallery functionality within my mobile android app, Local Coffee Shop, from CS360 class. The gallery is meant to display pictures of the coffee drinks sold on the menu as well as the interior of the coffee shop. For the artifact, I originally used an array list data structure to store the image title and location and created an algorithm to access this array list to display into the gallery. For enhancement, I wanted to further expand the app by adding the functionality of inflating the image to full-screen when the image is clicked as well as adding zooming gestures. I did experience difficulty initially in implementing this with the original way I had programmed the gallery. I ended up needing to alter the gallery to use fragments to handle the different screens of gallery and full-screen image as well as adding click listeners to handle the click to start a specific fragment. I originally used ImageView for the photos but I researched an alternative, PhotoView, which can handle zoom gestures. I still used an arrayList to store the photos and created a for loop algorithm for Glide to access the photos to display on to the RecyclerView of the gallery. I did end up with a much more complex gallery than what I originally started with but I definitely learned a lot more about android development and utilizing data structures/algorithms to perform what I wanted. The skill illustrated when using this enhancement is being able to manipulate data in an array list to display in certain views within android app development. I do believe I met course objectives by showing how I could troubleshoot and come up with a design solution to meet the enhancement that I wanted to implement.