COM 339

ADVANCED PROGRAMMING

Advanced Programming Final Homework

Görkem Toprak – B1705.010008

February 4, 2021

In this final Advanced Programming homework, at first, I did some researches on the subjects, we can say a preliminary study. In the first part of the homework, what is the sobel edge image and what is not, I learned it first. I did the first batch similar to our previous midterm project. First I created GUI using jframe and jtabbedpane. I put the original version of the picture you sent on the first floor. After that, I have created an image reading class like the previous project. This class is called ReadFile. Thanks to this, I can read the pictures easily. Then, I created a grayscale class as you described it in the class, and I grayscale the original color picture, and then I did that. If I come to the Gx Edge image, first I read the pixels with double for loop then I thought of a 3x3 cell. For this, I need 9 different types of value. After for loops, I made a check as i! = 0 && j! = 0 if my values i and j are not equal to 0 I said do these operations. I checked the values of i and j in the pixel array of all indexes where there are pixels, the picture will be drawn and for this I created 9 different integer values as index00,01,02,10,11,12,20,21,22. Why? Because if we consider a 3x3 cell box from top to bottom, the first row is 0, the second row is the 1 and the third row is the 2nd index. Then I did a calculation, I found this calculation from stackoverflow. To tell you the truth. In addition to this calculation I just got the absolute value using Math.abs, if you ask why, the reason is that some of our pixels were below those values or did not output an integer number, so the picture was a bit pixelated and this caused an error. That's why I got the absolute value of that calculation. Then I created a threshold value, which is filled with / 255 with my maximum value. That 's all I can tell with Gx Edge Image. Now it's time to Gy Edge. Actually I did the same here what I did with Gx, the only difference is Gy when calculating - I hit it that much the rest is the same with Gx. For G Edge, I took the square of the pixels I got from Gx and Gy and got their absolute value. There is no other difference without calculating. I couldn't do tab 4. I'm really sorry for that. Be sure, if I understood this from the first week, I would definitely do it, but of course, I fully understood this assignment on the last date you extended it and I tried to do it. But again I couldn't draw vertically, I failed here, I admit. I was looking at the projects of the school from morning till night until 4-5 at night and I had very difficult times. Please understand from my condition. In the last tab, I did 2 rounds, but I think the second version was a little different. In the zoom, I will show you the 2-turn, you extended the time I did wrong and I tried to do it again and I did it correctly. ClickableImage class is my actual tab5 and ClickableJPanel class is my second option for tab5. There is a high probability of misunderstanding the homework and I did it completely wrong. I hope you forgive because I really wasted time there. When I clicks on the panel I made there, he extracts the original picture by giving the number in x and y coordinates. I thought of it entirely in chess logic

actually and I went according to that. I'm really sorry I made a big mistake, but when I couldn't delete it, I didn't want to delete it, I thought it would stay that way rather than leaving it empty. This is the first part of the homework. And second part of the homework I mean Streams is just like that. I really like java streams in general and will definitely use them all the time. Streams seemed to me to query in MySQL. So now, let me tell my streams project. First, I created a customer class. There are 5 different parameters in this class. name surname, year, city and purchase (transaction). I created getter setter and constructor with these parameters. So my job here Customer class is done. Then I created 10 different customer objects in my main class and I created a customer list as a ArrayList. I cannot write all the methods I used here because my time is very limited, but I have used everything. Sorted, filter, max-min, map, comparing etc. I used for each somewhere in this homework, the rest is always with System.out because I don't think it will be a problem. Although I could not write all the items in detail, I can tell you in the zoom. In the last point, I did it as you explained in the lecture. I have created one filter class and one filter interface and used it in my main class. Here I use any of the customers who live in Ankara. In short, my homework was like this, I hope I did it correctly. Really, my time was very limited, I could only do this much because of the intensity of the work. Please understand my condition, my teacher, I really worked hard to do these homework at a level that would lose my health. This is the only way I could do it without interrupting my school. And be sure that if I didn't work on any of the tasks, I would handle all of this homework and do it properly.