Gebze Technical University
Computer Engineering

CSE 222 - 2018 Spring

HOMEWORK 5 REPORT

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1 INTRODUCTION

1.1 Problem Definition

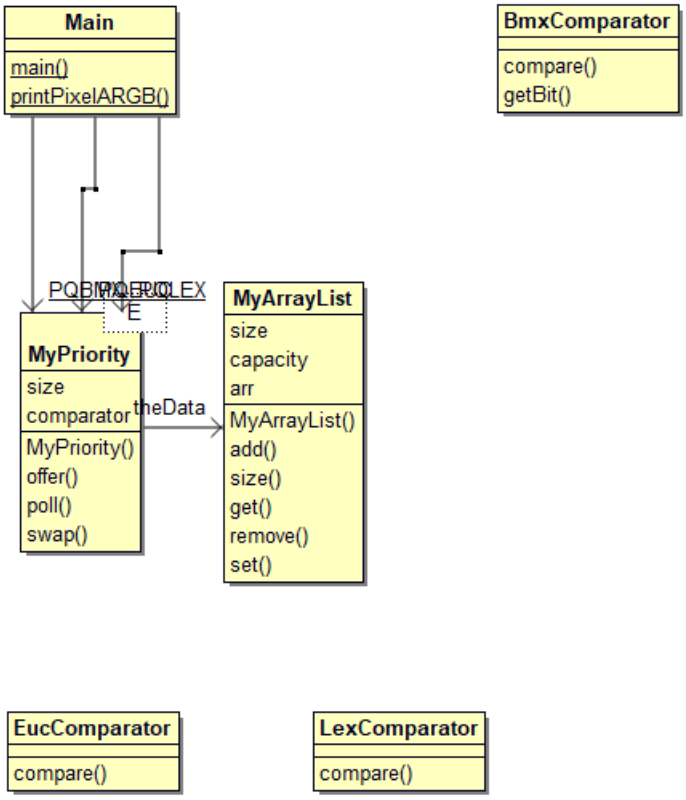
Taking an image given as an argument and to divide it into pixels and add it as a priority queue. All pixel represent as 2D array (with W columns and H rows) of 3D 8bit unsigned integer valued vectors. Each element of this must be 2D array correspond to a color point in this image. Each pixel is made up of 3 integer values in the range 0-255 inclusive. The first dimension corresponds to the amount of red in that color, the second dimension to the amount of green in that color and the third dimension to the amount of blue in that color. Enter those pixels one by one into priority queues, and then extract them according to different priority schemes (or ordering relations).

1.2 System Requirements

First I need to priority queue class. It provides given structure. In priority queue, i can use an arraylist, so i write my own arraylist class. In priority queue comparison, i need to my own comparator class that lexcomparator, euccomparator, bmxcomparator. For writing program, i will use intellij.

2 METHOD

2.1 Class Diagrams



2.2 Use Case Diagrams

Add use case diagrams if required.

2.3 Other Diagrams (optional)

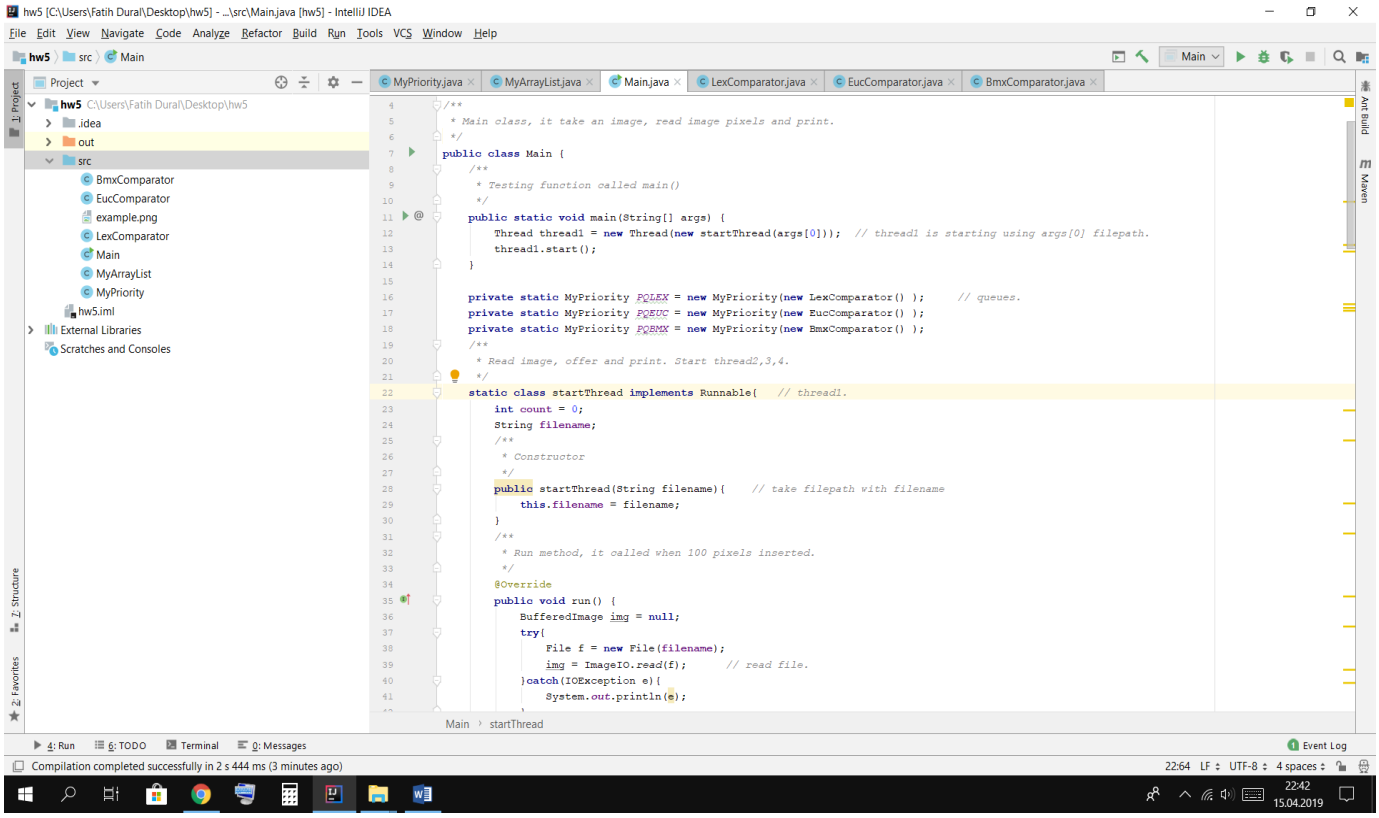
Add other diagrams if required.

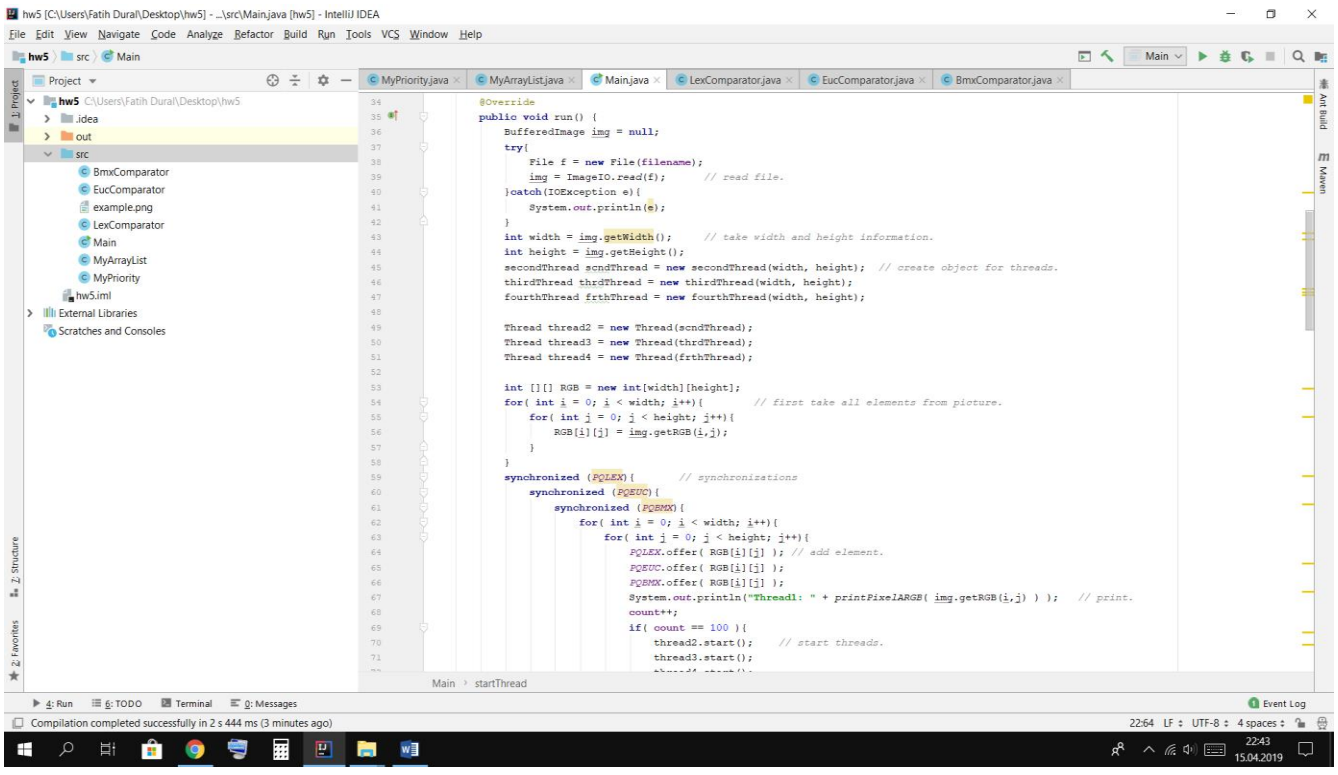
2.4 Problem Solution Approach

As I said before, i implemented my own data structure. Main call thread1. Thread1 process the run method. It read from image, print and adding. Loop at w x h time. It is synchronized. After 100 times, thread1 create and start other threads(2, 3 and 4). Other threads remove elements from queue. This process become O(logn).

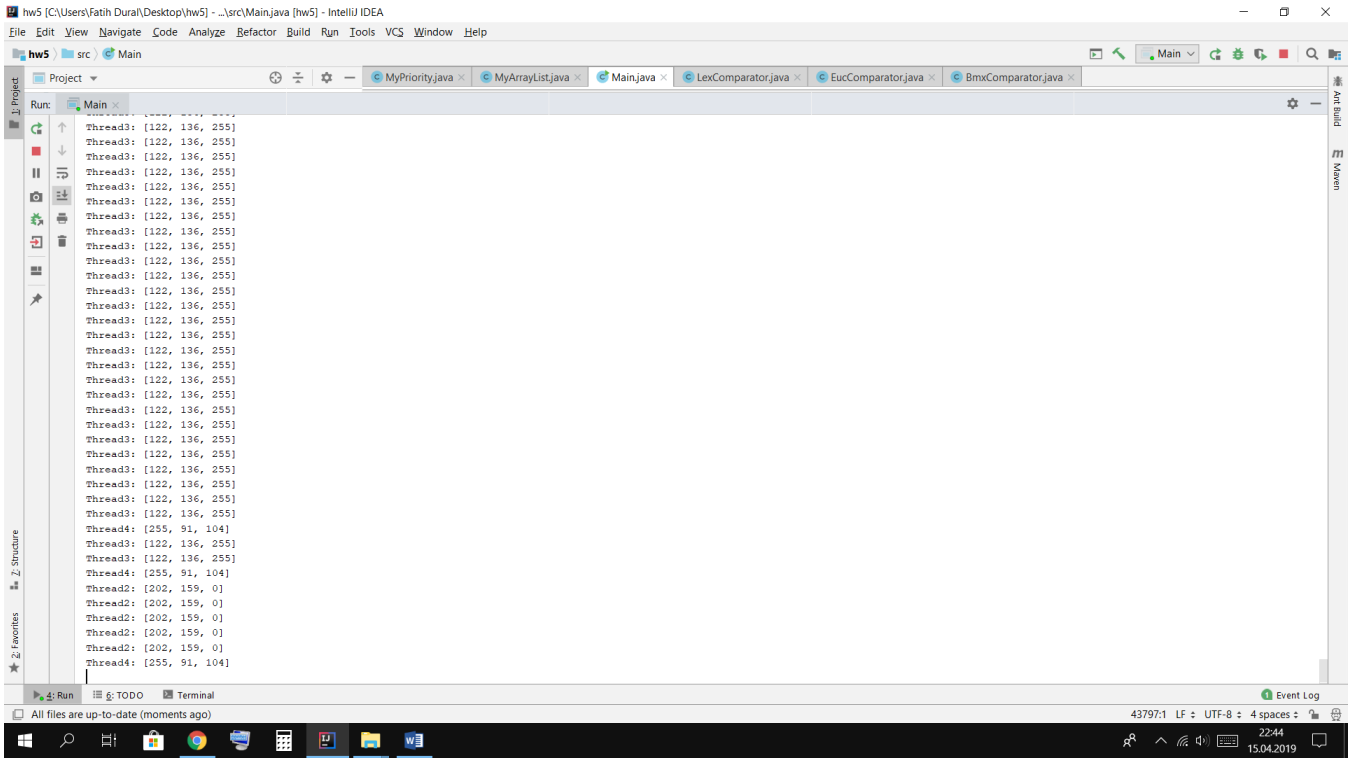
3 RESULT

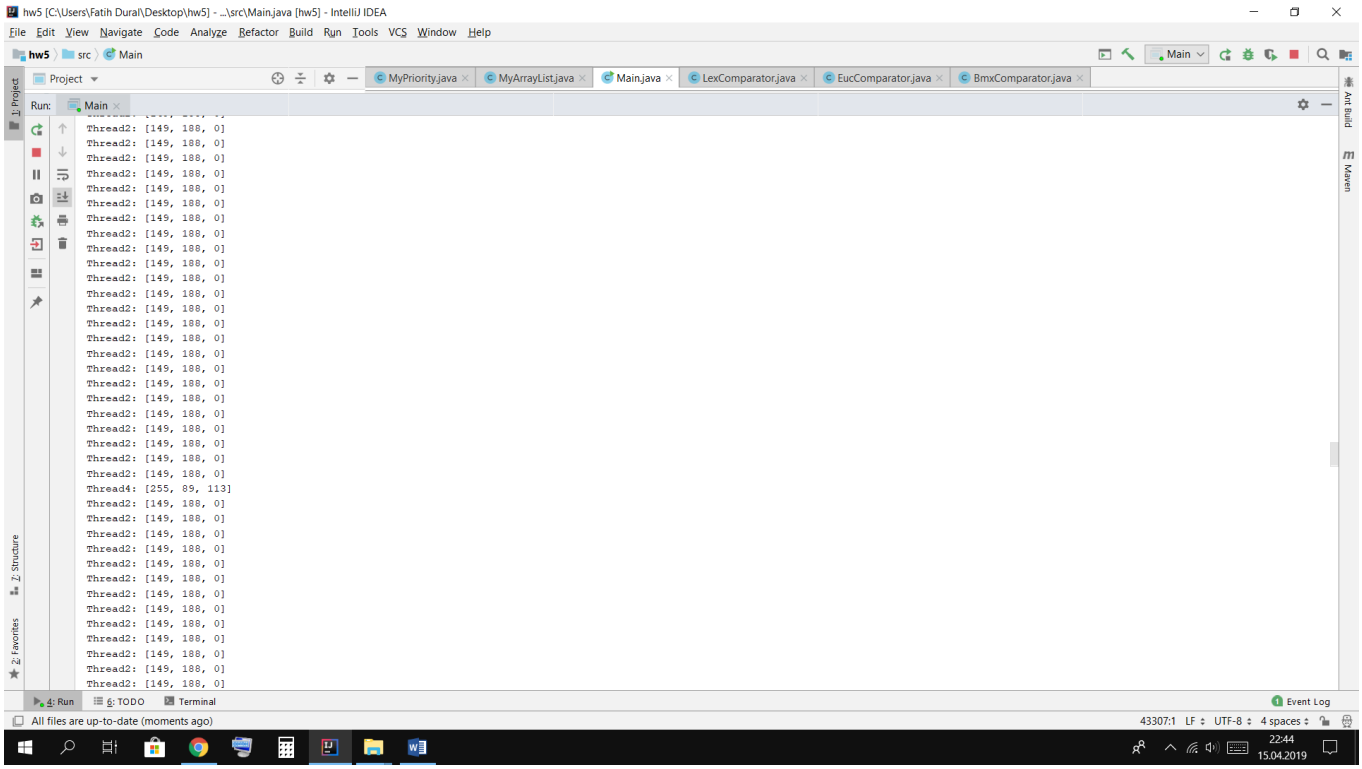
3.1 Test Cases

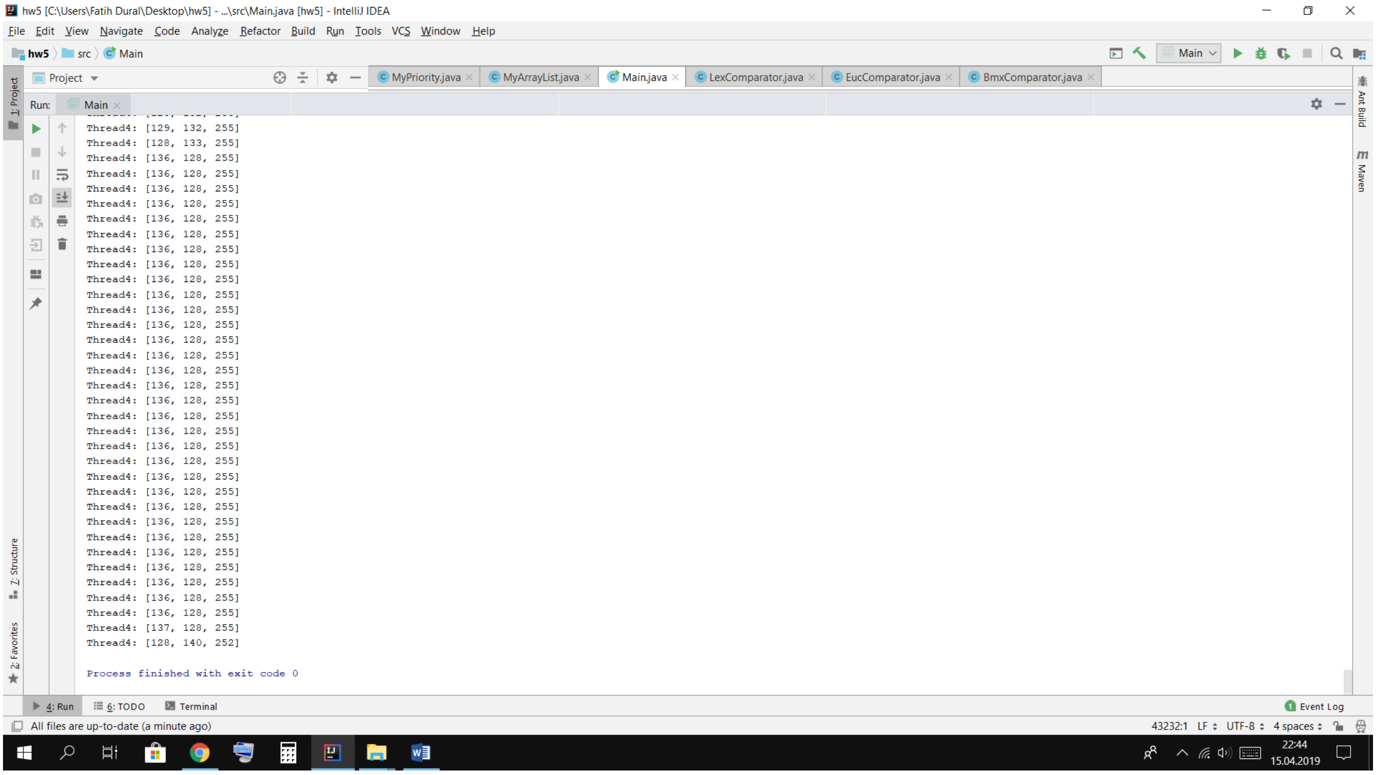




3.2 Running Results







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