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## Program 5 IDE

Program 5 is also a Java project. It differs from C++, but it was a little easier when implementing program 5 than when implementing program 4. When implementing program 4, it was the first time to implement a program in Java, so everything was unfamiliar and it was difficult because there were many syntaxes that I did not know. However, through program 4, I became a little familiar with Java, and because of that, program 5 proceeded easily. It was easy in terms of syntax, but implementing a balanced tree was the most difficult part of this project. To implement a balanced tree, I had to revisit the videos of the balanced tree lecture and study the balanced tree algorithm again. It was very difficult to implement and there were many difficult moments, but it seems to have been a very meaningful process. Because a balanced tree is a data structure that I learned in CS163, I found myself not fully understanding how a balanced tree works and its algorithms even though I am taking CS202 right now. It was a good review and now I have confidence that I can implement any data structure. Therefore, while implementing program 5, I had a lot of time thinking about how to implement the AVL tree algorithm in Java.