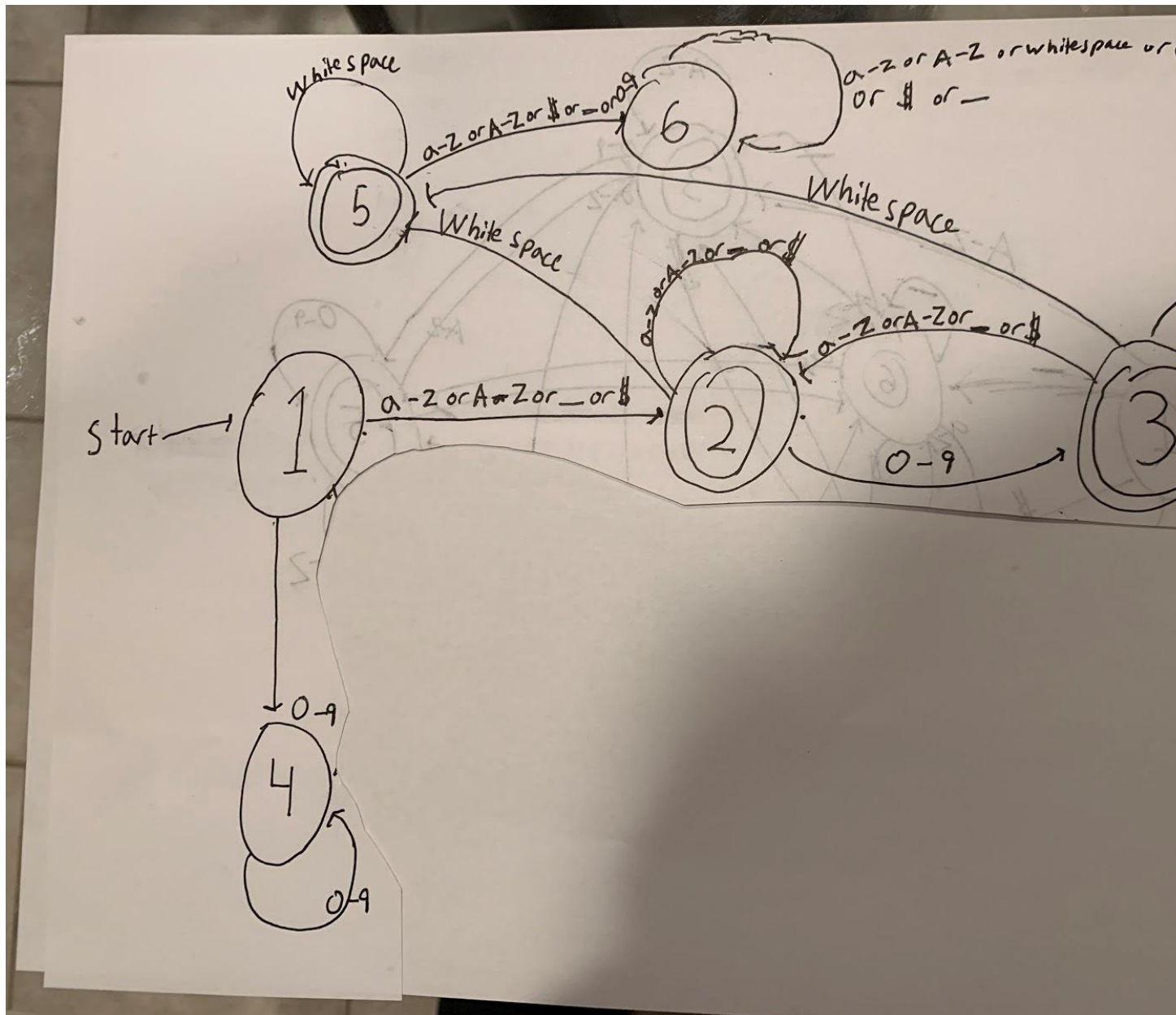


Assignment 11 Deterministic Finite State Machine

A. The DFA Diagram

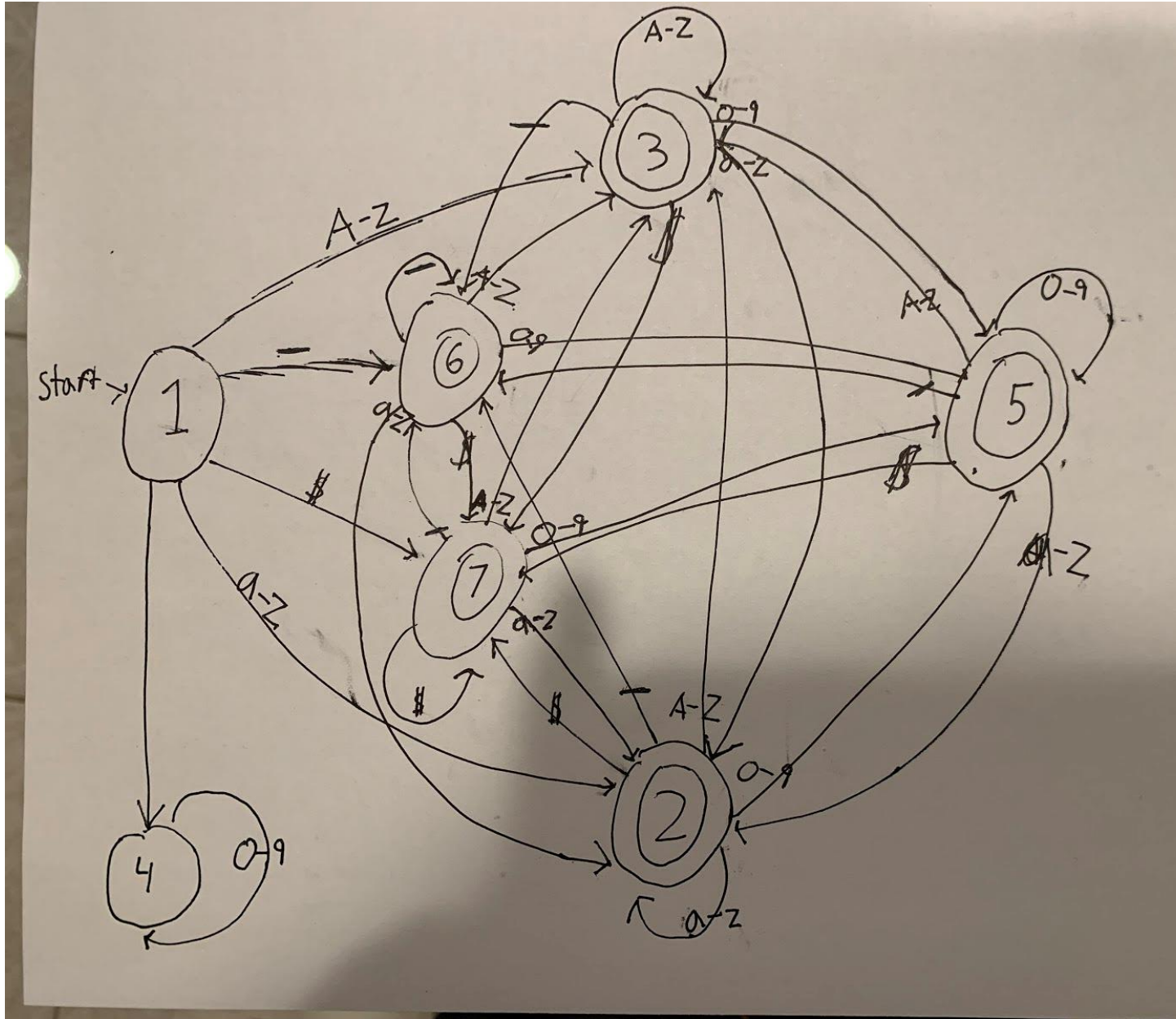


Screenshots

The screenshot shows the IntelliJ IDEA IDE interface. The top toolbar contains the following menus: File, Edit, View, Navigate, Code, Analyze, Refactor, Build, Run, Tools, VCS, Window, and Help. The Run menu is open, displaying 'Run' (a green play button icon) and 'StateMachine' (a red stop button icon). The main editor area shows the output of a Java program, which is a sequence of 'State: 2' and 'State: 3' messages, followed by 'true' and 'false' values, and 'hello' and 'hello world' strings. The bottom status bar indicates 'Build completed successfully in 3 s 461 ms (2 minutes ago)'. The Windows taskbar at the bottom shows the time as 4:44 AM on 5/7/2021.

Essay

I was proceeding on this assignment quite nicely and I had something like this



After I implemented it, I discovered that I had to take into account for the white space character for the hello world test. I also discovered that states 2,3,6,7 added nothing to the machine and it could be more efficiently achieved if I made a state that encapsulated all of them- though the state is a little encompassing. However, it allowed me to focus on crafting states 4, 5, 6 in my new machine that deals

with leading numbers and whitespace(differentiating between ending and middle white space). After coding it up it managed to catch the illegal variable names so I'd call it a success.

B.