Lessons Learned

1. I got used to making tunnels that make building circuits way easier and make them look way better and less complicated.
2. I learned the difference between decoding and splitting the bits of an input that has multiple bits.
3. I learned how to use the expression button that makes logic gates according to the expression you give. (Thanks to my friend Çağlar Kabaca for suggesting this.)
4. I learned how to build control bits.
5. I learned that I need to use a pull-down resistor when the output of the three-state buffers goes into a logic gate. If I don't use it, it kind of gets stuck on that input even if the selector bit is 0.
6. I learned how to change the output order of an included custom circuit and how to change its size.
7. I overall learned how to design a basic computer, how the instructions work, how we decode them, how we control the bus, how we do the timings and logical operations, how to use test cases and debug our design.
8. Most importantly, I literally memorized how a JK flip flop works after hours of tinkering with the E flip flop and making truth tables.