

Group Evaluation

Nathan Donaldson: I feel I contributed as much as I could to this group. It was hard at times to get along with everyone and work well together but we all tried. Depending on everyone's workload we kind of split up the work fairly. We all worked on the ALU, we actually all sort of worked on everything up until the last stretch of the semester. From then on we split the work. Me and John worked on the VGA and Keith worked on the compiler and program. And then Clint worked on the mechanical stuff. I basically did the whole VGA. I laid out the ground work for the controller and tried getting it working via bench tests, and John actually got it showing on the screen correctly using direct mapping. Once we got that working I put together a glyph library and tried reading from two ports at a time. Since I realized we were only using two colors (at minimum; more if we got it working early), I decided to only read from one port and just have a frame buffer instead of a glyph library and frame buffer. That way we wouldn't have to change the FSM. Then Keith also gave me the idea of using multiple frame buffers to store our screens since he knew nothing about the VGA and we were running out of time. So I wrote all the preloaded screens in hex into memory for preload. Then we came up with the idea of just choosing which offset we wanted to display by reading a place in memory that would decide which offset. That way Keith would just have to update that one spot. This proved to be a challenge for me because I would have to read from memory for the offset decision first before reading from memory for the frame buffer. It took a little work but I got it working. I was proud of getting the VGA to work using only one port. At times I felt bad because in the end I didn't know what was going on in Keith's and Clint's part of the project and I wanted to understand as much as possible but they were stressed and didn't want to bother telling me. It kind of made me mad but I guess I understand that they didn't want me to be bothersome. It just surprised me because they didn't even really want to understand how the VGA worked but I guess it is what it is. I also basically did the whole FSM with Keith's skeleton (which we made small changes to in the end). But overall as I said, I feel I contributed as much as I could to this group. Only missed class twice and was willing to meet as much as possible. We all stayed overnight the last day as well.

John McKay: John is a really smart kid and I actually think he took too many classes to be in a group project class. He did help find problems and write bench tests, and he also helped a little with everything else. But I would say he helped the least in the group. I'm not bitter or angry about that but I think at one point it irritated me. One big thing he did that helped all of us was his diagram creations. He is very organized at making diagrams and schematics and he did a wonderful job keeping updated ones that we would always reference and work off of. It made the project much easier. Although he didn't as much with the other aspects of the project, he sure made a huge difference with those schematics. The one schematic that helped us all the most was the one he made for the FSM. We were all really thankful and made sure he knew that we were. John helped me with the VGA as well. He took what I did and organized it and got it working with direct mapping. Small changes were made to get working with

glyphs but overall he is just really good at staying organized and making things easy to read for everyone.

Keith Madsen: I gotta say Keith is the one in the group I got along with the most. He is fair, smart, and understanding. Me and him talked the most about the project and what we expected and we gauged a lot about what could be done. We would communicate well with the group as well. Keith was really good with testing. He was always doing testing on everything to make sure it worked. I cant say all of us did that for everything but I know Keith did. Anything he made he would test. Keith helped on everything up until the last stretch. Then he basically had to kind of work with me and Clint because he needed to know what to do in his program for the VGA and the motors/drivers and NES controller. Overall I think Keith was one of the strongest links in the group and even when things got stressful (except the very last day) he was in a good mood and in high spirits. Keith did a lot of the starting designs for things such as the ALU and the FSM. He layed out the ground work and then we all worked on filling it in. He is basically well rounded at everything. He kept organized with instruction sets and any code he wrote, as well as keeping good communication and working smart.

Clint Wilkinson: Clint was a character, lets just say that. He was probably the one I didn't get along with the most on the team. He is not very good at teamwork. He just tries to do everything on his own and just plows through it. He is not super organized either. Don't get me wrong, he is very smart and he did a lot of work in the class. But at some points he would not let us help him and we would just be sitting around waiting for him to finish something instead of him giving us all a copy and working it out together. He would get really frustrated as well when something wasn't working. And we would give him advice that he would ignore, and a few times that advice was correct and time was wasted. I must say he did an incredible job getting the physical portion of the project together and he was basically the key to our finished project. He did all the motor/driver/NES controller connections and figured out how they worked and he also built the crane himself. He really wanted to keep the project for himself so he took it upon himself to build it. Overall I think Clint is really smart and works hard. But he needs to know when to ask for help and also realize that this is a group project and not a solo project. I actually would have liked to help him build the crane or help him with the other stuff but he just went ahead and did it. I also would have liked to help Keith as well with the program and assembler, but I guess we sort of needed to split off in the end to get things done more efficiently. He wasn't very good at communicating at all and so a lot of the time he would make decisions without us as well and not let us know till the next class. So a lot of the time I felt things were up in the air. He did well on putting the whole CPU together after everything was done (Regfile, ALU, Memory) as well. He doesn't work smart, but he does work hard, and I gotta give him credit for that.

Nathan Donaldson: A

John Mckay: B+

Keith Madsen: A

Clint Wilkinson: A