Did you like your project topic? Why (not)?

Yes I like it now. In the beginning it was a bit difficult to get on board especially because I had another completely different idea. But slowly after many questions and careful examination of the existing code, I understood the way Charlie was thinking and contributed to the code.

In the first two days or so I mostly helped Charlie debug because it was fairly easy. But after watching him think aloud I understood his thought process and code organization strategy. I then coded on my own several functions after the To-Do list was made. (To do list explained in next question)

On the last day of coding I was actually assigned to do some code and I am so proud I successfully used one of Charlie's functions (he doesn't comment code and he thinks very differently so it was a feat). I ended up writing 3 functions near the end using one of his more confusing functions. Coding was an adventure. But I now completely understand and can use most of the functions regardless of the original programmer.

But yes I am so proud this works! I always get a rush of joy whenever a function I created works or if I correctly implement another person's function. So yes after getting into the project and understanding the goal clearer, I definitely love the project and I feel like I had a part in making this a reality. My favorite part is being able to skip levels by directly changing the saved game text file and skipping levels. I truly enjoyed testing even though we didn't have enough time to fully test. I think the highest level anyone went to was 5 because each time an error occurred, the person had to start over.

2. Did your team stick with your initial top-down approach to program development, or did you switch to a different design approach at some point? Which approach did you prefer and why?

Well we started off with a top down hierarchy for the initial hierarchy/project plan we turned in. I was fairly confused on the specifics. But the overall overview made sense. Charlie started the code without the rest of us, so we were a bit lost for the first couple days and no one really had assignments. Then Charlie wrote out his dream game in words (bullet point) and literally everything made a bunch of sense. I added on to the syntax doc he created and so the big lists' index positions were labelled so people know what is what. For me accessing the correct element was confusing because I never created the list to begin with so the syntax doc just explains everything.

Regardless, after we had the bulleted list, we actually were able to split up the work relatively well. Each day, each person kind of took a couple bullets and worked on them. Definitely preferred the bottom up approach facilitated by the bulleted list of To-Dos. This allowed for people to try to be more useful and not just sit around asking what is happening? However, Kai kind of fell short in that he still didn't contribute to the code except for the items dictionary creation. This should link to the To Do List. (It is not formal in any way. It just helped immensely)

https://docs.google.com/document/d/190oupII3j2aQfh9bgHHp2rlFBNBx9liUv7ItZ8mC2EM/edit?usp=sharing

3. Did your final design closely match the original hierarchy your team developed? In what ways is it the same? In what ways is it different?

Yes the final design does reflect the hierarchy fairly closely only because the hierarchy is sooo broad. There were basically no details in it because that is the difficult part. The hierarchy labels areas like the shop, inventory, dungeon/battle area and town square. All of these parts are preserved. It is different in that there are so many additional supporting functions to allow the big functions to work. Some functions like town(x) only display menu options and the real work is sent to a different function. This is just different because we added much more thought into the final product in creating the equations and getting the details worked out for game balance.

4. Briefly describe the thing(s) you learned on your own, beyond what was covered in the lectures. How did you incorporate them into your program?

We as a group didn't add too many new concepts in our code. It was more of a coordination of who is doing what and what is the input/output of various functions. I chose to look into Colorama. I did various testing with it. Looking further I found ANSI escape sequences. The name sounded cool so I dove deeper. I made a for-loop (no longer in the program) to display all the color combinations we can use. The first number is apparently style, second is text color and third is background color. I varied each number by making three nested for-loops through possible numbers.

With the printed list of all the combos, I chose a couple to implement for the important parts of the code. The locations are mostly in red. The blue banners are for levels. The green shows health. Yellow is for gold. Purple is for words/sayings (not necessarily important text). There wasn't enough time to fully test. But the colors were put to break up large sections of white text.

Another part I learned is in Charlie's code how in the prompt functions he has prompt(*argument_name) that star means any amount of arguments can be taken in. That was an interesting method. I would've just had a list..but this is a new inventive way. I thought that was a neat approach.

5. If you had more time to work on your program, what additional features would you want to add? Is there anything about your submitted program you would change?

We added everything we could. I wouldn't want to add anymore. This is crazy enough. This was super complex and even more difficult to coordinate and execute. If I don't have to figure out the logic and syntax it would be cool to make graphics to go with this.

Also I would improve the messages during the battle portion. They seem a bit difficult to understand fully. I modified several, but not all. Also I would make each level connected with a location and a monster. This will make the player feel more connected to the game and makes it so the monster isn't just a random one. A hydra will be found near a river etc. Add more events to the level (it is at 3 for ease of testing -- easily changed).

Also we went through three different ways of defining the battle function: mine, Lindsey's then finally Charlie's. Each one worked, everyone just thought about programming the function differently and weren't able to convey the concept until it was coded up. It was fairly complex to create and I disagree a bit with Charlie's way. So I would consider switching up the battle functions. Also if you try to open a game, it errors. So adding an else which tries to open the file. If it fails, then it would create the default.

Then of course the simpler ones, make the items dictionary less of a bunch of random values, make it based on a formula the way I did for the monster function. Add more monsters so the names don't need to be reused. Add more sayings and make them location/level specific. Also split the shop() and battle() function into multiple functions (there is no spacing and is hard to understand). I would at least add five supporting functions for the battle function.

6. What was the most difficult part of this assignment? Please explain.

The most difficult part was trying to understand what the goal was. Since the idea was from one person, Charlie had to effectively convey the goal. We only figured out his aim after he made a written version of his goal after I suggested it because everyone was left confused after several exasperated explanations in the first and second meetings.

The other part is I had not played a game like he was describing ever, so this was an interesting one to learn what are the "norms" in these sorts of games. I actually researched real games to see what he meant.

Also the coordination of who is doing which function was moderately difficult. I made it a point to write expected input in the first line of the function and a comment on the return line explaining what was returned and how to access values correctly. I went back in after and wrote formal docstrings near the end. Lindsey was also pretty good with commenting and spacing. Charlie didn't comment anywhere! Nor add docstrings. Me and Lindsey ended up guessing in the end. We tried.

The other problem was testing. The point of a function is that it is a standalone. But the main game loop needed a file which wasn't working in the beginning. I think we should have added the main game loop last to allow for easier testing. I only partially tested functions I wrote because of the heavy dependency on other functions. I helped Lindsey in testing her version of the battle function and I know we created testing values in order for the functions to not be dependent on any other place. But then it was difficult to figure out what the needed functions were returning. Regardless everything worked out in the end. Fingers crossed.

7. Estimate the portion of the assignment completed by each member of your team (yourself included). Please explain any significant workload imbalances and give a brief summary of who did what. For this question it's ok to make a bulleted list instead of writing complete sentences.

- I did the addGold_to_player(), removeGold_from_player(), update_lvl(), addXP_to_player(), getLoot(), nextEvent(), saying(), monster(), battle(), checkInventory(), inspect() functions, learned/implemented ANSI colors
    - This list may look long but these are the inner workings of the game. Some like the monster func needed quite a bit of logic and thought with the equations and the idea of removing the monster names as they get used.
    - Also I did a bunch of the table of function input/output as well as did the first half of the game walkthrough portion of the user manual.

- Kai has added items to the items array and contributed to the user manual doc with the table of input/output values. All of us worked outside of our zoom meetings. But even in the meetings he didn't do much.

- Charlie of course started the code, so he did large chunks of it :
    - save(), prompt(), prompt2() #prompt2 is only used in the shop,
    - shop(), viewinventory() (I helped with fixing this because several problems came here)
    - get_inventory_value(), get_inventory_value2() #examines all items including equipped ones unlike previous func
    - town() and made several changes in the battle_user/monster functions as well as the dungeon function -- bc he was not satisfied with the way it worked

- Lindsey did the battle_monster(), battle_user() and dungeon() functions and set up the user manual doc writing a majority of the essay portions
    - Function count may be less, but these functions are the heart of the code so these are fairly long and involved. -- however these were rewritten by Charlie

The initial doc with the project plan was completed with fairly equal contributions. Again Lindsey did a big part of the essay. Charlie and I did the hierarchy. Kai did some of the bullet points. All of us contributed to the bulleted list of how the game is planning to work. The project plan happened too long ago so honestly contributions are a bit fuzzy. We haven't looked at that doc since it was turned in. We look at the project to do list made by Charlie et al. semi-recently everyday almost. The to-do list is constantly updated by everyone so it is always changing.

In terms of percentages, it is really difficult to say. I honestly think Lindsey, Charlie and I did the same amount of work with a heavy lean on Charlie because he began the project and was the one with the vision. Sorry to say but Kai just didn't do as much..he slept on one of our calls.

When he is on I just don’t think he contributes too much. The only physical piece of code he wrote was the items dictionary (which is vital..but it is only one thing).

If I had to assign % then Charlie: 34%; Nishi 30%; Lindsey 30%; Kai 6% -- idk how to split correctly. That is my best approximation. We met around 15 times or so each meeting 1-2 hrs long. Hopefully this gives an idea of how much work we all put in. I speak for myself that I likely put 6 hrs outside meetings. Other people likely have more or less I wouldn’t know.

PS *I wrote this across multiple sittings (after eventful meetings) which is why it is so long. My apologies. I tried to space it out well.*