

## Appendix

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## **Appendix ADVISOR: Interactions with client & advisor**

*First Meeting with Client (January 26):*

ME: Chris (Me)

CLIENT: Vincent Pham (Client)

ME: Hi I'm doing a project for computer science where I create an application to solve a problem for a client. Do you have any needs for an application?

CLIENT: Sure I am in an industry that uses a lot of technology, so I'm sure I could find some use with an app. As you know, I play Valorant professionally and I'm always looking for new ways to improve my gameplay. It would be pretty cool if you could like help me strategize with an app.

ME: Yeah, I could do that. How would you like strategizing? Through analyzing your gameplay and reporting your trends? Or would you like more of a play-by-play helper?

CLIENT: An app reporting my trends would be great.

ME: Would you want it on your phone or computer?

CLIENT: I've got a Google Pixel that I always have on me when I compete. It would be nice to have access there.

ME: Okay. What if the program took your Match History and told you what the best and worst agents to use on each map for you was?

CLIENT: That would definitely be helpful.

ME: To store your data, I am considering using Google FireBase. It is through Google and it's pretty reputable to keep your data safe and quickly accessible. What do you think about that?

CLIENT: Sounds good to me.

ME: Sweet, okay I think I get the idea. Anything else?

CLIENT: Nope, that sounds good.

*First Meeting with Advisor (January 27):*

ME: Chris (Me)

ADVISOR: Brian (Advisor)

ME: Hi, so my client wants to make a database analyzer that lets them know the trends seen in the data.

ADVISOR: Okay. Have you started thinking about how you will do it?

ME: Yea, my client wants a program on his phone, so I will make it for Google Pixel.

ADVISOR: Okay, you know Java already, right?

ME: Yea

ADVISOR: Well Java is a common language for a lot of computer programs, have you learned any ways of showing graphics?

ME: Yea, in class we talked about Android Studio. I have not learned it, but some people have told me it is pretty intuitive.

ADVISOR: Okay, that sounds like you could use that, then.

ME: Also, I am thinking of using Google FireBase as my database.

ADVISOR: I've heard good things about that, you should definitely look into it.

ME: Sure, sounds like a plan.

*Second Meeting with Client (February 17):*

ME: Chris (Me)

CLIENT: Vincent (Client)

ME: Hi, this is just a check-in so I can show you what I've got so far.

CLIENT: Okay

ME: Take a look at this. I've made a log-in page, home page, the match history page, and the skeleton for the advice page. The advice page isn't functional, but the UI looks as it should. I also want to add functionality so that you can add matches to the database.

CLIENT: Alright, can I try it out?

ME: Sure. What do you want the log-in to be? What is your Valorant username?

CLIENT: I want it to be poa#fps. That is my username for everything.

ME: Sounds good.

CLIENT: \*tries out the program\*

CLIENT: It's clean so far. I like this layout

ME: The buttons are easy enough to follow, right?

CLIENT: Yep

ME: So what I need to do now is add functionality to the advice page.

CLIENT: Sounds good.

ME: What do you think about the buttons' names and such so far? Is it simple enough?

CLIENT: Yes, it's easy to follow so far.

ME: I will add functionality so you can add matches from within the app. Do you also want to be able to delete matches?

CLIENT: Just adding will be fine. I am confident I won't make mistakes!

ME: Great. Any specific directions as I continue working on it?

CLIENT: Nope. Just keep this theme going because I like what you've got so far.

ME: Sweet. Thanks.

*Second Meeting with Advisor (February 17):*

ME: Chris (Me)

ADVISOR: Brian (Advisor)

ME: Hey, I want to show you what I've got so far.

ADVISOR: Sure.

ME: I've got a log-in, home, match history, and advice page. I'm using Google FireBase to store the data.

ADVISOR: How does the data structure look?

ME: Well I've got the parent object as the ID for each match, and the children of it include the match's result, the agent they used in game, and the map they played on.

ADVISOR: Got it. How are you using it?

ME: When the app connects to the database, it pulls all the matches into a linked list and is displayed to the match history from there.

ADVISOR: Interesting.

ME: Yep.

ADVISOR: Great. I like what you've got so far. Keep going and let me know if you have questions.

ME: Sure

*Last Meeting with Client (March 20):*

ME: Chris (Me)

CLIENT: Vincent (Client)

ME: Hey, I believe the program is finally done! Want to check it out?

CLIENT: Sure

ME: Alright, here you go

CLIENT: \*opens program\*

CLIENT: \*enters log-in and enters the next page\*

CLIENT: The log-in works well

ME: Sweet.

CLIENT: Wow. Look at this match history list. Love how clean it is. I can just scroll through really easily.

ME: Yep, it grabs the information from the FireBase to update the list. We've discussed this before, but you know how fast it grabs your data.

CLIENT: You're right, it's important that my data's fast, and FireBase does that. Thanks.

CLIENT: \*Changes the sorting of match history to newest to oldest\*

CLIENT: Awesome. This is fast and easy. I like it.

ME: Of course. Why don't you try adding a new match to the database?

CLIENT: Sure.

CLIENT: \*adds a new match\*

CLIENT: That worked wonderfully. That is easy to use.

ME: Try checking out the fun stuff at the advice page.

CLIENT: Okay

CLIENT: \*types in a map and requests advice\*

CLIENT: Wow that's so cool. I always knew Jett was my agent on this map, and it is reassuring to see the stats back it up. Did it really work that fast?

ME: Yep, that deduction was made all from the database.

CLIENT: And check out the map description. That's a cool feature.

ME: So now that you have seen the whole application's capabilities, how user-friendly do you think the UI is, on a scale from one to ten?

CLIENT: It's a ten. I didn't have to ask you for any directions when using it. I like how easy it is to use.

ME: Sweet! Thank you for being my client throughout this process.

CLIENT: Of course, thank you.

*Last Meeting with Advisor (March 20):*

ME: Chris (Me)

ADVISOR: Brian (Advisor)

ME: I've finished the program. Can you take a look at it as we have our final meeting?

ADVISOR: Sure

ADVISOR: \*opens program\*

ME: Remember we talked about FireBase database our first meeting? Now that it's finished, can we go over how I implemented it? It took me quite a lot of hours of debugging to figure out how to write code in java to read and add information. However, it was worth it because of the speed and security of the database that it offers.

ADVISOR: Of course. Despite what way of saving and loading data you chose; it would've taken you a long time of debugging to figure out how to use it. It's fine that you chose FireBase because FireBase is a safe way to store data.

ME: Can you try navigating the UI to tell me if it's easy to use?

ADVISOR: Sure.

ADVISOR: \*uses the program for a minute or two\*

ADVISOR: Great. Your UI is simple enough that almost anybody could use it. The buttons were very easy to follow and I had no issue navigating it.

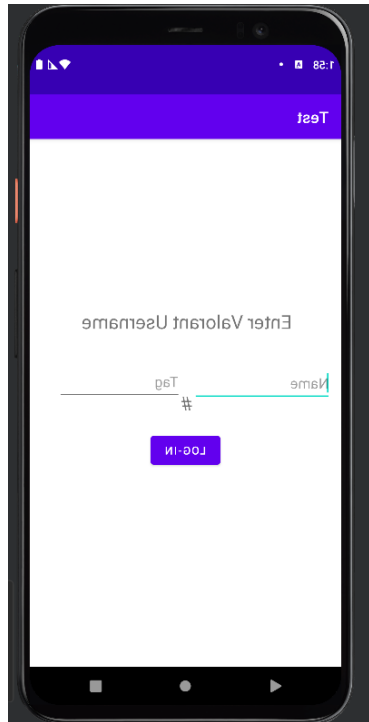
ME: Thanks, that's about it! Thanks for being my advisor throughout the process

ADVISOR: Sure thing.

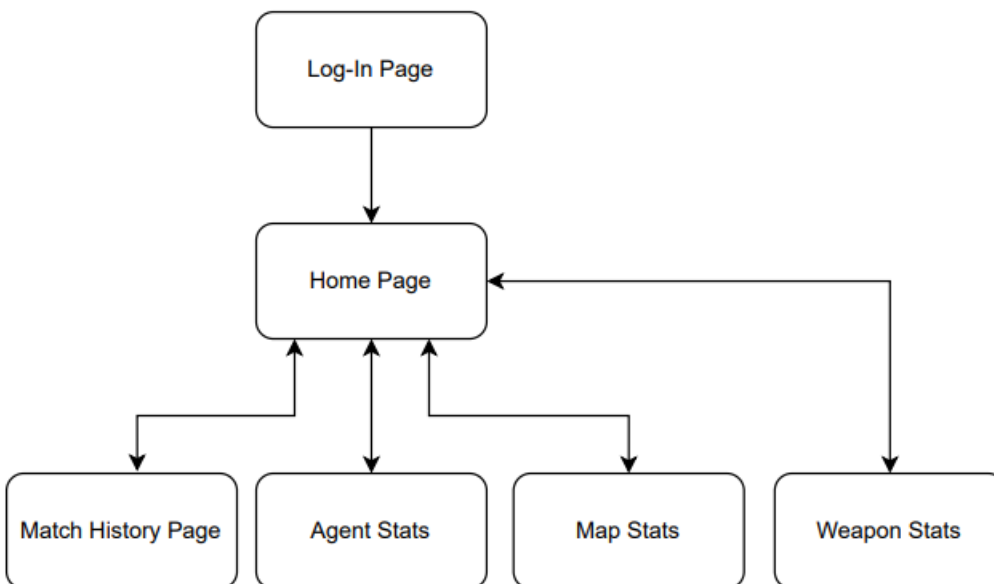


## Old Versions of UI and Charts

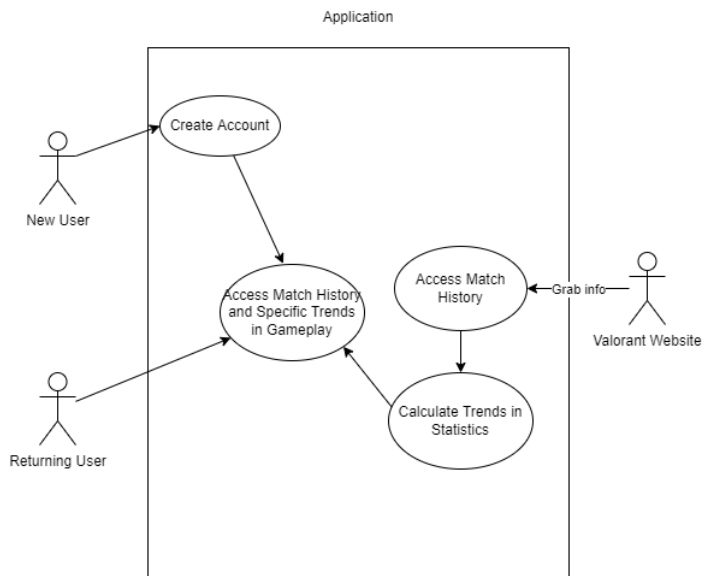
Log-in-page:



Page Flowchart:



## Agent Flowchart:



## Flowchart:

