Appendix 1; First interview with Mary

Me: We have discussed your problem of playing video games with your friends at school. Can you repeat the problem?

Mary: Sure, about once or twice a week I am playing CivilizationVI with my friends. This game is a strategy where several people are choosing civilizations or heroes and are playing in a randomly generated world. Such games can take a lot of time, nearly about 6-8 hours of constant playing. Referring to the problem, there are about 50 of these heroes, and like in any other game, there are stronger and weaker characters. Some of them are being overpowered and too strong, my friends and I can spend a lot of time arguing about who should pick these heroes, or who should just pick heroes. This can turn out into arguing for more than 40 minutes, everybody gets tired and we are not even playing.

Me: Am I correct to say that you want to have a solution that will save your time and resolve such debates?

Mary: Yes, like any technology I would like to have software which will save my time, not take it.

Me: Can you please share your ideas about the solution to this problem?

Mary: I suppose that we should have a program where each participant in the game (usually there are 6-8) could vote for the civilization she would like to ban and which she would like to give to others. So, the number of inputs would be equal to the number of players. 1 civilization for banning, and N-1 for choosing civilizations for other players.

Me: How do you see the final product?

Mary: I suppose that website to which access will have my friends where each could log in by its nickname and vote for the game, the civilizations would be distributed by the version, so it easier to pick them.

Me: I have asked you to make something of a draft design how you see the solution. Can I take it?

Mary: Yes sure, here it is:
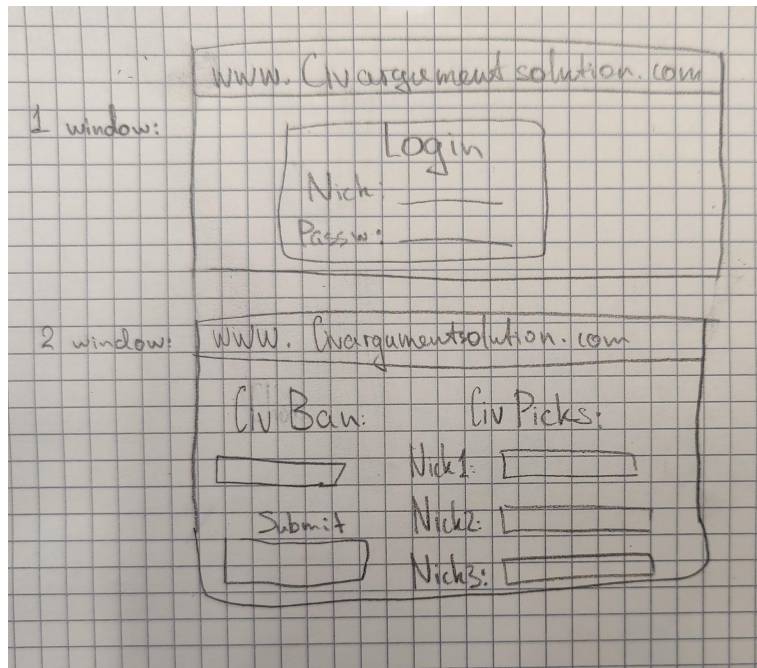
Me: So each of your friends will have his account and he will type down civilizations to choose and ban?

Mary: Yes, after it is written she will type down in the submit window the number of the game and it will be saved. When everyone will submit their bulletin, one of us could open and randomly view results, for example, this can be me. The number of players and civilizations per player should vary and we could change it. The data which you will need for the program would be just names of the civilizations.

Me: Thank you, I will analyze your solution with my teacher and contact you for further questions. Goodbye.

Mary: Thanks, bye.

Appendix 2; First interview with Computer Science teacher

Me: Good morning

Teacher: Good morning

Me: I have talked with Mary and she has described a problem like this: "*about once or twice a week I am playing CivilizationVI with my friends. This game is a strategy where several people are choosing civilizations or heroes and are playing in a randomly generated world. Such games can take a lot of time, nearly about 6-8 hours of constant playing. Referring to the problem, there are about 50 of these heroes, and like in any other game, there are stronger and weaker characters. Some of them are being overpowered and too strong, my friends and I can spend a lot of time arguing about who should pick these heroes, or who should just pick heroes. This can turn out into arguing for more than 40 minutes, everybody gets tired and we are not even playing.*" (I have shown the interview transcript) Do you think that the solution to this problem can be my Internal Assessment?

Teacher: I suppose yes, considering the correct techniques used.

Me: Perfect, then Mary will be my client, and this is the solution that she has offered:
"*I suppose that we should have a program where each participant in the game (usually there are 6-8) could vote for the civilization she would like to ban and which she would like to give to others.*

So, the number of inputs would be equal to the number of players. 1 civilization for banning, and N-1 for choosing civilizations for other players.
Me: How do you see the final product?
Mary: I suppose that website to which access will have my friends where each could log in by its nickname and vote for the game." This is the design of the product that she sees:
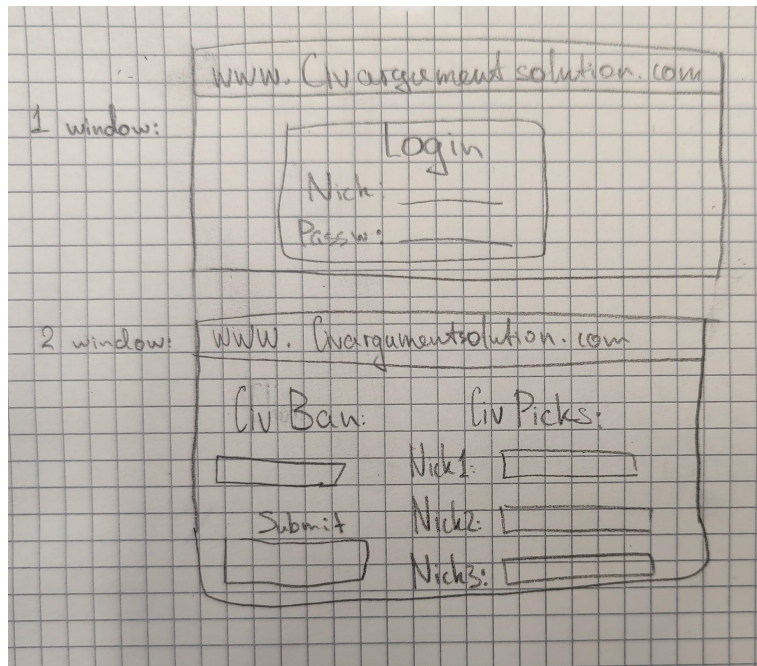
What do you think about this solution, is this appropriate?

Teacher: Actually, I suppose that it is too complex for such a problem and there is a more clear way. You should justify the need of using the website, if it is so local, only for Mary's friends you might consider doing a program since it will be more convenient. It should also be justified to have a submission process, it might be easier for each player to have the same accessibility. Do you understand?

Me: You think that it will be better for each player to have the same buttons and windows, not giving power of showing voting results for one?

Teacher: Yes, the output of the program should be seen by everyone.

Me: If Mary agrees on having a program instead of a website, will it be suitable to do it on Python or Java?

Teacher: It depends on what language you know better, but Python might seem a more appropriate language for writing a computer program. You should also think of other ways of fairly distributing civilizations between players, I think the voting system might be too complex.

Me: I thought that maybe a simple random distribution of civilizations that were not banned might work.

Teacher: This will work. Speaking of your aims you should ask more details about the game and its specifics, so you would meet them.

Me: I understood, thanks a lot.

Teacher: You are welcome.

Appendix 3; Second interview with Mary

Me: Hi

Mary: Hi

Me: So I have talked about your problem. It can be used for my Internal Assessment, so I will work with you on it.

Mary: Great, will my solutions work?

Me: I have discussed it with my teacher and she suggested several changes that I should ask you, to understand its need.

Mary: Okay, I'm listening.

Me: So, will you use it only with your friends?

Mary: I think yes.

Me: Could someone else participate, for example, someone with whom you are not playing now?

Mary: Probably yes.

Me: This means that you should have the possibility to add, create new users, am I right?

Mary: Yes, I think such functions can be added to my account.

Me: Ok, do you think it is necessary to have a website? What are your thoughts on making a program, which will be run on one computer?

Mary: Well, it depends, I just suggested using a website. I do not insist on having it or a log-in user system. If you could think of another way of fairly distributing civilizations and banning overpowered I am okay with it.

Me: Speaking of banning civilizations should be only 1 out of 50, or there are more strong ones, like what if each player will ban 1 or 2 on his own, finally having about 8 to 16 overall.

Mary: I have to ask my friends because we usually vary this number. But this seems okay, but what if someone will choose to ban the same heroes?

Me: Didn't think of that, but I will consider that this can happen and how to solve it. What you also think of having the same features available for each player account. Because if you could not play someday, your friends couldn't use my product and they will argue.

Mary: Oh yes, I see. Then it can be better to decentralize such features, so we could always use your solution. I didn't think about that last time, but your product should output a clear identification of civilization for each player because I would not want to name them out loud or something like that.

Me: Thus, if it will be public you could agree verbally on what civilizations you would like to ban and one of you will choose them. Will it be okay to have a table with the number player and civilization name right in front of it? I think numbers are better than players because this gives a possibility for the program to be used by much more people in your Civilization VI community than just your friends.

Mary: I see, I think it will work, I think there will be no arguing about what civilizations to ban, since this is a personal choice of each, and we never had debates on that.

Me: Does each of your friends know well how to play on all 50 characters, I mean what if the hero that my product will distribute will not suit the player and maybe he even doesn't like it?

Mary: This is happening a lot of times, maybe having a choice out of several available heroes would be better.

Me: Out of how many civilizations it is okay to choose for one player?

Mary: I suppose it depends on the number of players participating in the game, but about 4 seems okay.

Me: Will it be okay to make you as a user choose the number of civilizations per player?

Mary: Seems like a nice idea, I am okay with that.

Me: Then, I have thought about the problem and I think that randomly distributing heroes is a nice substitution for too complex voting systems. This is how I am seeing the process. The user is opening a program and the input is the number of civilizations per player and number of players. Since not only your friends will play, I have denied the idea of log-ins or any accounts. There will be just from player 1 to 8, or more, less depending on what user will choose.
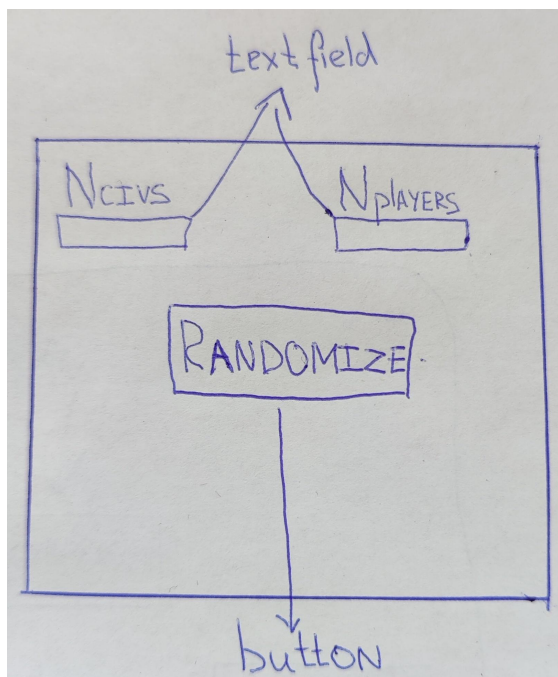
Mary: This seems less complex, and what about versions for civilization?

Me: I suppose they will be added on one side of the window.

Mary: Also maybe the civilizations name should not be typed down but chosen since it is faster, I suppose this is meeting the aims of your program and making the process faster.

Me: Make sense, let's use the choosing method. Researching your game I have seen that its creators are often adding new civilizations to the game since I want this program to work and be convenient as possible. Hence, I suppose that I could add buttons where users could add new civilizations. What do you think?

Mary: This seems complex to me, but if it is made simply and this will be great because I would not like to contact you whenever a new civilization is added since it

happens quite often. Also, some of my friends sometimes don't know whom they should ban, and this also takes a lot of time. I thought that you could add something to the table with the most frequent bans, so if someone will not know what to ban, the user could choose something from the table.

Me: I need to discuss it with my teacher, but this idea seems to meet my aims, so it is applicable. I have also seen that there are different versions of the game and different available civilizations depending on that. I thought that if someone will have an old version and have no access to new ones they will have to ban a lot of nations and it can take a lot of time. What do you think of having a division set of civilizations by its versions?

Mary: This is a great idea, I think this should be added to the program. Also, add a civilization description since many of us don't remember the abilities of all nations and this will make the process faster because no one will search for this information.

Me: Okay this will be easy to add. I think this is it, for now, I have to discuss this idea with my teacher and I will contact you later for further questions.

Mary: Nice, goodbye

Me: Bye

Appendix 4; Second interview with Computer Science teacher

Me: Greetings

Teacher: Good afternoon

Me: I have spoken to Mary about the necessity of some features. She said that she does not insist on having a website, or log-in system and she agreed that she should be not the only one who can see votes.

Teacher: Great, so what are your ideas?

Me: We have come to the conclusion that civilizations should be chosen not typed down since it is faster, also creators are often adding new civilizations and it could be a problem of a time for which program will be convenient, so we thought of a button by which user could add new civilizations on its own. Finally, versions will save a lot of time, since if you have the base one before doing anything you will have to ban about 30 nations and find them as well, this takes too much time and is very inappropriate, so we have created buttons which will output nations that are presented in the versions, so the client doesn't need to ban the ones to which he does not has access.

Teacher: And how this all would be located?

Me:
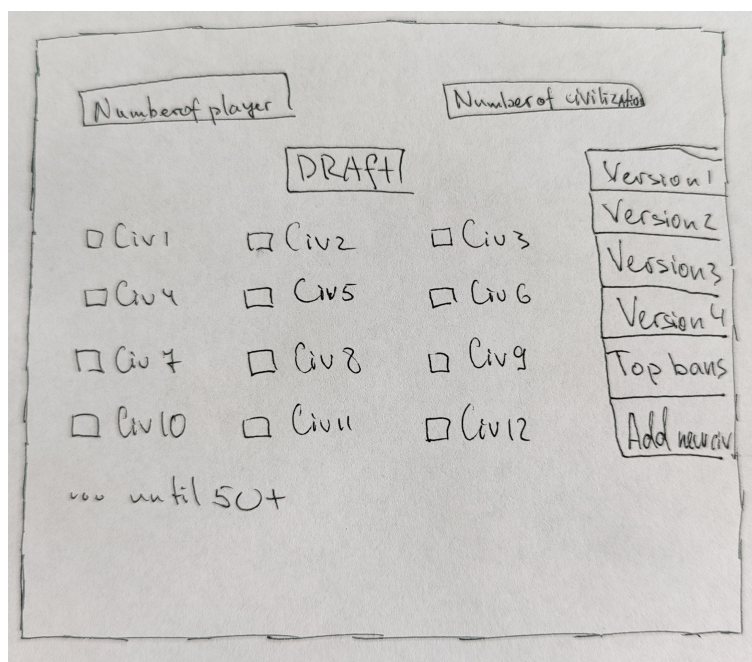
So each player will choose 1 or 2 characters that will be banned, when a table with distributed civilizations will be output people will not choose those that are banned. The top bans button will show the most frequently banned civilizations, this is made so new players will faster choose what to ban.

Teacher: I think this is a relevant design, but have you thought about the draft process? If the banned civilizations participate in it someone will have them and this will be unfair.

Me: Then, I just can remove them from the distribution.

Teacher: I think that will work, this means that you need to have two sets of civilizations: banned and not banned and draft only the second one.

Me: Okay

Teacher: You also should think of a process when your program will not give appropriate output, since you aim to have full autonomously you should try to output an explanation of the error and that should be changed so the program will work. And not forget to add contact information since you want not only Mary and her friends to use this program.

Me: All right, and I would sort civilizations by the alphabetical order, for a faster search.

Teacher: Nice, let's start working.

Me: Great, bye!

Teacher: Goodbye

Appendix 5; Evaluation interview with Mary

Me: Hi, Mary

Mary: Morning

Me: So this will be our last interview, we will discuss my product. I suppose that going through the success criteria will be the easiest way, I have shown the product to you previously, I hope you have tried it out.

Mary: No problem, yeah I tried we played several games with my friends using it.

Me: First criteria is displaying a set of civilizations depending on the choosed version, what do you think about it?

Mary: I think you met this criteria because I don't need to make a lot of bans and navigation between versions is fast, convenient, none of my friends had problems with it.

Me: Brilliant! Second success criteria was providing a list of civilizations sorted by the alphabetical order.

Mary: Obviously you have met this criteria, but since it was made so we could find needed civilizations faster I would suppose a change in order. Previously I thought it was quite comfortable, but after several testings me and my friends came to the conclusion that it would be much faster to add to the first rows civilizations that are in the top bans tables, so which were at least ones banned and all else could be alphabetically sorted.

Me: I see, this is quite an interesting idea, I suppose I could make this change. Third criteria is having a description of civilizations.

Mary: You met it, we rarely use it, but when needed it is fast to find and view. We like that you made it by the muse holding, this way it doesn't disturb.

Me: I will combine forth and fifth criteria — ability to vary number of players and civilizations per player.

Mary: Yes, you met this one.

Me: Outputting error warning messages, so users could solve independently.

Mary: You have error warning messages, but we thought that its explanation was too short. I also think that since you have shown me how to use the program I had no problems, but when I was showing it to my friends not everybody understood it from the first time, I think you can add small, quick tutorials to main functions of the program for new users.

Me: I understand, actually a nice advice, thanks a lot. Next is outputting a visual table of nations per player and banned ones.

Mary: You don't have any problems here, I understood everything from first look because we have discussed it, nevertheless my friends also understood immediately.

Me: What do you think of adding a new civilization criteria?

Mary: You have fulfilled it, I think you can add versions in future because Civilization VI developers could create a new version.

Me: I understand, what about a table of most frequently made bans?

Mary: We started to use it only after several games, because no bans were recorded before, we found it quite useful, the game became truly more balanced.

Me: Did everybody find the contact information?

Mary: Yes, you are showing it several times, we have seen and found it quite fast.

Me: And final one — simple and visually intuitive design of the program.

Mary: I suppose that you got this one, because we found every needed function very fast, I would like a more colorful version, I suppose outlining by color main features will make it even more intuitive.

Me: Yes, I didn't think of that, maybe red or yellow color will guide the client even faster. Thanks a lot, this is actually a very detailed feedback. I am very grateful for it.

Mary: No problem! You saved my time, this is very valuable.

Me: Thanks a lot, bye!

Mary: Goodbye!