SECTION 01- Basic Questions

Duration estimate: ~15 minutes

Q.1.1 : What is your name?
Q.1.2 : What is your job at FAPESB?
Q.1.3 : How long do you work at FAPESB?
Q.1.4 : Do you like working here?
Q.1.5 : Which software development process do you like most?
Q.1.6 : Is this your first experience with data analytics? If not, which was?
Q.1.7 : How long have you been working on the projects?
Q.1.8 : Can you describe both projects to us?
Q.1.9 : Which practices of software engineering do you use?
Q.1.10 : Which tools did you use for the data extraction?

SECTION 02

Duration estimate: ~30 minutes

1. Principle - Users Before Algorithms

Q.2.1.1 : When you implement some algorithm or some feature, do you think about the benefits that they bring to the users? How?

Q.2.1.2 : Is there some plan or action for that? Is there any kind of software engineering process to help on that?

Q.2.1.3 : Have you developed some prototype? How was the prototype development process?

Q.2.1.4 : How is the relationship with the clients? How close is the development team to the clients?

Q.2.1.5 : How were the meetings with the clients?

2. Principle - Plan for Scale

Q.2.2.1 : When you implement some algorithm or method to discover a certain information, this same algorithm can be used to perform another discovery?
Q.2.2.2 : What practices do you adopt to ensure that?
Q.2.2.3 : Is there some software engineering process or tools that help you to achieve that (for instance project patterns, specific programming language feature, agile methods)?

3. Principle - Early Feedback

Q.2.3.1 : When you implement a filter or discover some new information, how early is this information verified with users?

Q.2.3.2 : Is there any practice to capture client's feedback in a systematic way?

Q.2.3.3 : How was the requirements elicitation to extract the information from the databases?

Q.2.3.4 : Is this connected to the feedback from the system?

4. Principle - Be Open-minded

Q.2.4.1 : Is there some effort to discover new strategic informations from the data that you have?
Q.2.4.2 : When you go investigate the database, do you do that with a fixed objective in mind or do you do predisposed to find new relations (new informations)?
Q.2.4.3 : Is there any plan for that or is it intuitive?

5. Principle - Avoid Bad Learning

Q.2.5.1 : Is there any validation about the information discovered?

Q.2.5.2 : Is there some statistical methods (validation?) in the process?

Q.2.5.3 : Is this in the software development process?

Q.2.5.4 : Through which practices?

6. Principle - Live with the data you have

Q.2.6.1 : Imagine that the client required a feature that depends of certain type of data that you do not have at the moment, but it will come someday. In a strict deadline scenario, do you prefer wait for the new data or do you prefer try to solve the problem with the data do you already have? Why?
Q.2.6.2 : Is there something in the software development process that allow you to think that way? If yes, how?

7. Principle - Broad skill set, big toolkit

Q.2.7.1 : If there is an efficient way to extract the information, is there some effort to change the methods and algorithms or keep the way that it is?
Q.2.7.2 : Is there some systematic way?
Q.2.7.3 : How is this process?
Q.2.7.4 : When do you identify the need?

SECTION 03

Duration estimate: ~30 minutes

1. Requirement - Performance

Q.3.1.1 : How do you deal with the system’s performance issues?

Q.3.1.2 : Which specific tests do you apply to ensure the performance?

Q.3.1.3 : Is the requirement defined by the clients?

Q.3.1.4 : How is it specified?

Q.3.1.5 : How is it designed?

Q.3.1.6 : How is it implemented?

Q.3.1.7 : How is it tested?

2. Requirement - Security

Q.3.2.1 : How do you deal with the system’s security issues?

Q.3.2.2 : Is there some access profile or login feature?

Q.3.2.3 : How this security issues influenced the software development process?

Q.3.2.4 : How is it specified?

Q.3.2.5 : How is it designed?

Q.3.2.6 : How is it implemented?

Q.3.2.7 : How is it tested?

3. Requirement - Availability

Q.3.3.1 : Are there concerns about the availability from the client?

Q.3.3.2 : Is this a task that the development team are in charge or is delegated to another department?

Q.3.3.3 : How this security issues influenced the software development process?

Q.3.3.4 : How is it specified?

Q.3.3.5 : How is it designed?

Q.3.3.6 : How is it implemented?

Q.3.3.7 : How is it tested?

4. Requirement - Usability

Q.3.4.1 : Is there any concern about the usability?
Q.3.4.2 : Is there someone able to design the layout?
Q.3.4.3 : How is the usability evaluated?
Q.3.4.4 : In which development process' step do you deal with usability concerns?
Q.3.4.5 : How is it specified?
Q.3.4.6 : How is it designed?
Q.3.4.7 : How is it implemented?
Q.3.4.8 : How is it tested?

5. Requirement - Scalability

Q.3.5.1 : How do you deal with the system’s scalability?

Q.3.5.2 : Is the process integrated to the discovery of the data?

Q.3.5.3 : Is there something at the software architecture that supports the growth of the system?

Q.3.5.4 : How is it specified?

Q.3.5.5 : How is it designed?

Q.3.5.6 : How is it implemented?

Q.3.5.7 : How is it tested?

6. Requirement - Reliability

Q.3.6.1 : Do you have actions to verify if the system can run for a long period without maintenance?

Q.3.6.2 : Do you experienced any critical failure?

Q.3.6.3 : Which actions do you took?

Q.3.6.4 : How is it specified?

Q.3.6.5 : How is it designed?

Q.3.6.6 : How is it implemented?

Q.3.6.7 : How is it tested?

7. Requirement - Interoperability

Q.3.7.1 : Does the system communicate with other application?

Q.3.7.2 : How?

Q.3.7.3 : How is it specified?

Q.3.7.4 : How is it designed?

Q.3.7.5 : How is it implemented?

Q.3.7.6 : How is it tested?

8. Requirement - Adaptability

Q.3.8.1 : Do you had concerns about the system being adaptable to diverse platforms?

Q.3.8.2 : Or is it a requirement from the client?

Q.3.8.3 : Is the system adaptable to diverse devices, like smartphones and tablets?

Q.3.8.4 : How is it specified?

Q.3.8.5 : How is it designed?

Q.3.8.6 : How is it implemented?

Q.3.8.7 : How is it tested?