**Progress Report 2**

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**Program of Study**  
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**Completed Tasks**

I studied about Test Plan to further the task of development of the SOAP Listener. Furthermore, I analyzed AutoConf that is to be used in the development of the project. I completed studying the server-side programming models. Since my project was old and the information for its setup was outdated and had obsolete documentation, I wrote the documentation for its setup. In addition to this, I have been writing a documentation page for our team Jargons. Furthermore, I understood the design of the SOAP Listener to help capture the detailed functionalities. Apart from this, I studied Jenkins tool. It is a continuous integration (CI) and continuous delivery (CD) solution that ensures that all merged code is always in a production-ready state.

The next task was to understand Jetty and Tomcat to make a decision as to which servlet container to use in order to host the Soap service. Following this, I, along with my supervisor, did the midterm evaluation for the internship. I went through the Perl script to understand the detailed design of the project so as to implement the replica in Java. With this began the second phase of the Software Development Life Cycle (SDLC) for the project – Design. The expected output for this phase is a Design Document. I also established communication with the QA team, product owner and the existing testing team working on the project.

Following this, the main phase of coding started where the actual implementation is to take place. I am understanding and going through various tutorials for the implementation. The tools like Spring boot, CXF, yaml are to be configured into the project.

**Progress Made**

Previously, I had understood the workflow and documented the SRTPA project so that it is easy to work with the SOAP Listener as the Listener is meant to be operated with SRTPA. I have also analyzed the design for the Listener and have created the Design document.

Further, I have understood the Spring boot technology to implement in the SOAP Listener. I am deeply analyzing the processing done in the SOAP Perl script to gather all the detailed functionalities to implement the SOAP Listener so that the functionality of the Java SOAP Listener remains the same as that of the Perl script for the Listener. I have completed the Design document and had it approved. Besides this, I am currently making progress in coding the Soap Listener by undergoing the training for essential tools to be used for the project like Spring boot, CFX, JMS, etc.

**Learning**

I learnt about various new technologies, AutoConf being one of them.  Autoconf is a tool for producing configure scripts for building, installing and packaging software on computer systems where a Bourne shell is available. I also learnt about Server-side Programming Models that is an essential part of the project. It is about choosing the correct ServiceEndpoint which can correctly transform the input to instance for your service. The project has given me a better understanding of working with Eclipse IDE. My knowledge of Git and Linux has improved significantly.

I have learnt about Jenkins, an open source automation server to automate some of the software development process. I have also gained the knowledge of yaml for configuration files. My team has introduced me to various morganized (modified for use within the Morgan Stanley firm only) tools that are useful for working with my project and used in general on a day to day basis. Besides this, I have attained the knowledge of various morganized libraries meant to be utilized for the project. These include Soap libraries, spring boot, CXF, JMS, JMX, WSDL and many more. For implementing the command line arguments parsing, I studied Apache cli and JCommander. Based on the features of each, I decided to implement JCommander.

One of my major learnings includes implementing the functionality using Spring boot with JMS. Analyzing design has been another important activity I grasped during the work. Finally, I have imbibed the functionality of the SOAP Listener, a protocol specification used for exchanging structured information across the computer networks. I have also developed the skills of team work and remote communication. We have daily standups with the New York team and weekly progress meetings that have helped me improve my communication skills as well.

**Job Performance Objectives**

I have understood and documented the design, the task covered under the designing phase. I have also started with implementing the Listener using Spring boot along with JMS. I always try to communicate issues with other team members so that the project is not stuck at one point for too long. We have daily standups to share the status of our progress with other team members. For the time being, I have delivered my tasks on time keeping in mind the deadlines for the tasks.

Ever since the start of my internship, I have been documenting everything that I discover, develop and work on. I have completed the second phase of the development cycle on time and have started with the third, i.e., coding phase. Besides I also completed my onboarding on time, have attended regular team meetings and have prepared my daily status reports to improve communication with other team members. I, along with my supervisor, have come up with a strategic plan to follow for the project and deliver the required documents for each of the SDLC phases timely and correctly.

**Professional/Personal Objectives**

I communicate with the remote team for the project on a regular basis which helps demonstrate my ability to work in a team. Learning and applying new skills have very often been a part of my since I am new to many a tools and technologies being used in Morgan Stanley. Almost every day, I come across something new to learn and acquire knowledge from. I have also learnt how the Software Development Lifecycle process works in a large organization. I am, myself, using SDLC for my project.

Apart from this, I have been learning more about the new office, familiarizing myself with new technology, and gaining upward feedback from team members to establish further what can be improved upon. I have been using the daily standups and weekly progress meetings as a means to improve my communication skills and confidence, and getting along with others.

**Meetings Attended**

One of the amazing meetings held was the Senior Management Networking Lunch where senior managers from New York visited our campus and had a personal talk with people on a lunch where they shared their experiences and guided us through our concerns. Apart from this, we had a 10 year anniversary celebration of the Morgan Stanley Montreal office. We also had a Women In Technology session where all the working women in the department came together to discuss the issues, if any, they are concerned about and to make them aware about the opportunities they can avail at Morgan Stanley.

My team has daily scheduled standups to discuss the work plan for the day and deadlocks, if any. This keeps everyone updated of what the team members are working on and helps resolve issues sooner. We have weekly code review meetings that are meant to give feedback on any code changes carried out during the week which ensure that only meaningful and understandable code is approved. In addition to this, there are weekly progress meetings which are meant to setup weekly milestones for each of the team members and give feedback on their progress. Another weekly meeting is the mentor meeting where I catch-up with my mentor to discuss what I am working on, how I like it so far and discuss concerns, if any, I have about my team, my project or the firm.

One another meeting was with the HR team for Midterm evaluation to analyze and discuss the progress towards the goals setup for the internship. Also, we have a monthly meeting of people interested in programming Graphical User Interfaces (front-ends) at Morgan Stanley. It helps nurture your interest in GUIs.

Apart from these, a few sessions were held for the employees which included Foreign Exchange tech talk where they explained the Morgan Stanley way of Foreign Exchanges, a Web Securities Control Session that introduced the employees about the security controls implemented at the firm and \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**Literature Review**

I have used various TWiki documentation pages (internal to Morgan Stanley) to study different tools and technologies to be used, how to work with Linux Dev environment, how to establish Kerberos authentication, how to access and work with database, database entry process workflow, Staged Real Time Products Adapter project workflow, to study morganized java libraries. These include AutoConf, Server-side Programming Models, Jenkins, JMS, JMX, Spring boot.

I also referred to the Wikipedia for many of the technologies to be integrated in he project like Jenkins, YAML, Apache CLI tool, etc. Besides this, I reviewed online tutorials from Lynda to study Spring Boot and JMS, and other tutorials to understand the SOAP protocol for messaging, Investopedia to learn different terms related to investment to know more about financial management and the Morgan Stanley training site to understand the business flow and other divisions.

**Skills Acquired**

* Leadership: I have acquired this skill as I can get other people to help me whenever I am stuck at something in the project.
* Written skill: Documenting everything that I do has helped enhance my writing skill as it is increasingly important to be able to convey what you have worked on.
* Organization: I have been able to structure my schedule and prioritize my tasks. I have been planning ahead of time what resources will be necessary and how long each phase of the project will take.
* Time management: I have scheduled my time appropriately by effective goal-setting, prioritization and planning. I have set clear milestones for working on the project.
* Ability to meet deadlines: I have worked as per the set deadlines till now and have done my best to complete my tasks ahead of time.
* Willingness to learn: I have a desire to improve my professional skills and competencies. I try to search for ways to improve myself, keep myself up to date with the changes going on and keep track of what my team members are working on through daily standups.
* Reliability: I try my best to diligently follow through on commitments and consistently meet deadlines, demonstrate regular and punctual attendance, comply with organizational rules, policies, and procedures and follow written and verbal directions. I also check my work to ensure that all essential details have been considered.
* Ability to work with others: Giving and accepting appropriate delegation, following directions, and communicating clearly with the right people has been a part of my teamwork on a daily basis.
* Professionalism: I have always been encouraged to arrive on time to meetings, with note-taking materials in hand, and actively participate, keeping up to date knowledge and skill, seek input and help from others when needed and always be competent and reliable by producing high quality work and meet deadlines.
* Technical ability: Exposure to many new technologies like that of Jenkins, Jira, Leela, Kerberos, JMS, JMX, Spring boot and various internalized tools have expanded my technical skills horizon.