

**sdmay19-23: Mobile, Biometric Bitlocker**

Week 8 Report

October 22 - October 29

**Client/Advisor:** Dr. Akhilesh Tyagi and Timothy Dee**Team Members**Morgan Anderson — *Scribe*Cole Alward — *Storyboard Master*Yousef Al Absi — *DevOps Engineer*Larisa Andrews-Thys — *Scrum Master*Ammar Khan — *Product Owner*Justin Kuhn — *Testing Engineer*

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**Summary of Progress this Report**

This week, we turned in our second revision of the project plan. Additionally, we began developing our application in our allotted repository (i.e., sdmay19-23). We have also continued PUF integration and testing. As we worked through the problems discovered last week, we found more issues. These issues are described in more detail in the “Individual Contributions” section.

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**Pending Issues**

Issue #20 - Include Mockito for individual unit tests

Assigned to: Justin Kuhn

Issue #23 - Change number of evaluation points to 32

Assigned to: Cole Alward

Issue #24 - Change normalization algorithm

Assigned to: Ammar Khan

Issue #25 - Change authentication algorithm

Assigned to: Ammar Khan

Issue #26 - Change PUF drawing method

Assigned to: Larisa Andrews-Thys

Issue #27 - DevOps Gitlab Research

Assigned to: Yousef Al Asbi

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**Plans for Upcoming Reporting Period**

Issue #20 - Include Mockito for individual unit tests

Assigned to: Justin Kuhn

Issue #23 - Change number of evaluation points to 32

Assigned to: Cole Alward

Issue #24 - Change normalization algorithm

Assigned to: Ammar Khan

Issue #25 - Change authentication algorithm

Assigned to: Ammar Khan

Issue #26 - Change PUF drawing method

Assigned to: Larisa Andrews-Thys

Issue #X - DevOps Gitlab Integration

Assigned to: Yousef Al Asbi

Issue #X – Begin adding encryption functionality to the application

Assigned to: Morgan Anderson

### Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Morgan Anderson	I met with Mr. Roberto Alva and received clarification for the project plan improvements and relayed the information to my team members. Based on the feedback, I reconstructed the project timeline to provide more clarity and improve readability. Additionally, I added functionality to the preexisting PUF application's authentication method such that it would reroute to a different activity upon authentication success. This was done to ultimately help prepare the team for upcoming implementations.	9.5	44
Cole Alward	I updated the project plan to reflect different challenges and include cost considerations. I reviewed and merged Larisa's merge request after Yousef reviewed it as well. I tried to get the application working on a lab computer to change the evaluation points; however, I had issues getting it to run. I worked on trying to get it to run with Yousef.	5	36
Yousef Al Absi	Researched and put some thought into the architecture of our project. I started working on the development operations to automatically create the jar on the library's side. When both repositories are separated, we will create a deployment for the APK on the Android side.	5	38

Larisa Andrews-Thys	Worked on ticket to create multiple profiles and ran into implementation issues within the library. Since the library hardcodes names of profiles among other issues, extensive work was required. I ended up moving the issue to the backlog. I also worked on editing the previous work in the project plan, revising and formatting the project plan before turning it in. Additionally, I worked on my other ticket to change the challenge type of the library, ultimately to try to generate lines that do not cross each other. When modifying this, I was able to change the challenge type to a poly line; however, I unfortunately ran into more issues within the implementation.	14	50
Ammar Khan	Began working on ticket to change the authentication of the application that was supposed to fix the authentication bugs we were experiencing (random shapes were authenticating). Unfortunately, I was not able to successfully do this. That is, while making the authentication change, I uncovered several issues with the PUF library that were preventing my change from taking effect. I iterated through the issues and fixed as many as possible, but I was not able to solve all the issues and test the fix properly. These errors were pertaining to the PythonInterpreter and GSON libraries that the application uses. While I was able to resolve all of the GSON issues and some of the PythonInterpreter issues, there remains an issue with the PythonInterpreter not appearing in the classpath, which was causing the application to crash. I have scheduled a meeting with Timothy Dee, one of our clients who has the most technical knowledge and experience with our application, for Tuesday at 11:00 AM to figure what is causing the issues and try to solve them.	10	44
Justin Kuhn	Oversaw the testing structure of the project imported to the sdmay19-23 repository. I have researched and am prepared to implement an integration testing structure within the Android application for inter-component testing. I have also researched including Mockito into the project and using it	5	39

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	within the build.gradle. I also revised the testing and validation sections of the project plan to include specific acceptance tests.		

**Gitlab Activity Summary**

Nothing to report.

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