

Progress Report Template

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GROUP: F25_4440_G13

F25_4440_G13 - Work Log

Date	Student Name	Number of Hours	Description of work
2025-10-20	Ifeoluwa Aribو	0.5 hr	Met with instructor to review project scope, tools, and proposal feedback.
2025-10-20	Ifeoluwa Aribو	1 hr	Team meeting to set objectives, divide tasks, and plan analysis workflow.
2025-10-24	Ifeoluwa Aribو	2 hrs	Helped structure the proposal and created GitHub repository.
2025-10-24	Ifeoluwa Aribو	2 hrs	Installed MobSF and AndroBugs. Configured environment for analysis.
2025-11-07	Ifeoluwa Aribو	1 hr	Installed Android Studio and AVD emulator. Verified ADB connectivity.
2025-11-07	Ifeoluwa Aribو	0.5 hr	Identified installed emulator packages. Retrieved package names and paths for Reddit and Tim Hortons.
2025-11-07	Ifeoluwa Aribو	0.5 hr	Attempted to pull APKs. Fixed path and permission issues.
2025-11-07	Ifeoluwa Aribو	0.5 hr	Created organized folder structure on Kali for APKs, reports, and tools.
2025-11-07	Ifeoluwa Aribو	1 hr	Set up Python environment for AndroBugs. Installed dependencies. Confirmed Python 2.7 compatibility.
2025-11-07	Ifeoluwa Aribو	0.5 hr	Cloned AndroBugs repository. Reviewed directory structure and scripts.

2025-11-07	Ifeoluwa Aribو	0.5 hr	Tested AndroBugs with Python 3 and found syntax issues. Switched to Python 2 and validated execution.
2025-11-07	Ifeoluwa Aribو	0.25 hr	Confirmed Python 2 installation. Ran AndroBugs help menu to check available options.
2025-11-07	Ifeoluwa Aribو	1 hr	Conducted AndroBugs security scan on Reddit.apk. Reviewed the analysis report.
2025-11-07	Ifeoluwa Aribو	0.5 hr	Analyzed Reddit findings. Noted implicit intents, non-SSL URLs, and exported components.
2025-11-07	Ifeoluwa Aribو	0.5 hr	Summarized Reddit results. Prioritized security issues and recommendations.
2025-11-07	Ifeoluwa Aribо	1 hr	Conducted AndroBugs scan on Tim Hortons.apk. Reviewed detailed analysis report.
2025-11-07	Ifeoluwa Aribо	0.5 hr	Compared Reddit and Tim Hortons vulnerabilities. Highlighted similarities and differences.
2025-11-07	Ifeoluwa Aribо	0.5 hr	Documented all results. Organized reports and prepared summary files.
2025-11-07	Ifeoluwa Aribо	0.5 hr	Researched Python 3 compatible AndroBugs forks to improve workflow.
2025-11-16	Ifeoluwa Aribо	1.5 hrs	Attempted to install and run Docker on Kali Linux to deploy MobSF. Resolved dependency conflicts and service startup errors. Successfully started MobSF container and accessed the web interface.

2. Description of work done

< What I've Done So Far >

I have successfully set up the entire required toolchain for mobile security analysis, including MobSF, AndroBugs, Android Studio, and the AVD emulator. I extracted the Reddit and Tim Hortons APKs from the emulator, resolving path and permission issues, and created an organized project directory on Kali. I completed full static security scans for both applications using AndroBugs, analyzed the reports, and identified key security issues such as exported components, cleartext traffic, weak intents, and insecure URLs. I created detailed summaries for each app and performed a comparative analysis of their security postures. I also contributed to team-wide tasks, including project proposal organization

and GitHub repository setup. I also worked on configuring the Mobile Security Framework (MobSF) by installing Docker on Kali Linux, which presented several configuration challenges that were successfully resolved.

<The issues I encountered>

I encountered two primary technical challenges. First, the AndroBugs framework was incompatible with Python 3, throwing syntax errors. Second, I faced ADB permission and path issues when attempting to pull APK files from the Android emulator. Additionally, I faced significant issues installing and running Docker on Kali Linux. The problems included:

- **Dependency Conflicts:** Kali's rolling release environment led to conflicts between the Docker package and existing system libraries.
- **Service Startup Failure:** After installation, the Docker daemon failed to start due to permission issues and conflicts with existing containers or services.
- **MobSF Container Deployment:** Even after Docker was installed, initially pulling and running the MobSF Docker image encountered network timeouts and container port configuration issues.

<These are my planned next steps>

My planned next steps are to conduct complementary dynamic analysis using the MobSF tool on both APKs, perform dynamic analysis, and investigate certificate and network security aspects. I will also continue researching a Python 3-compatible fork of AndroBugs to modernize the workflow. Finally, I will contribute to drafting the final project report by integrating my findings.

AI Use Section:

- **Table of AI Tools and Specific Use:**

AI Tool Name	Version, Account Type	Specific feature for which the AI tool was used
OpenAI ChatGPT	GPT-5.1, Free Account	Helped with MobSF setup, Docker troubleshooting, ADB command guidance, and clarifications during environment configuration.

AI Tool Name	Version, Account Type	Specific feature for which the AI tool was used
OpenAI ChatGPT	GPT-4o Mini, Free Account	Assisted in identifying Python errors and confirming AndroBugs execution steps.
OpenAI ChatGPT	GPT-4o Mini, Free Account	Used to troubleshoot Docker installation errors on Kali Linux and resolve MobSF container deployment issues.

- **Value Addition:** I provided all the raw data, specific details, and context from my actual work sessions. I executed all suggested commands myself, correcting inaccuracies based on my specific environment. The AI tools were used for guidance and structuring information, but I performed all the technical work, wrote my own analysis summaries, verified all APK findings through my own testing, and refined instructions to match the actual tools and configurations. The value I added was the genuine work, expertise, and effort captured in the logs, which formed the entire substance of the report.
- **Appendix: Prompt History**
 - **Context for AI use:** Separate prompts were used during the project for technical guidance, such as "How to set up MobSF with Docker?" and "How to resolve Python syntax errors in AndroBugs?"
 - "Convert this Python 2 socket code to Python 3 with proper error handling"
 - "I'm getting 'ModuleNotFoundError: No module named 'Crypto' when running on Kali Linux"