Alec Austin

Meghana Gathpa

Joshua Hardy

Rachana Kandadi

Kalyani Padaraju

**Project Report 2**

What was done:

Alec Austin - Found Python and FPGA implementations for DES to potentially be used for the project. Watched the Sakai FPGA video to become more familiar with working on hardware. Refamiliarized myself with Python for working on the project.

Meghana Gathpa - Finished watching the FPGA video. Gathered the information like FPGA setup guide, SD card image for PYNQ and the association with Jupyter notebooks. Also gone through the python implementation examples.

Joshua Hardy - I watched the FPGA video as instructed. I found the documentation for using Python in PYNQ, which includes the Python environment in PYNQ. I learned that Python is the default for Jupyter Notebook, which means that we have a user friendly way to interact with the board. Also, I purchased the book, “Programming FPGAs Getting Started with Verilog”. While we are not using Verilog in this project, the book does provide insight to: drawing logic, timers, PWM and Servo Motors, audio and video.

Rachana Kandadi - I watched the FPGA lecture on LinkedIn. I went through some python concepts. Understood how RSA works and found implementation for RSA on python and other languages. Found implementation of RSA algorithm on FPGA using verilog on GitHub.

Kalyani Padaraju - I completed watching FPGA linkedin videos and got a good idea on what FPGA is and how it works , learnt how to customize FPGA. I found a couple of AES implementations in python. Watched a video related to the PYNQ Z2 board which explains each and every component on the board and their functionality, learned how to establish jupyter on our device .

Plan for next deliverable:

* Find information on communicating between software and hardware.
* Determine which crypto algorithm to implement
* Divide team into a software group and a hardware group
* Have the software team implement the chosen crypto algorithm in software, put the code into the group Github, and make sure every member of the group can run the code.
* Have the hardware team implement the chosen crypto algorithm in hardware, put the code into the group Github, and make sure every member of the group can run the code.