Initial Study

- Setup a multi-node hadoop cluster
- Ran mapreduce on the cluster
- Understood the working of HDFS, Block placement and default hadoop policies

Environment Setup

- Finding appropriate simulator to simulate HDFS environment
- Setting up Simulator to work with IDE
- Understood working of simulator and configurations

Devising Algorithm

- Literature survey with appropriate papers to devise Algorithm
- Defined hot and cold zones, new block palcement policy, new block balancer and transfer algorithm
- Visualized algorithm with diagrams and charts

Implementing Algorithm

- Implemented algorithm on simulator
- Made new modules in simulator to measure power consumption and number of read-write operations
- Test simulator for accurate functioning

Testing Algorithm

- Ran simulator for multiple hadoop configurations and analyzed difference in energy consumptions
- Edited simulator to work for multipleiterations for various workloads and save data
- Plotted graphs with saved data and verified algorithm accuracy