**SET Conference →**

**A Scholarship Around Java Concurrency**

Jay Rathod - 23MCA0284

Shivam Sharma - 23MCA0251

**Abstract**

3 billion Devices run Java and hundreds of thousands of developers use it to build their applications. This paper aims to understand how do so many applications work just fine and how are they built specifically while handling concurrency. For the uninitiated, Concurrency is the ability to handle code which needs to execute out of order and usually even share resources. We will talk about multiple tools available in the java by default like ConcurrentHashMap, Locks, etc. and third-party libraries like RxJava. This will be more developer focused while studying about different performance metrics like throughput, response time, resource utilization and also reliability. We will also look into what do they do differently than each other and what could make the most sense for your next application.

|  |  |
| --- | --- |
| Week Number | Goal |
| 1 | What and Why’s of concurrency with more research on things to add in the report. |
| 2 | Tools that Java provides out of the box |
| 3, 4 | Third party Libraries like RxJava |
| 5, 6 | Performance comparison b/w different approaches |
| end of week 6 | Informal Review with Mentor |
| 7 | Different sematic and situational comparison like what is better for a DB application as compared to a mobile app. |
| 8 | Review & Final Draft |