

## **Abstract**

The project aims to develop a Turing Machine simulator. The Turing Machine simulator intends to show the working of Deterministic Turing machine. This is suited for teachers and students so as to learn and explain the working of Turing machine.

The Turing Machine simulator will run as a console application on a pc running the Red Hat Linux or Windows XP OS and must be implemented in Java using the Java compiler.

It will allow a user to interactively trace the operation of a Turing Machine on an input string. The user will have the option to enter the transitions of a Turing machine. Also the user will have an option to enter the initial tape symbols.

Sun Microsystem's Java is used as the platform for this project. This was coded and tested in Linux. The project was done internally.

The Turing Machine simulator can further be extended to simulate Multi-tape Turing Machine or Non-Deterministic Turing Machine.

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