PRACTICAL 9

Aim: Case study on Software Configuration Management Tools.

Theory: Software Configuration Management Tools are the tools and utilities used in administering source code, building software, install packaging, defect tracking, change management and managing software configurations. Software tools that automate and facilitate the application of the Software Configuration Management best practices.

Tool Name	Description
Chef	Chef is a configuration management tool written in Ruby and Erlang. It uses a pure-Ruby, domain-specific language (DSL) for writing system configuration "recipes". Chef turns infrastructure into code. With Chef, you can automate how you build, deploy, and manage your infrastructure. Your infrastructure becomes as versionable, testable, and repeatable as application code.
Scarab	Scarab is an issue-tracking and task management system that allows programmers to keep track of the issues that may exist during a software project development. The goal of the Scarab project is to build a highly customizable Artifact tracking system. Standard features: data entry, queries, reports, notifications to interested parties, collaborative accumulation of comments, dependency tracking. Scarab is built using Java Servlet technology for speed, scalability, maintainability, and ease of installation. Scarab can be integrated into larger systems by re-implementing key interfaces. Eg: MySQL version 3x or 4x uses scarab.
Code Co-op	Code Co-op is a distributed revision control system of the replicated type. It is a peer-to-peer revision control system made by Reliable Software. Instead of using a centralized database (the repository), it replicates its own database on each computer involved in the project. The replicas are synchronized by the exchange of (differential) scripts. The exchange of scripts may proceed using different transports, including e-mail and LAN. It has a built-in peer-to-peer wiki system, which can be used to integrate documentation with a software project. It is also possible to create text-based Wiki databases, which can be queried using simplified SQL directly from wiki pages.

Git	Git is a free and open source distributed version control system designed to handle everything from small to very large projects with speed and efficiency. Git is easy to learn and has a tiny footprint with lightning fast performance. It outclasses SCM tools like Subversion, CVS, Perforce, and ClearCase with features like cheap local branching, convenient staging areas, and multiple workflows.
AccuRev	AccuRev uses atomic transactions—you perform an operation on a set of elements at one time. Transactions are "all or nothing" and cannot be interrupted in progress. If, for some reason, a transaction does not complete, it is treated as if it never started. Benefits: • Element versions with interdependencies are delivered together. • Data integrity is preserved. • No more broken builds.
CVS	In the field of software development, the Concurrent Versions System (CVS), is a free software version control system. Version control system software keeps track of all work and all changes in a set of files, and allows several developers (potentially widely separated in space and/or time) to collaborate. Features: • CVS uses a client-server architecture. • Efficient in project development in team. • Log info and script processing.
Rational Team Concert	Rational Team Concert is a software development team collaboration tool developed by the Rational Software brand of IBM, who first released it in 2008. The software is available in both client versions and a Web version. It provides a collaborative environment that software development teams use to manage all aspects of their work—such as plans, tasks, revision control, build management, and reports.