***CMR INSTITUTE OF TECHNOLOGY***

**PROJECT ABSTRACT**

**DevOps:** (development and operations) is an enterprise software development phrase used to mean a type of agile relationship between development and IT operations. The goal of **DevOps** is to change and improve the relationship by advocating better communication and collaboration between these two business units.

**GIT**: Itis a [version control system](https://en.wikipedia.org/wiki/Version_control_system) (VCS) for tracking changes in [computer files](https://en.wikipedia.org/wiki/Computer_file) and coordinating work on those files among multiple people. It is primarily used for source code management in [software development](https://en.wikipedia.org/wiki/Software_development), but it can be used to keep track of changes in any set of files. As a [distributed revision control](https://en.wikipedia.org/wiki/Distributed_revision_control) system it is aimed at speed, data integrity, and support for distributed, non-linear workflows.

**Version Control**:  Version control is a system that records changes to a file or set of files over time so that you can recall specific versions later. For the examples in this book you will use software source code as the files being version controlled, though in reality you can do this with nearly any type of file on a computer.

**Implementation**:Git is primarily developed on [Linux](https://en.wikipedia.org/wiki/Linux), although it also supports most major operating systems including [BSD](https://en.wikipedia.org/wiki/Berkeley_Software_Distribution), [Solaris](https://en.wikipedia.org/wiki/Solaris_(operating_system)), [macOS](https://en.wikipedia.org/wiki/MacOS" \o "MacOS), and [Windows](https://en.wikipedia.org/wiki/Microsoft_Windows).[[50]](https://en.wikipedia.org/wiki/Git#cite_note-50)

The first Microsoft Windows "port" of Git was primarily a Linux emulation framework that hosts the Linux version. Installing Git under Windows creates a similarly named Program Files directory

**Git server**: As Git is a distributed version control system, it can be used as a server out of the box. Dedicated Git server software helps, amongst other features, to add access control, display the contents of a Git repository via the web, and help managing multiple repositories. Remote file store and shell access: A Git repository can be cloned to a shared file system, and accessed by other persons. It can also be accessed via remote shell just by having the Git software installed and allowing a user to log in

**Repository Contents:**The purpose of Git is to manage a project, or a set of files, as they change over time. Git stores this information in a data structure called a repository.A git  **repository** contains, among other things, the following:

* A set of **commit objects**.
* A set of references to commit objects, called **heads**.

The Git repository is stored in the same directory as the project itself, in a subdirectory called .git. Note differences from central-repository systems like CVS or Subversion:

* There is only one .git directory, in the root directory of the project.
* The repository is stored in files alongside the project. There is no central server repository.