Computer Science & Information Systems

**DevOps – Lab Sheet1- M3**

**(M3: Source Code Management)**

This lab sheet needs to be administered along with Module 3: GIT

1. Objective:

This lab capsule aims to make students get overview of GIT and also be able to perform basic GIT operations such as Creating Project or Repository, Add files to repo and Commit the changes.

1. Pre-requisite:

* Study of Module3
* GIT installations
* Student must see DevOps- Lab Tutorial1- M3

1. Lab Exercise:

**Case 1:**

You have been asked to lead a Project of Web Development for which four people are working on Java and JavaScript code. You need to manage code with help of GIT Project by following below steps:

* Create a Project with name Web-Dev in Local Repository
* Create Two Branches "Java" and "JavaScript"
* Create Test Script and Increase Versioning in each Branch
* Merge Branches to Master "Web-Dev
* Push to code to Server

**Case 2:**

Considering you as Member of PMO Office working across the different locations, You are working on Planning & Inventory of a Project, where you will be keep appending data to the existing files and may add new files. You are asked to manage the versioning and repository available at a central location:

**Steps to be followed:**

* Create a GitHub Account
* Start a new Project called "PMO-Office"
* Add on some Excel Sheet for Inventory
* Commit the Changes
* Create a Local Repository [On Your Laptop]
* Add few more file in Local Repo
* Commit the changes in Local Repo
* Push the files to Server

1. Outputs/Results:

This exercise will help on learning of GIT basics and branching & merging operations. Also will help to understand local and server repository. Also it will help on building a GIT repository and also will help to Add, Commit and Push Functionality of GIT.

1. Observations:

The students are expected to execute GIT operational commands and observe the process.

1. References:

* [Getting started with Git - GitHub Docs](https://docs.github.com/en/get-started/learning-to-code/getting-started-with-git)
* https://www.atlassian.com/git/tutorials/comparing-workflows
* Refer Chapter 2 and 14 of Continuous Delivery: Reliable Software Releases through Build, Test, and Deployment Automation by Jez Humble, David Farley. Publisher: Addison Wesley, 2011