**Assignment 1**

The objective of this assignment is to have hands on experience of Git Workflow. You are required to create or fork a repo on Git and use Git bash on the desktop for completing the tasks. You are required to create one manager role for the repository and others as collaborators. The manager will act as a reviewer and decision maker.

Checklist of the tasks that are required to be performed:

* Add team members as collaborators and assign them appropriate rights (if you are performing individual then create one dummy account for the task)
* Create a branch(development/production/feature)
* Edit files or create new files followed by commit
* Clone the repo and Create pull-request
* While collaborating your work, showcase how conflicts are resolved
* Create tag such as open issue, or feature-added
* Do a force push/commit and then later reset the changes
* Stage “development branch to production branch”
* Showcase how features are released in versions (merging production to master branch)
* Also, state importance of Readme and gitignore files and their usage while working in a distributed environment.
* Pull Requests linked with e-mail to the manager who finally approves the changes.

**Assignment 2 – Case Study (Both case study A & B should be completed)**

A) Consider you are part of a healthcare management system, working on a product development in analytics domain (provides day to day analysis of the entire system). The product is expected to generate business reports using AI for the stakeholders. The product should serve features such as, Data Loading, Data Cleaning, Data Pre-processing and Artificial Intelligence for Report Generation, Report Exporting in PDF/Word and integration with a mailing system.

During an investment round, received a big investment for the product to scale and deliver the product. Product must be converted as SaaS solution and made available for about 100 stakeholders each generating 1 lakh reports on monthly basis. To satisfy the request, it requires load balancing, parallel and distributed execution and error free as these reports contain great value to the stakeholder’s company and timely generation. How this product development delivery can be accelerated with the help of DevOps?

**B) A brand Product Development Company is failing to deliver their new product features to their customer. If this continues the company is expected to lose their customer base by 20% by 2021.**

Here are the challenges of company:

a) They still follow Nightly Build

b) Has Development Team spanned across Netherlands, America & India

Suggest the solution’s they can bring in to overcome the challenges and overcome the delivery backlog.