



Real Time College

Course: Git Source Control

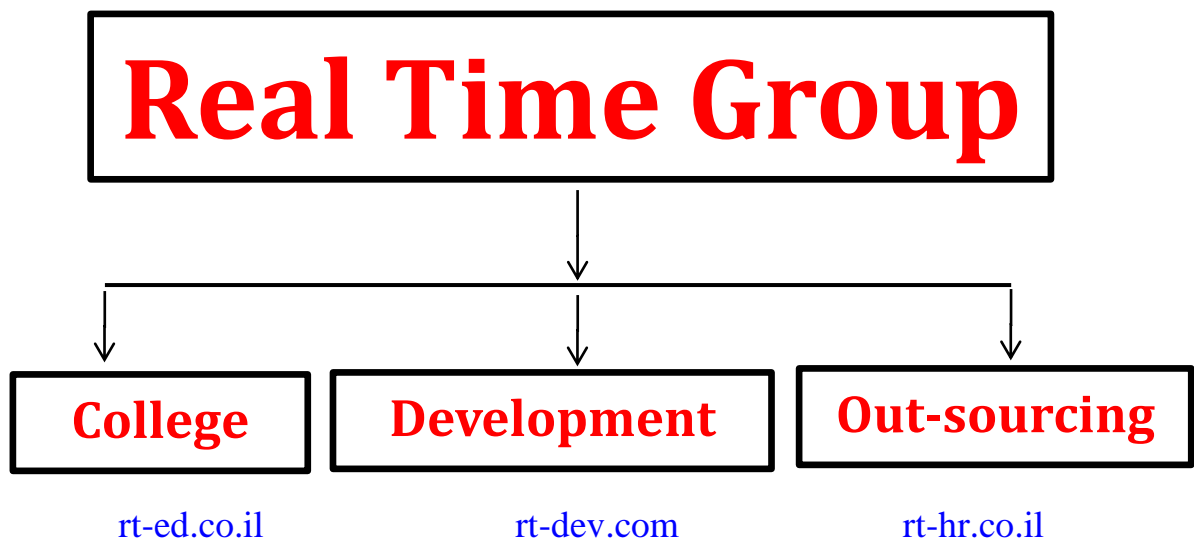
Duration: 30 Hours

Hands-On-Training: 65%

Real Time Group is a multi-disciplinary dynamic and innovative Real-Time O.S. and Embedded Software Solutions Center, established in 2007.

Providing Bare-Metal and Embedded Linux solutions, professional services and consulting, end-to-end flexible system infrastructure, outsourcing, integration and training services for Hardware, Software and RT-OS \ Embedded Systems.

The company is divided into the following three Divisions:



Training Division:

Professional Training Services for Hardware, Software, RT-OS and Embedded systems industries.

We provide the knowledge and experience needed to enable professional engineers to Develop, Integrate and QA Hardware, Software and Networking Projects.

In order to insure experience, all courses are practical – hands-on-training. The latest Development, QA and Automation equipment which are adopted by the industry are used.

All students are supplied with Development-Boards for home-work and course projects.

Course Overview:

The hardest part about computer programming is that there is a mountain of knowledge needed before you can even begin to work on some serious projects with others. Git source control is one of the technologies you will need to learn.

Git can either allow you to reach your full potential, or it can ruin your coding life if you have no idea what you are doing. These days, you are expected to know source control. Don't be in the position where you are expected to know Git and you're stuck searching the internet for help.

You might be asking, "Why do I need to learn Git?" The answer is simple, the source code for the majority of software is stored in Git repositories.

Who should attend:

- This Course is intended for testers, programmers, DevOps or IT professionals who would like to learn and to understand what Git is, how it works, and how to use it to with your software and why DevOps starts from Git Source Control.

Prerequisite:

- Understanding of Software Development Life Cycle.
- Knowledge about Linux is mandatory.
- Basic Testing concepts are an advantage.

Git Source Control Course Outline

1. **Introduction to Source Control**
 - a. The Purpose of Source Control
 - b. What is Version Control?
 - c. What is Revision Control?
 - d. What is SCM – Source Code Management?
 - e. Source Control Tools
 - f. Source Control Terminology
 - g. Branches and Merge Overview
 - h. Git Introduction
 - i. What is Repository?
 - j. GitHub Repository Introduction

2. **Instating Git - Preparing Your Environment**
 - a. Download Git
 - b. Installing Git
 - c. Configuring the Git on your Environment
 - d. Cloning a first source code from GitHub repository

3. **Getting Started with Git**
 - a. Create a local repository
 - b. Command git init
 - c. Adding new files to a new local repository
 - d. Command git status
 - e. Managing a staging environment
 - f. Create a commit (git commit)
 - g. How to see all commits?

4. **Getting Started with GitHub Repository**
 - a. GitHub Overview
 - b. Creating account on GitHub
 - c. Creating a new repository on GitHub
 - d. Pushing a source code to your own GitHub repository

5. Configuring SSH on GitHub

- a. Introduction to SSH – Secure Shell
- b. Checking for existing SSH keys
- c. Generating a new SSH key
- d. Adding a new SSH key to your account
- e. Enabling SSH connection with GitHub

6. Updating your code on GitHub Repository

- a. Using actions to create a workflow
- b. How to synchronize your code placed on your server with a repository
- c. Command git pull

7. Git Branches

- a. Branches Overview
- b. Creating a new branch
- c. git checkout
- d. How to commit and push changes to the new branch?
- e. A new branch overview on your GitHub repository

8. Git Merge

- a. How to merge your code changes on your branch into another branch?
- b. Command git merge
- c. Merge Conflicts
- d. How to resolve Merge Conflicts?

9. GitHub Pull Requests

- a. What is Pull Request?
- b. Creating Pull Requests
- c. Pull Requests and conflicts
- d. How to resolve conflicts on Pull Requests?

10. GitHub Managing Releases

- a. What is Release?
- b. Release version formats
- c. What are tags in git?
- d. Creating a tag
- e. How to view all tags
- f. Pushing tags to your own GitHub repository
- g. Overview your first release on your own GitHub repository



www.rt-ed.co.il



info@rt-ed.co.il



077-7067057

רח' מרדכי רוזנסקי 14, ראשון לציון