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| Subject Name: **Source Code Management**  Subject Code: **24CSE0106**  Cluster: i-**Alpha**  Department: **DCSE**    **CHITKARA UNIVERSITY**  **CHANDIGARH-PATIALA NATIONAL HIGHWAY**  **RAJPURA (PATIALA) PUNJAB-140401 (INDIA)**  March ,2025  **Submitted By: Submitted To:**  Mohit Kumar Dr. Kamal Dhandha  2410991426 Department of Computer  G-18 Science and Engineering,  Chitkara University,  Rajpura, Patiala |
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| **Experiment 5**  **Aim:** To demonstrate the concepts of forking, cloning, and creating pull requests  On GitHub.  **Theory:** Forking a repository on GitHub creates a personal copy of someone else's  project. This copy is fully independent of the original repository, allowing you to  make changes without affecting the original project. Forking is useful for  contributing to open-source projects, as it enables you to propose changes through  pull requests.  **Procedure:**   * 1. Go to the repository you want to fork on GitHub.      * 1. Click the "Fork" button at the top right of the page. |
| * 1. Clone the forked repository using git clone <URL>.      * 1. Make changes in the cloned repository and push them to your forked repository.      * 1. Create a pull request to propose changes to the original repository. |
| **Experiment 6**    **Aim:** To manage ignored files and create a structured README file for a  repository.  **Theory:** The. gitignore file specifies files and directories that Git should ignore, ensuring  that unnecessary or sensitive files are not included in the version control. The README.md  file provides an overview of the project, including its purpose, installation instructions, and usage  details.    **Procedure:**   1. Create a .gitignore file in your repository.      1. Add patterns to the .gitignore file to specify files or directories to ignore,   such as: ▪ \*.log (ignore log files). ▪ node\_modules/ (ignore the Node.js  modules directory). ▪ \*.env (ignore environment files).   1. Create a README.md file and add the following sections:   ▪ **Project Title:** Add the name of your project.  ▪ **Description:** Provide a brief overview of the project.  ▪ **Installation Steps:** Include detailed steps for setting up the project.  ▪ **Usage:** Explain how to use the project.   1. Commit the .gitignore and README.md files to the repository. |
| 1. Push the changes to the remote repository on GitHub.      1. Capture the following:   ▪ The content of your .gitignore file.  ▪ A screenshot of the README.md file as it appears in the GitHub repository. |
| **Experiment 7**  **Aim:** Scenario-Based Merge Conflict Resolution  **Theory:** Simulated scenarios of merge conflicts provide a better understanding of  conflict resolution strategies  **Procedure:**  1. Create a conflict by modifying the same file in two different branches.    2. Merge the branches and encounter the conflict.    3. Use Git tools like git merge tool or manual resolution to resolve the conflict.      4. Commit the resolved file. |