Git Report: core.editor, checkout, and rebase

1. core.editor

- The core.editor configuration in Git specifies the default text editor for writing commit messages, interactive rebase scripts, and merge conflict resolutions.

Usage

- To check the current editor setting:
  - **git config --global core.editor**
- To set a specific editor (e.g., Vim, Nano, VS Code):
  - **git config --global core.editor "vim"**
  - **git config --global core.editor "nano"**
  - **git config --global core.editor "code --wait"**

Common Issues

- If the editor is not set, Git may use the system's default, which might not be user-friendly.
- Some editors (like VS Code) require the --wait flag to ensure Git waits for the user to finish editing.

2. checkout

- The git checkout command allows switching branches, restoring files, and even creating new branches (in older versions of Git).

Basic Usage

- Switch to an existing branch:
  - **git checkout branch-name**
- Create and switch to a new branch:
  - **git checkout -b new-branch**
- Restore a file from a previous commit:
  - **git checkout HEAD -- filename**

Deprecation & Replacement

- As of Git 2.23, checkout is partially replaced by:
  - git switch (for changing branches)
  - git restore (for restoring files)

3. rebase

- The git rebase command allows integrating changes from one branch into another by rewriting commit history.

Basic Usage

- Rebase a feature branch onto main:
  - **git checkout feature-branch**
  - **git rebase main**
- Interactive rebase (edit, reorder, or squash commits):
  - **git rebase -i HEAD~3**

Rebase vs. Merge

Feature	Merge	Rebase
Preserves commit history	**Supported**	**Not supported** (rewrites history)
Creates a merge commit	**Supported**	**Not supported**
Cleaner commit history	**Not supported**	**Supported**

Common Issues

- **Conflicts:** You may need to resolve conflicts manually and continue rebasing with:
  - **git rebase --continue**
- **Accidental History Rewrites:** Never rebase a branch that is shared with others unless using --interactive carefully.