**Git Conflict Questions**

**Q1. Merge Conflict**

* You created a file report.txt in the main branch.
* In branch1, you added the line Report created by Team A.
* In branch2, you added the line Report created by Team B.
* Now merge branch2 into branch1.

**Question:** What happens? How will you resolve the conflict so that both lines are preserved?

**Q2. Rebase Conflict**

* You have a branch feature created from main.
* In main, someone added the line System updated by admin.
* In feature, you added the line System updated by developer.
* You now try git rebase main from the feature branch.

**Question:** During rebase, a conflict occurs. How will you resolve it and continue the rebase?

**Q3. Multiple File Conflicts**

* In branchA, you modified file1.txt and file2.txt.
* In branchB, you also modified the same lines in both files.
* Now merge branchB into branchA.

**Question:** How will Git show the conflicts? What exact steps will you take to resolve and commit?

**Q4. Conflict during Cherry-Pick**

* On main, commit A adds line1 to notes.txt.
* On feature, commit B also modifies the same line in notes.txt.
* From main, you run git cherry-pick B.

**Question:** What will Git do? How do you resolve the conflict and complete the cherry-pic

**Q5. Create Patch**

* You made changes in fileX.txt on your dev branch.
* Instead of pushing, you need to send your changes as a patch to your teammate.

**Question:** Which Git command will you use to create the patch file?

**Q6. Apply Patch**

* Your teammate sent you a patch file 0001-bugfix.patch.
* You are on your local repo in branch main.

**Question:** How will you apply this patch so that the commit history (author, commit message) is preserved?

**Q7. Patch Conflict**

* You have config.txt with the line Version 1.0.
* A patch file tries to change the same line to Version 2.0.
* But your repo already updated it to Version 1.5.

**Question:** What will happen if you apply the patch? How do you resolve the conflict and continue patch application?

**Q8. Create Patch Series**

* You made **3 commits** on your feature branch.
* You want to send all 3 commits as patch files to your lead for review.

**Question:** Which Git command will generate these patches?

**Q9. Apply Series of Patches**

* You received 3 patches:
  + 0001-feature-part1.patch
  + 0002-feature-part2.patch
  + 0003-feature-part3.patch

**Question:** How do you apply them in order so that commit history is preserved?

**Q10. Patch vs Merge**

* Your manager asks: “Why should we sometimes use patches instead of merging branches?”

**Question:** What reasons would you give for preferring patches in collaborative development?