

## Variant 1

---

1. Which command downloads changes from a remote but does not automatically merge them?

- a) git pull
- b) git sync
- c) git fetch ✓
- d) git update

2. Which command removes a file from the staging area but leaves it in the working directory?

- a) git rm --cached <file> ✓
- b) git rm <file>
- c) git checkout -- <file>
- d) git unstage <file>

3. If you compile program.c with gcc program.c and no other options, what is the default name of the executable file?

- a) program.exe
- b) program
- c) a.out ✓
- d) main

4. Which command compiles calc.c and links the external math library?

- a) gcc calc.c -o calc -lib m
- b) gcc calc.c -o calc --link math
- c) gcc calc.c -o calc -lm ✓
- d) gcc calc.c -o calc -m

5. To run the install target specified in a Makefile, which command would you use?

- a) make run install
- b) make install ✓
- c) Makefile install
- d) run make install

## Variant 2

---

1. How do you add staged changes to the previous commit without creating a new one?

- a) git rebase -i HEAD 1
- b) git commit --amend ✓
- c) git commit --continue
- d) git merge --squash

2. Which command shows the differences between the tips of the main and develop branches?

- a) git diff main..develop ✓
- b) git show main..develop
- c) git log main..develop
- d) git status main develop

3. Which command compiles the C++ file ui.cpp into an executable ui using the C++14 standard?

- a) g++ -std=c++14 ui.cpp -o ui ✓
- b) g++ --version=14 ui.cpp -o ui
- c) gcc -cpp14 ui.cpp -o ui
- d) g++ ui.cpp -o ui --use-c++14

4. How do you compile test.c into an executable test with the highest level of optimization for speed?

- a) gcc -Omax test.c -o test
- b) gcc -Oall test.c -o test
- c) gcc -O3 test.c -o test ✓
- d) gcc -O test.c -o test

5. In a Makefile rule, what does the automatic variable @represent?

- a) The name of the first prerequisite
- b) The list of all prerequisites
- c) The name of the target ✓
- d) The stem of a pattern rule

## Variant 3

---

1. Which command discards all local changes in config.yml and restores the version from the last commit?

- a) git reset --hard config.yml
- b) git revert config.yml
- c) git checkout -- config.yml ✓
- d) git clean -f config.yml

2. Which command displays a compact, one-line log for all branches with a visual graph?

- a) git log --graph --oneline --all ✓
- b) git graph --all
- c) git log --tree
- d) git status --graph

3. Which gcc command compiles main.c into an executable main with debugging information?

- a) gcc -debug main.c -o main
- b) gcc --symbols main.c -o main
- c) gcc -g main.c -o main ✓
- d) gcc -d main.c -o main

4. Which g++ flag is used to create a shared library (.so file)?

- a) -static
- b) -dynamic
- c) -shared ✓
- d) -lib

5. In a Makefile, what character must each command line in a rule begin with?

- a) Four spaces
- b) Two spaces
- c) A colon (:) ✓
- d) A tab character ✓