



Summer course
Security Fundamentals

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Declaration

I confirm that I understand my coursework needs to be submitted online via My second teacher under the relevant module page before the deadline for my assignment to be accepted and marked. I am fully aware that late submission will be treated as non-submission and a mark of zero will be awarded

1. Introduction to git commits.

Task: The task is to make two commits.

Solution: git commit

git commit

Examination: The git commit command takes a snapshot of all staged changes to the repository.

2. Branching in git.

Task: The task is to make a new branch named bugFix and switch to that branch.

Solution: git checkout -b bugfix

Examination: The command git checkout -b bugfix makes a new branch named bugFix and switches to that branch at the same time.

3. Merging in git.

Task: The task is to make a new branch named bugFix and merge the branch bugFix into main.

Solution: git checkout – b bugFix

git commit

git checkout main

git commit

git merge bugFix

Examination: The solution creates a branch bugFix and commits any changes in the branch. Then it switches to main branch and commits any changes made in main. The git merge bugFix merges the bugFix branch to main branch. -

4. Rebase Introduction.

Task: The task is to create a branch named bugFix, commit once, go back to main, commit once, checkout to bugFix and rebase to main.

Solution: git checkout – b bugFix

git commit

git checkout main

git commit

```
git checkout bugFix
```

```
git rebase main
```

Examination: The solution creates a new branch bugFix, commits changes in both the bugFix branch and the main branch and then rebases the bug fix branch onto the main branch making it as if the changes in bugFix were made on top of the current state of main.

5. Detach head

Task: The task is to attach the head to commit.

Solution: git checkout c4

Examination: The command git checkout c4 attaches the head to the c4 commit.

6. Relative Refs ^

Task: The task is to find the parent commit of bugFix using relative refs.

Solution: git checkout bugFix^

Examination: The command checks and shows the parent commit of bugFix.

7. Relative Refs ~

Task: The task is to

Solution: git branch -f main C6

```
Git checkout HEAD ~1
```

```
Git branch -f bugFix HEAD~1
```

Examination: The command

8. Reversing changes in git

Task: The task is to

Solution: git reset HEAD~1

```
Git checkout pushed
```

```
Git revert HEAD
```

Examination: The command

9. Cherry pick intro

Task: The task is to

Solution: git cherry-pick C3 C4 C7

Examination: The command

10. rebase -I

Task: The task is to

Solution: git rebase -i overHere

Examination: The command

11. Grabbing just 1 commit

Task: The task is to

Solution: git checkout main

Git cherry-pick C4

Or

Git rebase -i main

Git rebase bugFix main

Examination: The command

12.

Task: The task is to

Solution: git rebase -i HEAD~2

Git commit --amend

Git rebase -i HEAD~2

Git rebase caption main

Examination: The command

13.

Task: The task is to

Solution: git checkout c1

Git cherry-pick c2

Git checkout main

Git cherry-pick c2 c3

Examination: