

SWDVC301 – VERSION CONTROL

DATE: 2024

PERIOD:



END OF TERM III EXAMINATIONS

QUESTION PAPER

SECTOR: ICT AND MULTIMEDIA

TRADE: SOFTWARE DEVELOPMENT

TVET LEVEL: 3

MODULE TITLE: VERSION CONTROL

MARKS: /100

DURATION: 3 HOURS

INSTRUCTIONS TO CANDIDATES:

This Exam paper is composed of Three Sections (A, B, C). Follow the instructions given below, and answer the indicated questions for a total of 100 marks

Section **A**: Seventeen (**17**) questions, all **Compulsory** **55 marks**

Section **B**: Among the five (**5**) questions, attempt any three (3) **30 marks**

Section **C**: Among the two (**2**) questions, attempt any one (1) **15 marks**

Allowed materials:

- Ruler
- Blue or Black pen
- Non programable calculator

SECTION A: ATTEMPT ALL QUESTIONS.**(55 marks)****01.** Write the acronyms in their full form:**(2 marks)**

- a) VCS
- b) GIT
- c) CMD
- d) BASH

02. Define the terms below**(5 marks)**

- a) Repository
- b) Version control
- c) Git
- d) GitHub
- e) Terminal

03. From question I up to question VIII, choose the best answer **(4 marks)**

- I. Command line environment is used for interacting with git
 - a) git Lab
 - b) GitHub
 - c) git Boot
 - d) git Bash
- II. How do you save the current state of your code into the git version control?
 - a) Using git stage
 - b) Using git commit
 - c) Using git push
 - d) Using git add
- III. Which of the following advantage of using GIT?
 - a) Collaboration friendly
 - b) Data redundancy and replication
 - c) Data redundancy and replication
 - d) All of the above
- IV. What comes first, staging with git add or committing with git commit?
 - a) Committing with git commit
 - b) Staging with git add
 - c) None of these
- V. Identify the correct commit syntax for all changes with a message?
 - a) git add -a "I'm coding"
 - b) git commit -am "I'm coding"
 - c) git message -am "I'm coding"
 - d) None of these
- VI. Which of the following shortcut to staging all the changes you have?
 - a) git push -am "Message"
 - b) git add .
 - c) git commit add.

d) git commit.

VII. Which of the following command is used to give a message description?

- a) Git command -m
- b) Git command -d
- c) Git command -message
- d) None of the mentioned

VIII. Point out the wrong statement

- a) You need GitHub to use Git
- b) Github allows you to share repositories with others
- c) GitHub allows to access others repositories
- d) All of the mentioned

04. Apart from git and GitHub version control systems, list other eight (8) version control systems you know. **(4 marks)**

05. What are four (4) benefits of using version control systems? **(4 marks)**

06. Define the following GIT commands **(5 marks)**

- a) git init
- b) git add
- c) git config
- d) git checkout
- e) git remote

07. Name four (4) benefits of using GitHub. **(4marks)**

08. Explain three (3) types of version control systems: local, centralized and distributed version control systems. **(3 marks)**

09. Differentiate bare repositories from non-bare repositories **(2 marks)**

10. Outline four (4) problems that may be presented without the existence of version control systems **(4 marks)**

11. Relate steps to follow for creating new branch in GitHub **(3 marks)**

12. Outline steps to follow for deleting existing repository in GitHub **(3 marks)**

13. Explain the following terms: **(3 marks)**

- a) Staging area
- b) Working directory
- c) Remote repository

14. Match the version control terminology in column A to its description in column B by writing number with its corresponding **(3 marks)**

Answer	Column A	Column B
	1. pull	A. will list branches
	2. push	B. it is used to record the changes in the repository

	3. branch	C. used to upload local repository contents to a remote repository
	4. commit	D. used to fetch and download contents from a remote repository and immediately update the local repository to match that content
	5. fetch	E. downloads changes from a remote repository without modifying the local repository
	6. clone	F. Creates a local copy of a project that already exists remotely.

15. Rewrite sentences below and complete them with the following words: CMD, computer, push and remote. **(2 marks)**

Git can be installed on [REDACTED]. Once running git commands you can use [REDACTED] or git bash. We can use different git commands in order to perform different tasks such as create a repository, clone a repository, [REDACTED] local repository to [REDACTED]VC and others.

16. Identify the meaning of pull request

17. Utilize the correct syntax to show how to perform the following in git: **(2 marks)**

- a) To unstage a file in git.
- b) Edit commit message
- c) To rename a branch in git
- d) delete the created branch in git

SECTION B: ATTEMPT ANY THREE (3) QUESTIONS **(30 marks)**

18. When working on Git, there may happen conflict. Answer the questions below related to conflict in Git: **(10 marks)**

- i. Define clearly the meaning of conflict in Git
- ii. List the steps for resolving conflict in Git

19. The image below shows git configuration settings. Analyze it carefully and provide answers to questions that follow: **(10 marks)**

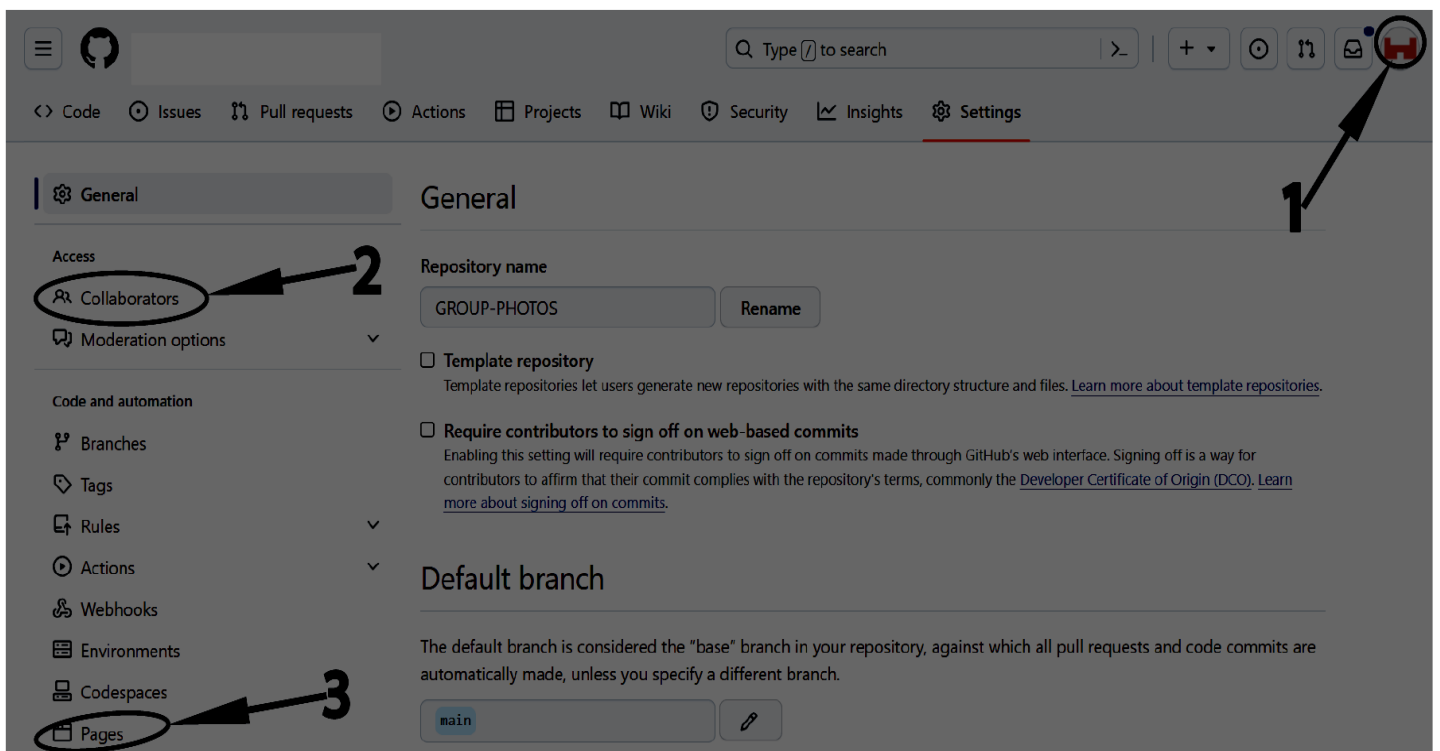
```
MINGW64/c/Users/ATHANASE/Desktop/pp
diff.astextplain.textconv=astextplain
filter.lfs.clean=git-lfs clean -- %f
filter.lfs.smudge=git-lfs smudge -- %f
filter.lfs.process=git-lfs filter-process
filter.lfs.required=true
http.sslbackend=openssl
http.sslcainfo=C:/Program Files/Git/mingw64/etc/ssl/certs/ca-bundle.crt
core.autocrlf=true
core.fscache=true
core.symlinks=false
pull.rebase=false
credential.helper=manager
credential.https://dev.azure.com.usehttppath=true
init.defaultbranch=main
user.email=collaborators2024@gmail.com
user.name=Project_collaborators
core.repositoryformatversion=0
core.filemode=false
core.bare=false
core.logallrefupdates=true
core.symlinks=false
core.ignorecase=true
[...skipping...]
diff.astextplain.textconv=astextplain
filter.lfs.clean=git-lfs clean -- %f
filter.lfs.smudge=git-lfs smudge -- %f
filter.lfs.process=git-lfs filter-process
filter.lfs.required=true
http.sslbackend=openssl
http.sslcainfo=C:/Program Files/Git/mingw64/etc/ssl/certs/ca-bundle.crt
core.autocrlf=true
core.fscache=true
core.symlinks=false
pull.rebase=false
credential.helper=manager
credential.https://dev.azure.com.usehttppath=true
init.defaultbranch=main
user.email=collaborators2024@gmail.com
user.name=Project_collaborators
core.repositoryformatversion=0
core.filemode=false
core.bare=false
core.logallrefupdates=true
core.symlinks=false
core.ignorecase=true
user.name=athanase
```

- According to information shown on the image, state the email and the user name
- According to information shown on the image, state the name of branch
- What are git commands to run in order to set email and user name?
- Analyze how you can unset configuration settings (email and username).

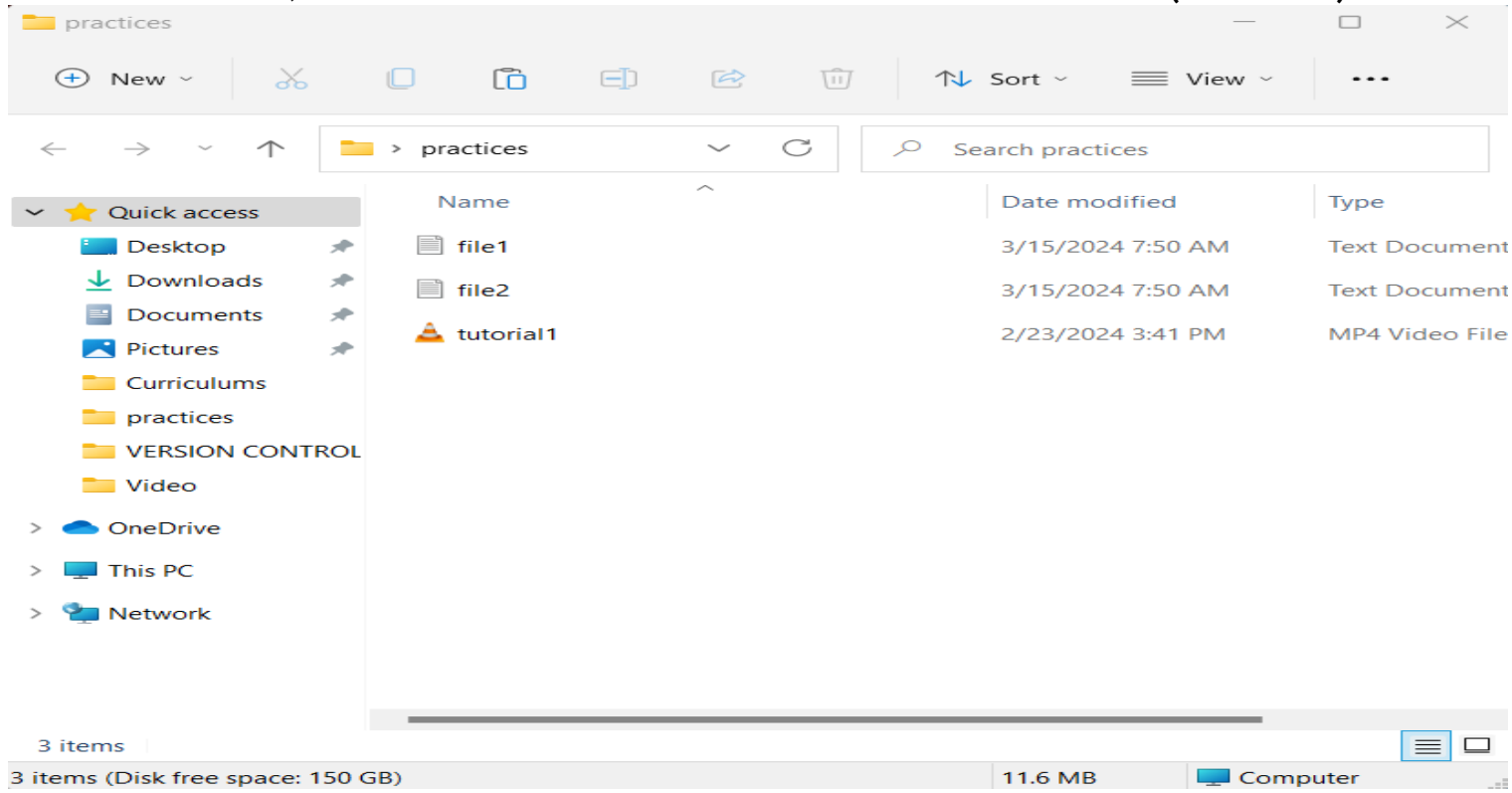
20. The picture below is the GitHub's logged in account. Analyze it and answer the questions that follow: **(10 marks)**



- i. Show where to click for signing out
 - ii. Show where to click for creating new repository
 - iii. Discover the number of repositories created for this account
- 21.** examine carefully the picture below and respond to the questions that follow: **(10 marks)**



- i. Which tab to be used in order to deploy the website to make it visible online to visitors?
 - ii. On which tab to be clicked in order to invite people?
 - iii. Demonstrate where to click for adding another account
 - iv. determine the name repository
- 22.** With the help of table, compare git pull and git fetch. **(10 marks)**

SECTION C: ATTEMPT ONLY ONE (1) QUESTION**(15 marks)****23.** Create a diagram of GIT architecture.**(15 marks)****24.** The picture below is a working directory that contains three files names file1, file2 and tutorial1.**(15 marks)**

Suppose that file1 and file2 have .txt extension and tutorial1 has .mp4 extension.

- Create a git command to initialize it. Means to create a git empty repository.
- Create a git command to add these all files in the staging area.
- Create a git command for committing changes with the following commit message "save three files"
- Create a git command to add another branch called "pages"
- Create a git command to switch to pages branch

END OF ASSESSMENT