### Git basic

1. How do I create a new branch in Git?

2. How do I switch branches in Git?

3. How do I push changes to a remote repository?

4. Write a script that will take a list of files and move them to a new branch.

5. Write a script that will clone a remote repository and checkout a specific branch.

6. Write a script that will compare two different branches and list the differences in their contents.

7. Create a script that will list all commits made by a specific user.

### Solutions

1. To create a new branch in Git, you can use the following command:

$ git branch <branch-name>

2. To switch branches in Git, use the following command:

$ git checkout <branch-name>

3. To push changes to a remote repository, you can use the following command:

$ git push origin <branch-name>

Note: `origin` is the name of the remote repository and `branch-name` is the name of the branch you want to push to the remote repository.

4. Here is a bash script that will take a list of files and move them to a new branch:

| #!/bin/bash  # Check if a branch name is provided  if [ $# -eq 0 ]; then  echo "Please provide a branch name."  exit 1  fi  # Create a new branch  git branch "$1"  # Switch to the new branch  git checkout "$1"  # Read the list of files from the file "files.txt"  files=$(cat files.txt)  # Loop through each file in the list  for file in $files; do  # Move the file to the new branch  git mv "$file" .  done  # Commit the changes  git commit -m "Moving files to the new branch" |
| --- |

5. Here is a bash script that will clone a remote repository and checkout a specific branch:

| #!/bin/bash  # Check if a repository URL and a branch name are provided  if [ $# -lt 2 ]; then  echo "Please provide a repository URL and a branch name."  exit 1  fi  # Clone the remote repository  git clone "$1"  # Change to the newly cloned repository's directory  cd $(basename "$1" .git)  # Checkout the specified branch  git checkout "$2" |
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6. Here is a bash script that will compare two different branches and list the differences in their contents:

| #!/bin/bash  # Check if two branch names are provided  if [ $# -lt 2 ]; then  echo "Please provide two branch names to compare."  exit 1  fi  # Compare the two branches  git diff "$1" "$2" |
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7. Here is a script that will list all commits made by a specific user:

| #!/bin/bash  # Check if a username is provided  if [ $# -eq 0 ]; then  echo "Please provide a username."  exit 1  fi  # List all commits made by the specified user  git log --author="$1" |
| --- |