

# Essential Git Commands

## Setup and Configuration – VS to Git

### 1. Add username

```
git config --global user.name "Your Name"
```

### 2. Add E-mail address

```
git config --global user.email your.email@example.com
```

## Repository Initialization and Cloning

### 1. Initializing a New Repository

```
git init
```

### 2. Clone an Existing Repository

```
git clone <repository-url>
```

### 3. Clone Repository – Specific Branch

```
git clone --branch <branch_name> <repository_url>
```

## Remote Repositories

### 1. Add a Remote Repository

```
git remote add origin <repository-url>
```

### 2. Fetch all branches

```
git fetch -all
```

## Basic Workflow

### 1. Add Changes to Staging Area – specific file

```
git add <file>
```

### 2. Add Changes to Staging Area – All files

```
git add .
```

### 3. Commit Changes

```
git commit -m "Your commit message"
```

### 4. Push Changes

```
git push
```

### 5. Pull Updates from Remote Repository

```
git pull
```

### 6. Stash Uncommitted Changes

```
git stash
```

### 7. Apply Stashed Changes

```
git stash pop
```

## Branching and Merging

### 1. Create a New Branch

```
git branch <branch-name>
```

### 2. Switch to a Branch

```
git checkout <branch-name>
```

### 3. Create and switch to a new branch

```
git checkout -b <branch-name>
```

## Reverting Changes

### **1. Revert a Commit**

#### **a. Find the necessary commit hash**

```
git revert <commit-hash>
```

### **2. Reset to Last Commit**

```
git reset --hard
```