

## 1. Write code for a simple user registration form for an event.

Step 1:

- ✓ Install Python from <http://python.org>
- ✓ Open powershell in windows
- ✓ Install Flask and MySQL with following commands
  - pip install flask
  - pip install flask-mysqldb

Step 2:

- ✓ Install xampp in windows
- ✓ Run xampp control panel then run apache and mysql
- ✓ Create database "mydb" in <http://localhost/phpmyadmin>
- ✓ Create a table

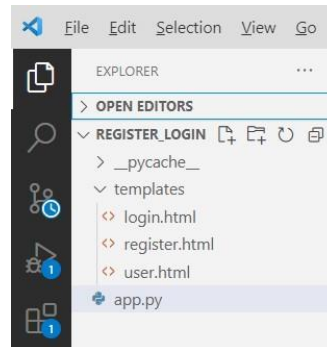
```
CREATE TABLE `user` (  
    `userid` int(11) NOT NULL,  
    `name` varchar(100) NOT NULL,  
    `email` varchar(100) NOT NULL,  
    `password` varchar(255) NOT NULL  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;  
  
ALTER TABLE `user`  
  
    ADD PRIMARY KEY (`userid`);
```

Step 3:

- ✓ Create a project (in powershell)
  - >md Register\_Login
- ✓ Change to Project
  - >cd Register\_Login
- ✓ Code . (it opens VS Code)

Step 4:

- ✓ Create app.py and write below code in the file
- ✓ Create templates folder under project
- ✓ Create register.html, login.html and user.html
- ✓ Write below code in respective files
- ✓ Project Structure:



### **app.py**

```
from flask import Flask, render_template, request, redirect, url_for, session
```

```
from flask_mysqlldb import MySQL
```

```
import MySQLdb.cursors
```

```
import re
```

```
app = Flask(__name__)
```

```
app.secret_key = 'xyzsdfg'
```

```
app.config['MYSQL_HOST'] = 'localhost'
```

```
app.config['MYSQL_USER'] = 'root'
```

```
app.config['MYSQL_PASSWORD'] = ''
```

```
app.config['MYSQL_DB'] = 'mydb'
```

```
mysql = MySQL(app)
```

```
@app.route('/')
```

```
@app.route('/login', methods =['GET', 'POST'])

def login():

    mesage = "

    if request.method == 'POST' and 'email' in request.form and 'password' in
request.form:

        email = request.form['email']

        password = request.form['password']

        cursor = mysql.connection.cursor(MySQLdb.cursors.DictCursor)

        cursor.execute('SELECT * FROM user WHERE email = % s AND password = % s',
(email, password, ))

        user = cursor.fetchone()

        if user:

            session['loggedin'] = True

            session['userid'] = user['userid']

            session['name'] = user['name']

            session['email'] = user['email']

            mesage = 'Logged in successfully !'

            return render_template('user.html', mesage = mesage)

        else:

            mesage = 'Please enter correct email / password !'

            return render_template('login.html', mesage = mesage)

@app.route('/logout')

def logout():
```

```
session.pop('loggedin', None)

session.pop('userid', None)

session.pop('email', None)

return redirect(url_for('login'))

@app.route('/register', methods =['GET', 'POST'])

def register():

    message = "

    if request.method == 'POST' and 'name' in request.form and 'password' in
request.form and 'email' in request.form :

        userName = request.form['name']

        password = request.form['password']

        email = request.form['email']

        cursor = mysql.connection.cursor(MySQLdb.cursors.DictCursor)

        cursor.execute('SELECT * FROM user WHERE email = % s', (email, ))

        account = cursor.fetchone()

        if account:

            message = 'Account already exists !'

        elif not re.match(r'[^@]+@[^@]+\.[^@]+', email):

            message = 'Invalid email address !'

        elif not userName or not password or not email:

            message = 'Please fill out the form !'

        else:
```

```
        cursor.execute('INSERT INTO user VALUES (NULL, % s, % s, % s)', (userName,  
email, password, ))
```

```
        mysql.connection.commit()
```

```
        mesage = 'You have successfully registered !'
```

```
    elif request.method == 'POST':
```

```
        mesage = 'Please fill out the form !'
```

```
    return render_template('register.html', mesage = mesage)
```

```
if __name__ == "__main__":
```

```
    app.run()
```

### **login.html:**

```
<html>

<head>

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>User Login Form</title>

<link rel="stylesheet"
href="https://cdn.jsdelivr.net/npm/bootstrap@4.6.1/dist/css/bootstrap.min.css">

</head>

<body>

<div class="container">

    <h2>User Login</h2>

    <form action="{{ url_for('login') }}" method="post">

        {% if mesage is defined and mesage %}

            <div class="alert alert-warning">{{ mesage }}</div>

        {% endif %}

        <div class="form-group">

            <label for="email">Email:</label>

            <input type="email" class="form-control" id="email"
name="email" placeholder="Enter email" name="email">

        </div>

        <div class="form-group">

            <label for="pwd">Password:</label>
```

```
        <input type="password" class="form-control" id="password"
name="password" placeholder="Enter password" name="pswd">
```

```
    </div>
```

```
    <button type="submit" class="btn btn-primary">Login</button>
```

```
    <p class="bottom">Dont't have an account? <a class="bottom"
href="{{url_for('register')}}"> Register here</a></p>
```

```
    </form>
```

```
</div>
```

```
</body>
```

```
</html>
```

### **register.html:**

```
<html>

<head>

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>User Registration Form</title>

<link rel="stylesheet"
href="https://cdn.jsdelivr.net/npm/bootstrap@4.6.1/dist/css/bootstrap.min.css">

</head>

<body>

<div class="container">

    <h2>User Registration</h2>

    <form action="{{ url_for('register') }}" method="post">

        {% if message is defined and message %}

            <div class="alert alert-warning">{{ message }}</div>

        {% endif %}

        <div class="form-group">

            <label for="name">Name:</label>

            <input type="text" class="form-control" id="name" name="name"
placeholder="Enter name" name="name">

        </div>

        <div class="form-group">

            <label for="email">Email:</label>
```



```
        <input type="email" class="form-control" id="email"
name="email" placeholder="Enter email" name="email">
```

```
    </div>
```

```
    <div class="form-group">
```

```
        <label for="pwd">Password:</label>
```

```
        <input type="password" class="form-control" id="password"
name="password" placeholder="Enter password" name="pswd">
```

```
    </div>
```

```
    <button type="submit" class="btn btn-primary">Register</button>
```

```
    <p class="bottom">Already have an account? <a class="bottom"
href="{{url_for('login')}}"> Login here</a> </p>
```

```
    </form>
```

```
</div>
```

```
</body>
```

```
</html>
```

**user.html:**

```
<html>

<head>

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<title>User Account</title>

<link rel="stylesheet"
href="https://cdn.jsdelivr.net/npm/bootstrap@4.6.1/dist/css/bootstrap.min.css">

</head>

<body>

<div class="container">

    <div class="row">

        <h1>User Profile</h1>

    </div>

    <br>

    <div class="row">

        Logged in : <strong>{{session.name}} | <a href="{{ url_for('logout') }}">
Logout</a>

    </div>

    <br> <br>

    <div class="row">

        <h2>Welcome to the user profile page...</h2>
```

</div>

</div>

</body>

</html>

Step5:

- ✓ Select app.py then run it.
- ✓ Open <http://127.0.0.1:5000/> in browser

### **Output:**



The screenshot shows a web browser window with the title "User Login Form". The address bar displays "127.0.0.1:5000". The page content includes a heading "User Login", followed by an "Email:" label and a text input field with the placeholder "Enter email". Below this is a "Password:" label and a text input field with the placeholder "Enter password". A blue "Login" button is positioned below the password field. At the bottom, there is a link that says "Don't have an account? [Register here](#)".

127.0.0.1:5500/register

## User Registration

Name:

Email:

Password:

Register

Already have an account? [Login here](#)

127.0.0.1:5500/register

## User Registration

Name:

Email:

Password:

Register

Already have an account? [Login here](#)

← → 127.0.0.1:5000/register

## User Registration

You have successfully registered !

Name:

Email:

Password:

[Register](#)

← → 127.0.0.1:5000

## User Login

Email:

Password:

[Login](#)

[Don't have an account? Register here](#)

← → 127.0.0.1:5000/login

## User Profile

Logged in : **raziya** | [Logout](#)

Welcome to the user profile page...

## Database in xamp phpmyadmin

Server: 127.0.0.1 » Database: mydb » Table: user

Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.

Showing rows 0 - 6 (7 total, Query took 0.0005 seconds)

```
SELECT * FROM `user`
```

☐ Profiling [[Edit inline](#)] [[Edit](#)] [[Explain SQL](#)] [[Create PHP code](#)] [[Refresh](#)]

☐ Show all | Number of rows: 25 | Filter rows:

Extra options

userid	name	email	password
123	naveen kumar	naveen76720@gmail.com	Naveen1234
201	varshitha	varshitha123@gmail.com	Varshitha1234
301	sniram	sniram@gmail.com	111
NULL	m	m@gmail.com	1
NULL	aammm	a@gm.com	11
NULL	deepika	deepika@gmail.com	1234
NULL	raziya	raz@gmail.com	123

☐ Show all | Number of rows: 25 | Filter rows:

Query results operations

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[Bookmark this SQL query](#)

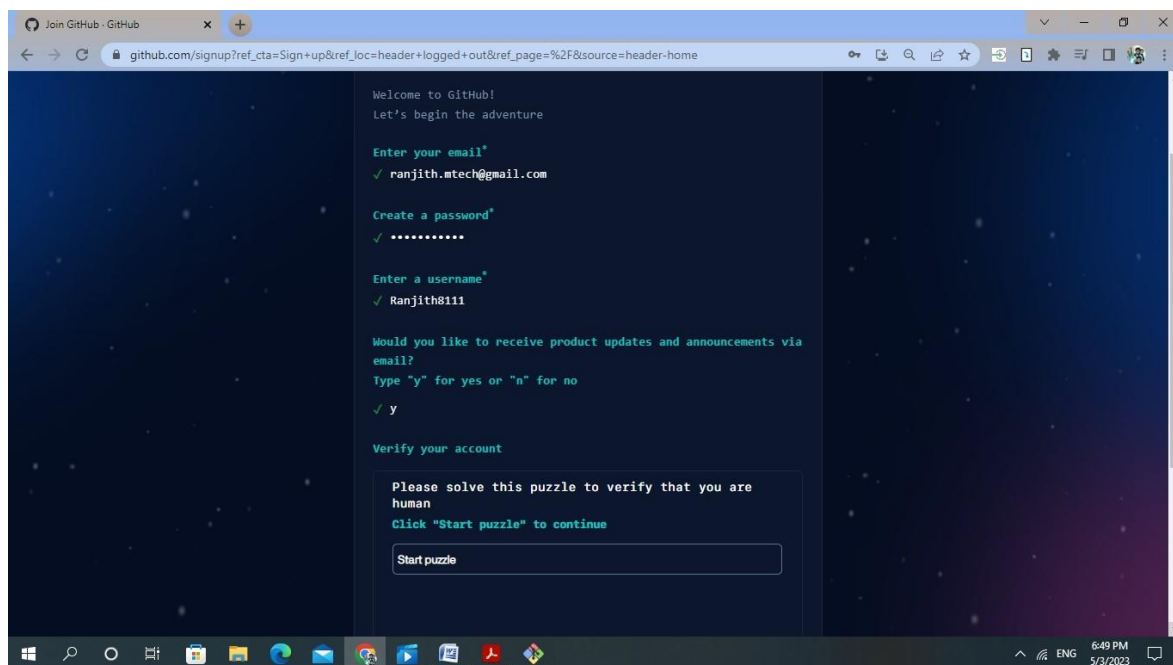
## 2. Explore Git and GitHub commands.

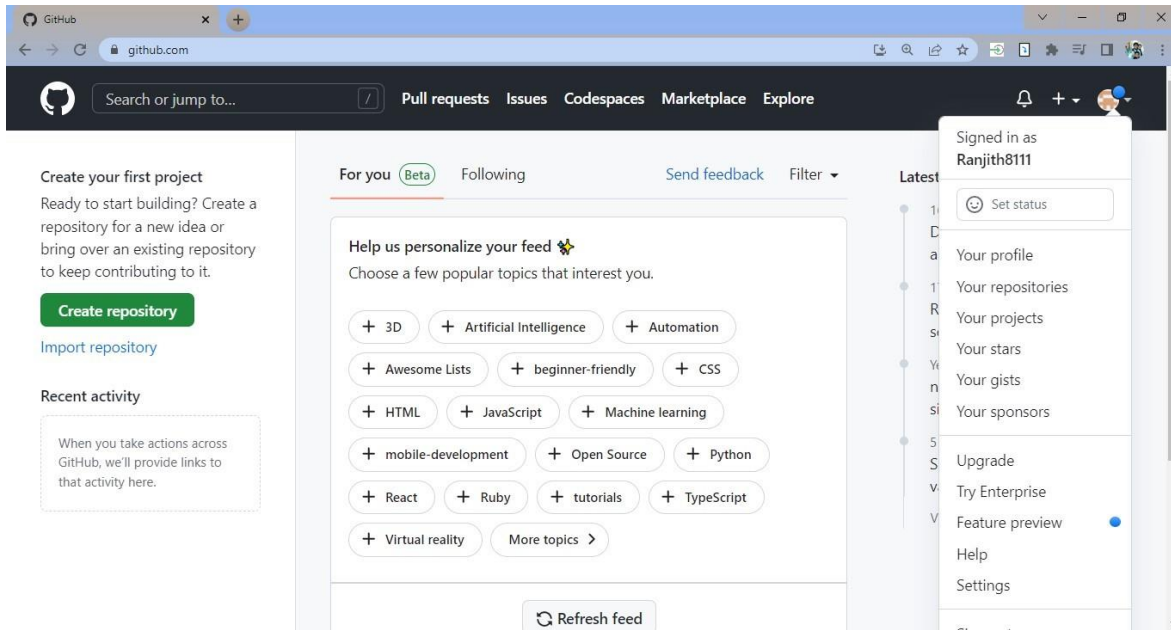
Step 1:

- ✓ Download gitbash from <https://git-scm.com/>
- ✓ Install gitbash

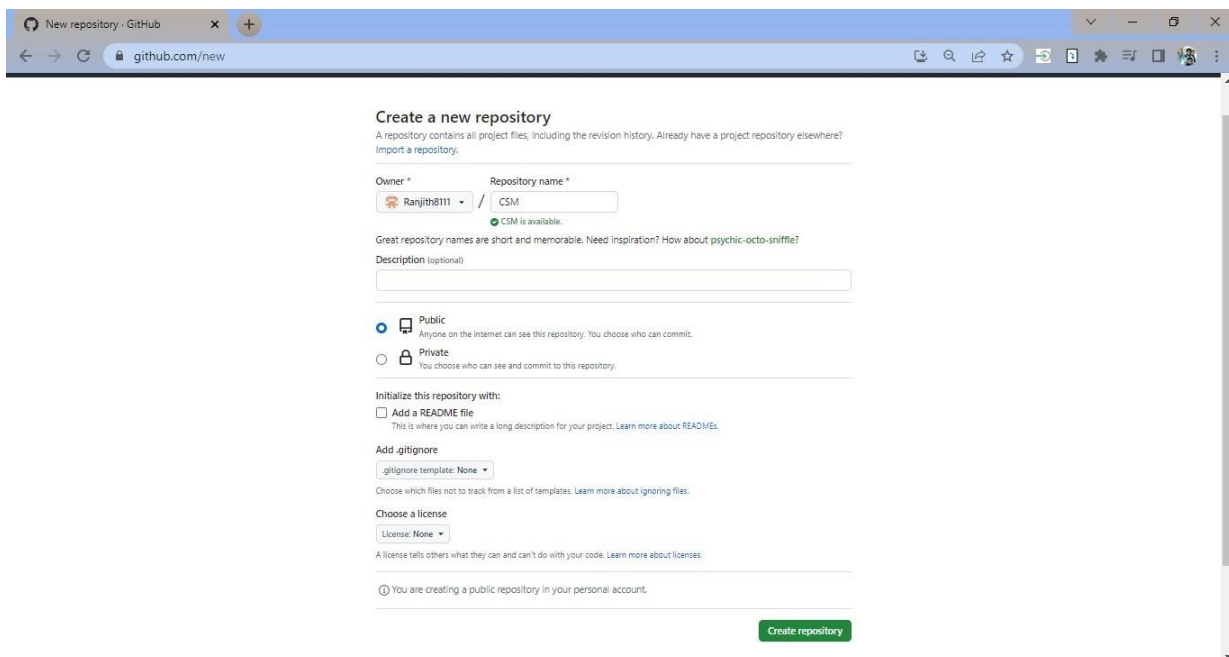
Step 2:

- ✓ Create an account with <https://github.com/>





✓ Create a repository





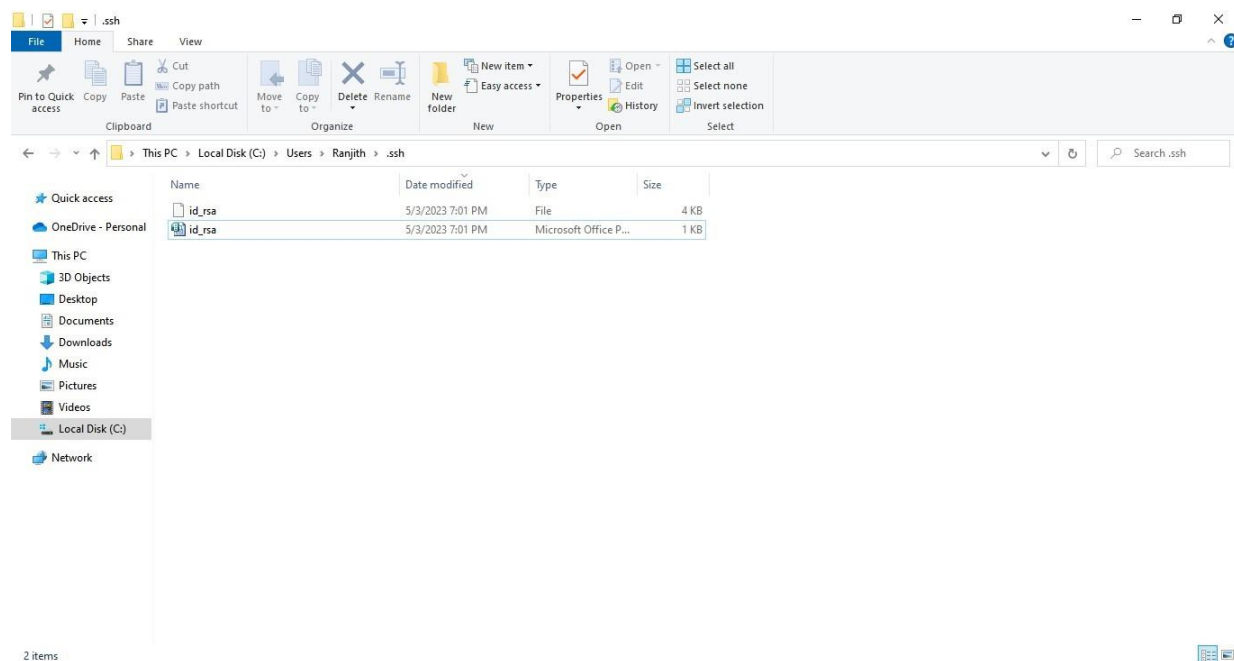
## ✓ Create SSH key in gitbash

```
MINGW64/c/Users/Ranjith

Ranjith@DESKTOP-3AL783Q MINGW64 ~ (main)
$ ssh-keygen -t rsa -b 4096 -C "ranjith.mtech@gmail.com"
Generating public/private rsa key pair.
Enter file in which to save the key (/c/Users/Ranjith/.ssh/id_rsa):
Created directory '/c/Users/Ranjith/.ssh'.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /c/Users/Ranjith/.ssh/id_rsa
Your public key has been saved in /c/Users/Ranjith/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:BYx0h3UN+zff6kPaEzYe03EbbwChno/1V0f1R8z/yxU ranjith.mtech@gmail.com
The key's randomart image is:
+---[RSA 4096]-----+
|  ..oooo oo.+o |
|  ..oo . o+.= |
|   . oo o* |
|   . o++E |
|  S  o.+*& |
|   +**O |
|   .+.O= |
|   . o.. |
|   . o. |
+---[SHA256]-----+

Ranjith@DESKTOP-3AL783Q MINGW64 ~ (main)
$
```

## ✓ Open and copy content of **id\_rsa** from **.ssh** folder in user folder



- ✓ Paste the content in key field in SSH keys/ Add new

SSH keys / Add new

Title: SSH key

Key type: Authentication Key

Key: AAAAB3NzaC1yc2EAAAADAQABAAQCAQCs/U+Of50lonpRmQZQTixiBb1C4WivEfg9OZ9Advtk8R0UAvp7tsyeP5QN64T3HiakhWIXQaPbet8VVAnYtcSIBYpXrCGz9Mv2ucWc6ATOYw93RWbWbK3Cg6oilOffRMOcPxeOz/qDtMP86crAJOncfAhBl/ZATDhRXmgqIxiS14RU3Nvvgzq3nW1tUumUJLTxDafGXLnL7zuQe+/QphybiXfR5i9HxznRZlplnhj2cusOIMqK+pMKAMQwQMarrHsXrwasyGq0k7jXhQFhynYinSXx9I0J01QgsXq4w5Fsn1nkc51NWKkc1JnxZeRHLVPqZJR584WVjzdwPEkD/KzUv6ccaAYBqVvyP3xSkVqKbS7UOUdSkChtOW/GOxUXjqplYOcbbzGm2XJmwLoJX0I6JwUwdOHKCAZ760mpGJVZBM4bXJkPEKjNcpQyZJBj4tkU5P0kerdN9D74wrMAGXitmURQyqwr+FbrfiWaZVDo40UGCgRuE68D8WV4ImKHT3mWLn0db+22K/0j2RNi7H4QFjhV+39v7yUmC55c/YU77BisNFWmDT7tnFOQQLBMQCVsAgKBQOmKM4DPHGQ/S AjLDiQte2SxuFhXHrt8/TYLOVLBTehalzyf7eatchSbKwElPfpHtn8FF18svU/gT5IEtw== ranjith.mtech@gmail.com

Add SSH key

### Step 3:

- ✓ Do following git commands in gitbash

```
MINGW64/c/Users/Ranjith/demo
$ git -v
git version 2.40.1.windows.1

Ranjith@DESKTOP-3AL783Q MINGW64 ~ (main)
$ mkdir demo

Ranjith@DESKTOP-3AL783Q MINGW64 ~ (main)
$ cd demo

Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (main)
$ git init
Initialized empty Git repository in C:/Users/Ranjith/demo/.git/

Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$ touch First.txt

Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$ git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    First.txt

nothing added to commit but untracked files present (use "git add" to track)

Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$
```

MINGW64/c/Users/Ranjith/demo

```
Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$ git add First.txt
```

```
Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$ git status
On branch master
```

No commits yet

```
Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
    new file:   First.txt
```

```
Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$ git log
```

fatal: your current branch 'master' does not have any commits yet

```
Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$
```

MINGW64/c/Users/Ranjith/demo

```
Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$ git commit -m "This is First File from Local Repository"
[master (root-commit) 0cd2345] This is First File from Local Repository
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 First.txt
```

```
Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$ git log
commit 0cd23455230d8f9350dec3c0ee065df8c53c0790 (HEAD -> master)
Author: M Ranjith Kumar <m_ranjithkumar@sritw.org>
Date:   Wed May 3 19:11:39 2023 +0530
```

This is First File from Local Repository

```
Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$ git status
On branch master
nothing to commit, working tree clean
```

```
Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$
```

MINGW64/c/Users/Ranjith/demo

```
Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$ git branch branch_1
```

```
Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$ git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    CSM/
```

nothing added to commit but untracked files present (use "git add" to track)

```
Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$ git log
commit 0cd23455230d8f9350dec3c0ee065df8c53c0790 (HEAD -> master, branch_1)
Author: M Ranjith Kumar <m_ranjithkumar@sritw.org>
Date:   Wed May 3 19:11:39 2023 +0530
```

This is First File from Local Repository

```
Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$ git checkout branch_1
Switched to branch 'branch_1'
```

```
Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (branch_1)
$ git log --oneline
0cd2345 (HEAD -> branch_1, master) This is First File from Local Repository
```

```
Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (branch_1)
$
```

MINGW64/c/Users/Ranjith/demo

```
Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (branch_1)
$ git checkout master
Switched to branch 'master'
```

```
Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$ git remote add origin git@github.com:Ranjith8111/CSM.git
```

```
Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$ git push -u origin master
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 243 bytes | 243.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To github.com:Ranjith8111/CSM.git
 * [new branch]      master -> master
branch 'master' set up to track 'origin/master'.
```

```
Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$
```

Ranjith8111/CSM

github.com/Ranjith8111/CSM

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Go to file

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<> Code

About

mrkranjith This is First File from Local Repository 0cd2345 13 minutes ago 1 commit

First.txt This is First File from Local Repository 13 minutes ago

Help people interested in this repository understand your project by adding a README.

Add a README

No description, website, or topics provided.

0 stars

1 watching

0 forks

Releases

No releases published

Create a new release

https://github.com/Ranjith8111/CSM

### 3. Practice Source code management on GitHub. Experiment with the source code written in exercise 1.

Do the following git commends

```
MINGW64/c/Users/Ranjith/demo
Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$ cp -r ../Desktop/M.Ranjith_Kumar/DevOps/Lab/Exp1 .

Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$ ls
CSM/  Exp1/  First.txt

Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.

Untracked files:
  (use "git add <file>..." to include in what will be committed)
  CSM/
  Exp1/

nothing added to commit but untracked files present (use "git add" to track)

Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$ git add Exp1/

Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   Exp1/__pycache__/app.cpython-311.pyc
    new file:   Exp1/app.py
    new file:   Exp1/templates/login.html
    new file:   Exp1/templates/register.html
    new file:   Exp1/templates/user.html

Untracked files:
  (use "git add <file>..." to include in what will be committed)
  CSM/

Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$

MINGW64/c/Users/Ranjith/demo
$ git status
On branch master
Your branch is up to date with 'origin/master'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   Exp1/__pycache__/app.cpython-311.pyc
    new file:   Exp1/app.py
    new file:   Exp1/templates/login.html
    new file:   Exp1/templates/register.html
    new file:   Exp1/templates/user.html

Untracked files:
  (use "git add <file>..." to include in what will be committed)
  CSM/

Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$ git commit -m "This is DevOps Lab Exp1 Program"
[master c8d987e] This is DevOps Lab Exp1 Program
5 files changed, 156 insertions(+)
create mode 100644 Exp1/__pycache__/app.cpython-311.pyc
create mode 100644 Exp1/app.py
create mode 100644 Exp1/templates/login.html
create mode 100644 Exp1/templates/register.html
create mode 100644 Exp1/templates/user.html

Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$ git status
On branch master
Your branch is ahead of 'origin/master' by 1 commit.
  (use "git push" to publish your local commits)

Untracked files:
  (use "git add <file>..." to include in what will be committed)
  CSM/

nothing added to commit but untracked files present (use "git add" to track)

Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$
```



MINGW64/c:/Users/Ranjith/demo

```
Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$ git push -u origin master
Enumerating objects: 11, done.
Counting objects: 100% (11/11), done.
Delta compression using up to 4 threads
Compressing objects: 100% (9/9), done.
Writing objects: 100% (10/10), 4.67 KiB | 2.33 MiB/s, done.
Total 10 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), done.
To github.com:Ranjith8111/CSM.git
   0cd2345..c8d987e  master -> master
branch 'master' set up to track 'origin/master'.

Ranjith@DESKTOP-3AL783Q MINGW64 ~/demo (master)
$
```

The screenshot shows a web browser displaying the GitHub repository page for 'Ranjith8111 / CSM'. The page is public and has 1 branch (master) and 0 tags. The repository description is 'This is DevOps Lab Exp1 Program'. The file list shows 'Exp1' (1 minute ago) and 'First.txt' (22 minutes ago). The 'About' section states 'No description, website, or topics provided.' and shows 0 stars, 1 watching, and 0 forks. The 'Releases' section shows 'No releases published' and a link to 'Create a new release'. A blue banner at the bottom encourages adding a README.

Ranjith8111 / CSM (Public)

Search or jump to... Pull requests Issues Codespaces Marketplace Explore

master 1 branch 0 tags Go to file Add file <> Code

**Ranjith8111** This is DevOps Lab Exp1 Program c8d987e 1 minute ago 2 commits

File	Description	Time
Exp1	This is DevOps Lab Exp1 Program	1 minute ago
First.txt	This is First File from Local Repository	22 minutes ago

Help people interested in this repository understand your project by adding a README. [Add a README](#)

**About**  
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