GROUP 13
SOFTWARE DEVELOPMENT TOOLS

WEEK 4:INTERGRATED DEVELOPMENT ENVIRONMENT

TOOL OF FOCUS: VISUAL STUDIO CODE

INTRODUCTION

VISUAL STUDIO CODE:

It is a code editor created for development tasks like writing, editing, task running, debugging code and version control.

FEATURES

- Supports multiple languages.
- Multiple extensions.
- Integrated terminal.
- Built-in Git Version Control.
- Debugging.

SETTING UP VISUAL STUDIO CODE

The following steps were followed to install Visual Studio Code;

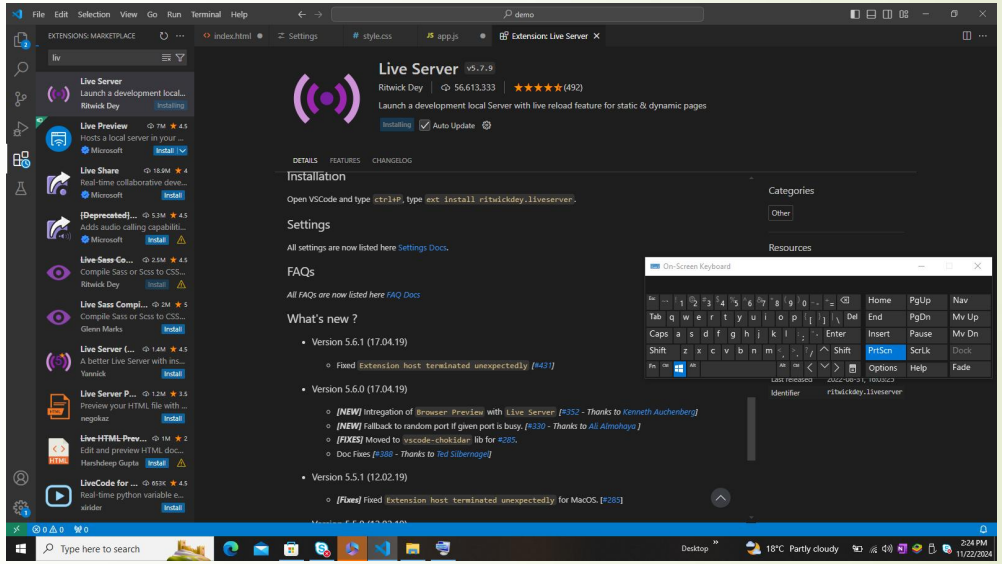
1. **Download:**

- Go to the visual studio code website using your web browser and search for the set-up for the corresponding OS.

continuation

1. **INSTALLATION:**

- The installer was run and prompts were followed.
- VS Code was then launched after installation.
- 2) **EXTENSIONS:**
- The are software components which add new functionality in a VS CODE
- The provide language ,support, code formating debuging tools and more.they can be easily installed from vs code market space.
- Some extension we installed where python ,live server which act as host and manymore



SETTING UP WORKSPACES

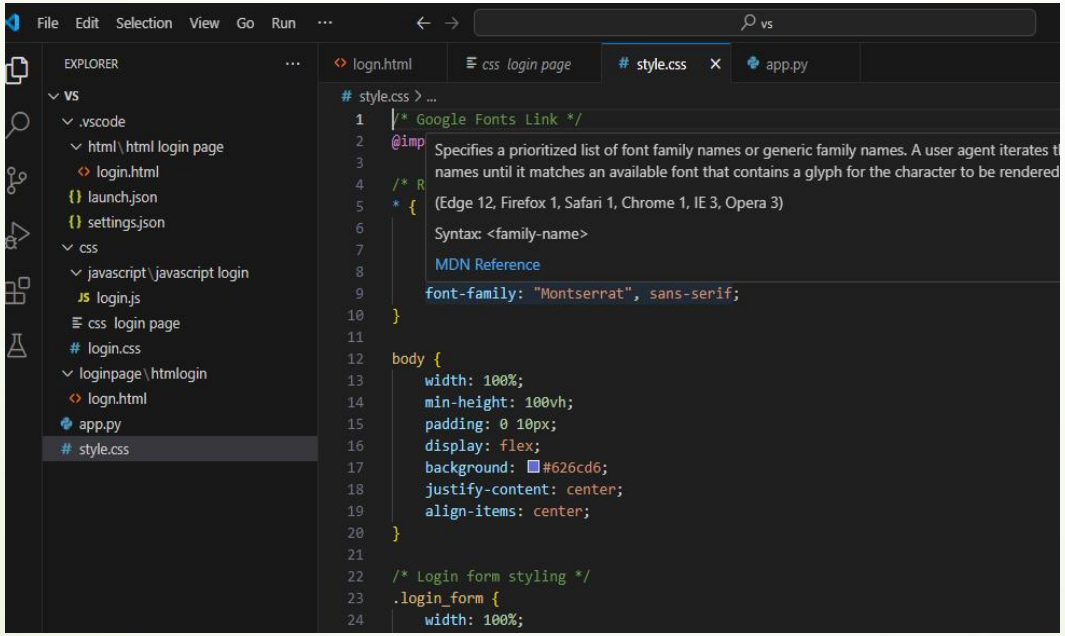
1. CREATING A WORKSPACE:

- **OPEN A FOLDER :** File>Open folder to create a new workspace
- **ADD MULTIPLE FOLDERS FOR THE VARIUOS TASKS :** File>Add folder to workspace.

2. SAVING THE WORKSPACE

After adding the workspace ,

- go to **File>Save Workspace As…**
- Choose location and save the **.code-workspace file**



INSTALLING EXTENSIONS

Extensions are enhancements that improve functionality, and allow users to customize their development environment to better suit their needs.

SETTING UP EXTENSIONS

1. Open extension panel(Ctrl+shift+X)which can also be found on the left side bar.
2. Search for desired extension(Python,Javascript).
3. Select extension and click “install”.
4. Restart VS Code if required
5. Verify installation in Extension Panel.

SIMPLE PROGRAM USING PYTHON (BMI CALCULATOR)

- **INTRODUCTION:**
- **A BODY MASS INDEX CALCULATOR** is a measurement of a person's leanness or corpulence(A Person state of having much fat or not) based on their height and weight, and is intended to quantify tissue mass. It is widely used as a general indicator of whether a person has a healthy body weight for their height. Specifically, the value obtained from the calculation of BMI is used to categorize whether a person is underweight, normal weight, overweight, or obese depending on what range the value falls between. These ranges of BMI vary based on factors such as region and age, and are sometimes further divided into subcategories such as severely underweight or very severely obese. Being overweight or underweight can have significant health effects.
- Its calculated by Using formular
- **BMI = WEIGHT IN KG / HEIGHT SQUARE m**

Below are conditions for a person weight result from BMI

```
if bmi < 18.5
        return "Underweight"
    elif 18.5 <= bmi < 24.9:
        return "Normal weight"
    elif 25 <= bmi < 29.9:
        return "Overweight"
    else:
        return "Obesity"
```

Code screenshots + Output

```python
def calculate_bmi(weight, height):
    """Calculate BMI using weight and height."""
    bmi = weight / (height ** 2)
    return bmi

def get_bmi_category(bmi):
    """Determine the BMI category."""
    if bmi < 18.5:
        return "Underweight"
    elif 18.5 <= bmi < 24.9:
        return "Normal weight"
    elif 25 <= bmi < 29.9:
        return "Overweight"
    else:
        return "Obesity"

def main():
    # Get user input
    weight = float(input("Enter your weight in kilograms: "))
    height = float(input("Enter your height in meters: "))

    # Calculate BMI
    bmi = calculate_bmi(weight, height)

    # Get BMI category
```

```python
        return "Obesity"

def main():
    # Get user input
    weight = float(input("Enter your weight in k
    height = float(input("Enter your height in m

    # Calculate BMI
    bmi = calculate_bmi(weight, height)

    # Get BMI category
    category = get_bmi_category(bmi)

    # Display the result
    print(f"Your BMI is: {bmi:.2f}")
    print(f"BMI Category: {category}")

if __name__ == "__main__":
    main()
```

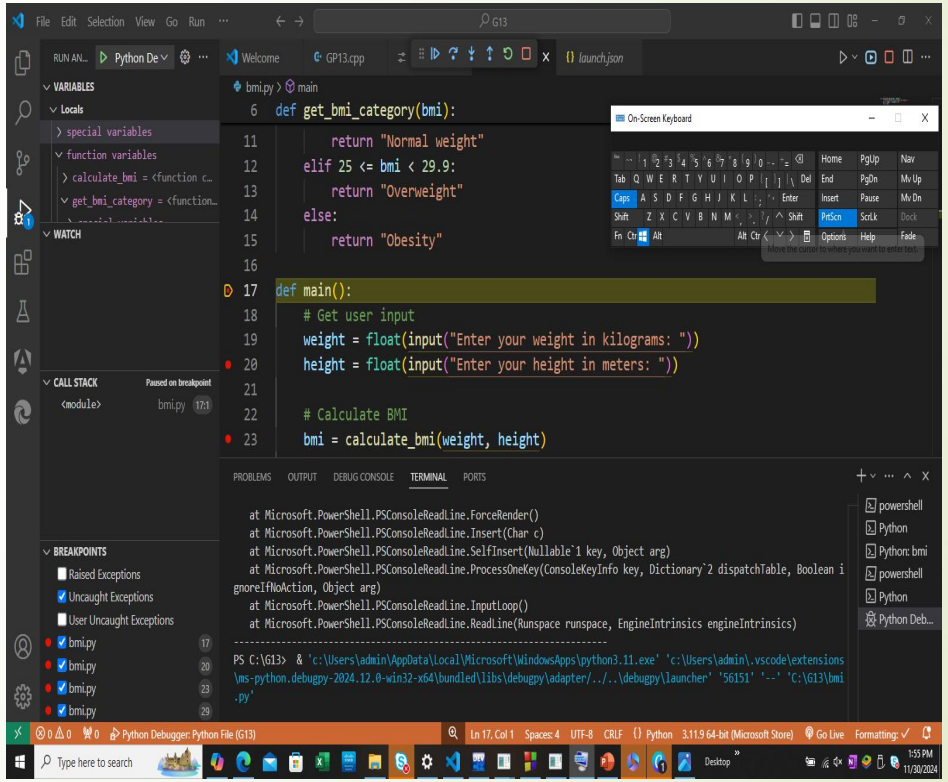
```
PS C:\G13> & C:/Users/admin/AppData/Local/Microsoft/WindowsApps/python3.11.exe c:/G13/bmi.py
Enter your weight in kilograms: 64
Enter your height in meters: 1.62
Your BMI is: 24.39
BMI Category: Normal weight
PS C:\G13>
```

DEBUGING FEATURES

DEBUGING STEPS

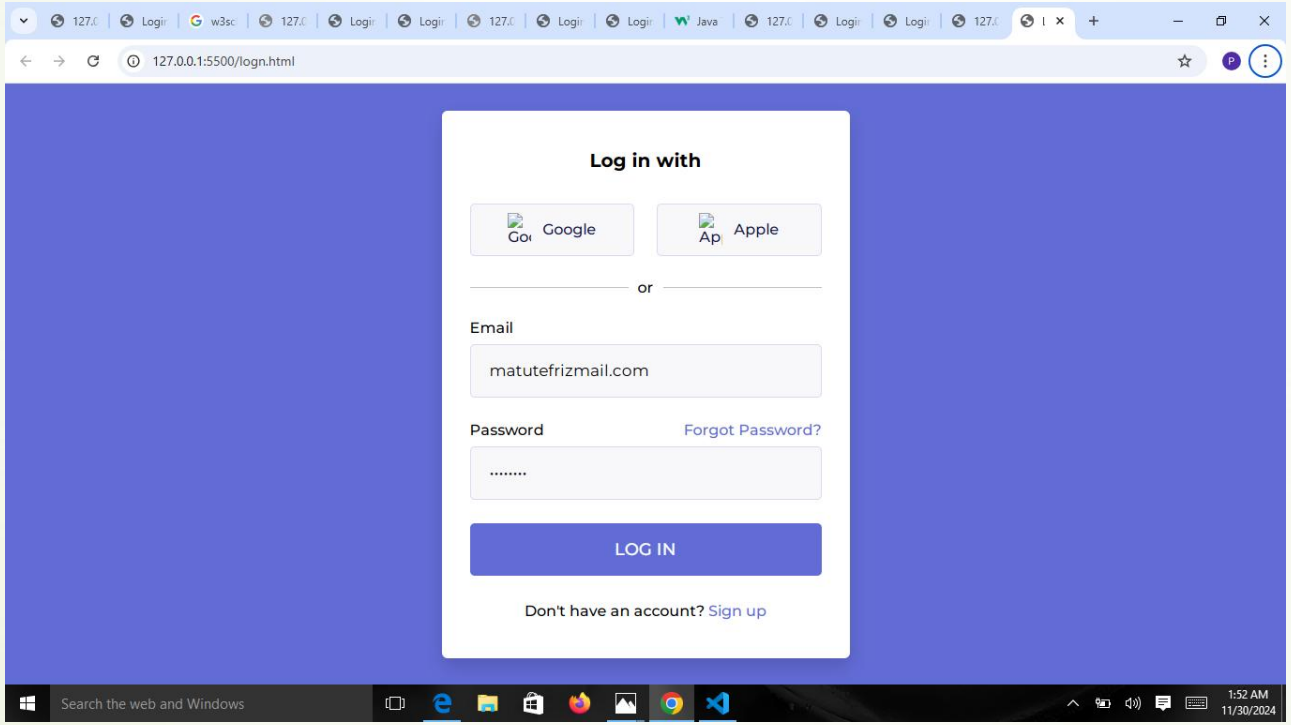
- DEFINATION OF DEBUGING: IT is a process of identify and fixing errors in a software
- STEPS OF DEBUGING OUR CODE
- We open debug view by ctrl+shift+D
- We selected the python file from drop down menu
- We set break points on line 17,20,23 and 29 and press f5 to debug
- We inspect the variables and use toolbar f10 and f11 in steping over and into
- We check debug console for any output error

DEBUGING IMAGE



SPRINT BACKLOG TASK IMPLEMENT

- We implemented a login page on our sprint backlog



Sprint backlog code