PYTHON FOR EVERYONE

Avnit Bambah

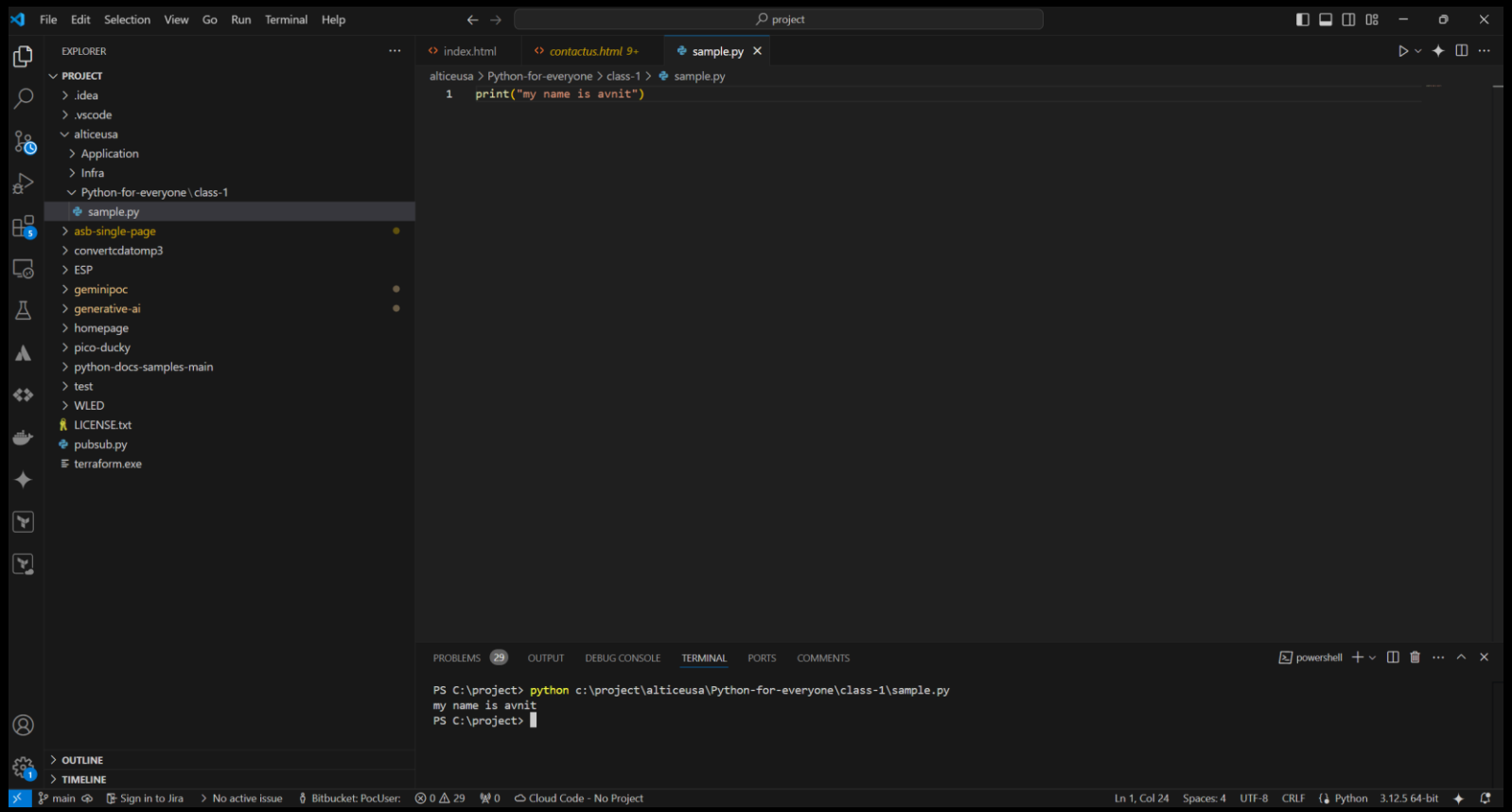
AVNIT BAMBAH

- 20 years of IT experience
  - Developer, Manager, Security Architect
  - BE and MS Computer Science and MBA in Finance, Loyola University
  - Love coding projects, building servers and IoT projects.

INSTALLING PYTHON

- Download
  - https://www.python.org/downloads/
- Development environment
  - Visual studio code https://code.visualstudio.com/download
  - PyCharm Community Edition https://www.jetbrains.com/pycharm/

RUNNING THE FIRST PROGRAM



CREATE A GITHUB ACCOUNT

- Sharing the code
- Share the github account with me before the next session
- fork my repo https://github.com/avnit/Python-for-everyone
- Open the folder Class -1
- These slides are in that folder

GIT HUB ACCOUNT

- **1. Creating a GitHub Account**
- **Go to GitHub:** Open your web browser and navigate to https://github.com/
- **Sign Up:** Click the "Sign up" button.
- **Enter Information:**
  - Provide your email address.
  - Create a strong password (at least 15 characters or 8 with a mix of letters and numbers).
  - Choose a username for your GitHub profile.
- **Verify Email:** Check your email inbox for a verification code from GitHub. Enter this code on the GitHub page.
- **Personalize (Optional):** GitHub may ask you some questions to personalize your experience. You can skip this step.
- **Choose a Plan:** Select the "Free" plan to start.

GIT HUB ACCOUNT

- **2. Accessing Code on GitHub**
- **Find the Repository:** Go to the specific repository URL (in this case, https://github.com/avnit/Python-for-everyone).
- **View Code:**
  - **Browse Files:** You can directly view the code files within the repository by clicking on them.
  - **Download ZIP:** Download the entire repository as a ZIP file by clicking the green "Code" button and then "Download ZIP."
  - **Clone the Repository:**
    - If you're familiar with Git, you can clone the repository to your local machine using the provided URL. This allows you to work with the code directly on your computer and contribute changes back to the repository.

GIT HUB BASICS

- **Public vs. Private Repositories:**
  - Public repositories are visible to everyone on GitHub.
  - Private repositories require a GitHub account to access and are only visible to you and collaborators you invite.
- **Forking a Repository:**
  - If you want to make changes to the code without affecting the original repository, you can "fork" it. This creates a copy of the repository under your own GitHub account.
  - For cloning the repo use the following command
  - Git clone https://github.com/avnit/Python-for-everyone.git
  - Optional : use extensions – github pull and python

PYTHON BASICS

- Variable and Data Types
  - Numerical Data Types

Data Type	Keyword	Description
Integer	Int	A whole number
Float	Float	A floating point number
Complex	Complex	A complex Number (which has a real and a imaginary part to it)

STRINGS

- Strings are basic sequence of characters or basically a text.
- Strings are always surrounded by quotation marks
- Keyword is str
- Example
- a = “my name is xyz”
- Type function helps us determine what is the type of the variable it is.

CONCAT TWO STRINGS

- a = “my name”
- b = “xyz”
- c = a + b
- Print(c)

BOOLEANS

- It can be True or False
- Keyword bool

SEQUENCES

- Collection of variable, objects

Data Type	Keyword	Description
List	List	Collection of values
Tuple	Tuple	Immutable list
Dictionary	Dict	List of key value pairs

OPERATORS

Operator	Name	Description	Example
+	Addition	Adds two numbers	5+2 = 7
-	Subtraction	Subtracts two numbers	5-2=3
*	Multiplication	Multiples two numbers	5*2 =10
/	Division	Divides two numbers	5/2 =2.5
%	Modulus	Returns the remainder of a division	5%2 =1
**	Exponent	Takes a value to the power of another value	5**2 = 25
//	Floor division	Returns the result of a division without decimal places	5//2 =2

ASSIGNMENT OPERATORS

Operator	Description	Example
=	Assigns a value to variable	A = 10
+=	Adds a value to a variable	A += 1
-=	Subtracts a value from the variables	A -= 1
*=	Multiplies a values with a variable	A *= 10
/=	Divides the variable by a value	A /= 10
%=	Assigns the remainder of a division	A %= 2
**=	Assigns the result of a exponential	A**=2
//=	Assigns the result of a floor division	A //= 2

COMPARISON OPERATORS

Operator	Name	Description	Example
==	Equals	Two values are the same	a == b 10 == 10 -> True
!=	Not Equals	Two values are not the same	a != b 10 != 20 -> True
>	Greater than	One value is greater than the other	a > b
<	Less than	One value is less than the other	a < b
>=	Greater than or equal	One value is greater than or equal to another	a >= b
<=	Less than or equal to	One value is less than the other value	a <= b

LOGICAL OPERATOR

Operator	Description
Or	At least one has to be true
And	Both has to be true
Not	Negates the input

A is true and B is false
A or B is true

OR (A/B)	True	False
True	True	True
False	True	False

AND OPERATOR

AND (A / B)	TRUE	FALSE
TRUE	TRUE	FALSE
FLASE	FALSE	FALSE

USER INPUT

- Name = input(“please enter your name”)
- Print (name)