d) Instantiates a class.

Answer: b) Calls methods from the parent class.

Which of the following is a valid Python class?

a) class 1Person:

b) class Person1:

c) class: Person

d) class Person-1:

Answer: b) class Person1:

Which operator is used for inheritance in Python?

a) &

b) +

c) :

d) (

Answer: c) :

What will be the output of the following code?

MODULE4

Python Projects - Beginner to Advanced
Last Updated : 19 Aug, 2025

Here's a list of Python projects from beginner to advanced levels, complete with key concepts and ideas to enhance your coding journey.
20+ Python Projects for Beginners with Examples

After mastering Python programming language, practicing Python projects is a great way for beginners to practice and apply their coding skills in real-world scenarios. Here in this

section, we have listed more than 20 beginner Python projects that help you to upscale your Python coding skills.

Number guessing game
Word guessing game
Hangman Game
21 Number game
Rock Paper Scissor game
Check if two PDF documents are identical
Convert emoji into text
Create a Voice Recorder
Create a Screen recorder
Mastermind Game
2048 Game
Flames game
Pokémon Training Game
Taking Screenshots using pyscreenshot
Desktop Notifier
Get Live Weather Desktop Notifications
How to use pynput to make a Keylogger?
Cows and Bulls game
Simple Attendance Tracker
Higher-Lower Game
Fun Fact Generator Web App
Creating payment receipts
How To Create a Countdown Timer?

10+ Python Projects for All Levels of Expertise

Take your Python skills further with intermediate projects like creating bots for Twitter, WhatsApp, and Telegram, or building tools like an auto-login bot and an auto clicker. Explore data analysis with a Twitter Sentiment Analyzer, develop an Employee Management System, or make a file-sharing app. These projects help you learn more advanced Python skills while working on practical applications.

How to Build a Simple Auto-Login Bot
Make a Twitter Bot
Building WhatsApp bot
Create a Telegram Bot
Twitter Sentiment Analysis
How to make an auto clicker?
Instagram Bot
File Sharing App
Send message to Telegram user

Whatsapp birthday bot
Corona HelpBot
Amazon product availability checker
Fetch your gmail emails from a particular user
Spam bot using PyAutoGUI
Hotel Management System

10+ Advanced Python Web Scraping Projects for 2025

Web scraping with Python allows you to extract valuable information from websites and automate data collection tasks. You can build projects like a COVID-19 Vaccine Tracker, an Email ID Extractor, or scrape weather data to send email reminders. These projects help you master web scraping tools and techniques, such as Scrapy, OpenCV, and other Python libraries.

Build a COVID19 Vaccine Tracker
Email Id Extractor Project from sites
Automating Scrolling by Color Detection
How to scrape data from google maps?
Scraping weather data to get umbrella reminder on email
Scraping Reddit
How to fetch data from Jira?
Scrape most reviewed news and tweet
Extraction of Tweets using Tweepy
Predicting Air Quality Index
Scrape content from dynamic websites

Automate the Boring Stuff with Python: 15+ Python Projects Ideas

Python is a powerful tool for automating repetitive tasks, making your daily routine more efficient. So, in this section you we have listed more then 15 projects based on "Automation of Boring Stuff":

Automate Instagram Messages
Automating Happy Birthday post on Facebook
Automatic Birthday mail sending
Automated software testing
Automate Google Search
Automate linkedin connections
Automated Trading
Automate the Conversion from Python2 to Python3
Bulk Posting on Facebook Pages using Selenium
Share WhatsApp Web without Scanning QR code
Automate WhatsApp Messages

How to Send Automated Email Messages
Automate backup
Automated software testing
Hotword detection
Automate linkedin connections

30+ Projects that Use TKinter: Complete Project List

Tkinter is a powerful library in Python for creating desktop applications with graphical user interfaces. With Tkinter, you can build a variety of projects like a calculator, a to-do list app, or even a text editor. These projects help beginners and intermediates learn the basics of GUI development, event handling, and creating user-friendly interfaces, providing a solid foundation for more advanced Python applications.

Create First GUI Application
Simple GUI calculator
Loan calculator
Rank Based Percentile Gui Calculator
Standard GUI Unit Converter
Create Table
GUI Calendar
File Explorer
Weight Conversion GUI
Age Calculator
Create a digital clock
Simple FLAMES game
Simple registration form
Image Viewer App
Create a GUI to extract Lyrics from song
Make Notepad
Sentiment Detector GUI
Create a GUI for Weather Forecast
Build a Voice Recorder GUI
Create a Sideshow application
Visiting Card Scanner GUI Application
Compound Interest GUI Calculator
ToDo GUI Application
Create a GUI Marksheet
Create Countdown Timer
Tkinter Application to Switch Between Different Page Frames
Color game using Tkinter
How to create a COVID19 Data Representation GUI?
GUI to Shutdown, Restart and Logout from the PC
Application to get live USD/INR rate

Build an Application for Screen Rotation
Build an Application to Search Installed Application
Text detection
Spell Corrector GUI

10+ Python Turtle Projects for Beginners

Turtle graphics in Python offer a fun way to learn programming by drawing shapes and patterns. Here in this section we have listed various projects that will helps beginners as well as professionals to learn how to Python Turtle.

Create digital clock
Draw a Tic Tac Toe Board
Draw Chess Board
Draw an Olympic Symbol
Draw Rainbow using Turtle Graphics
How to make Indian Flag
Draw moving object
Create a simple Animation
Create a Simple Two Player Game
Flipping Tiles (memory game)
Create pong game

30+ OpenCV Projects Ideas for Beginners

Extract frames using OpenCV
Displaying the coordinates of the points clicked on the image
White and black dot detection
OpenCV BGR color palette with trackbars
Draw rectangular shape and extract objects
Drawing with Mouse on Images
Text Detection and Extraction
Invisible Cloak
Background subtraction
Unsupervised Face Clustering Pipeline
Pedestrian Detection
Saving Operated Video from a webcam
Face Detection with webcam
Gun Detection
Multiple Color Detection in Real-Time
Detecting objects of similar color
Opening multiple color windows
Play a video in reverse mode
Template matching

Cartooning an Image
Vehicle detection in a Video frame
Count number of Faces
Live Webcam Drawing
Detect and Recognize Car License Plate from a video in real time
Track objects with Camshift
Replace Green Screen
Eye blink detection project
Connect your android phone camera
Determine The Face Tilt
Right and Left Hand Detection
Brightness Control With Hand Detection
Creating a Finger Counter

10+ Django Projects With Source Code

Once you have completed the above projects. Django projects will help you understand
web development concepts, manage databases, and create dynamic, full-featured websites
with ease.

Weather app
Sign Up and login with confirmation Email
ToDo webapp
Sending Emails
Create a Comments System
Voting System
Translator App
How to add Google reCAPTCHA to Django forms?
E-commerce Website
College Management System
Create Word Counter app

10+ Python Projects — Convert Speech to Text and Text to Speech

In this section, we have listed projects on converting text to speech and speech to text
using Python libraries like gTTS and SpeechRecognition. These projects are great for
learning how to create applications that read text aloud or transcribe spoken words.

Speak the meaning of the word
Convert PDF File Text to Audio Speech
Speech Recognition using Google Speech API
Convert Text to Speech
Text To Speech using pyttsx module
Convert Speech to text and text to Speech

Personal Voice Assistant
Build a Virtual Assistant
Create a simple assistant using Wolfram Alpha API
Voice Assistant
Voice search Wikipedia
Language Translator Using Google API
How to make a voice assistant for E-mail?
Voice Assistant for Movies

More Projects on Python

Tic Tac Toe GUI
8-bit game
Bubble sort visualizer
Caller ID Lookup
Tweet using Python
How to make Flappy Bird Game?
Face Mask detection and Thermal scanner for Covid care
Personalized Task Manager
Pollution Control by Identifying Potential Land for Afforestation
Human Scream Detection and Analysis for Controlling Crime Rate