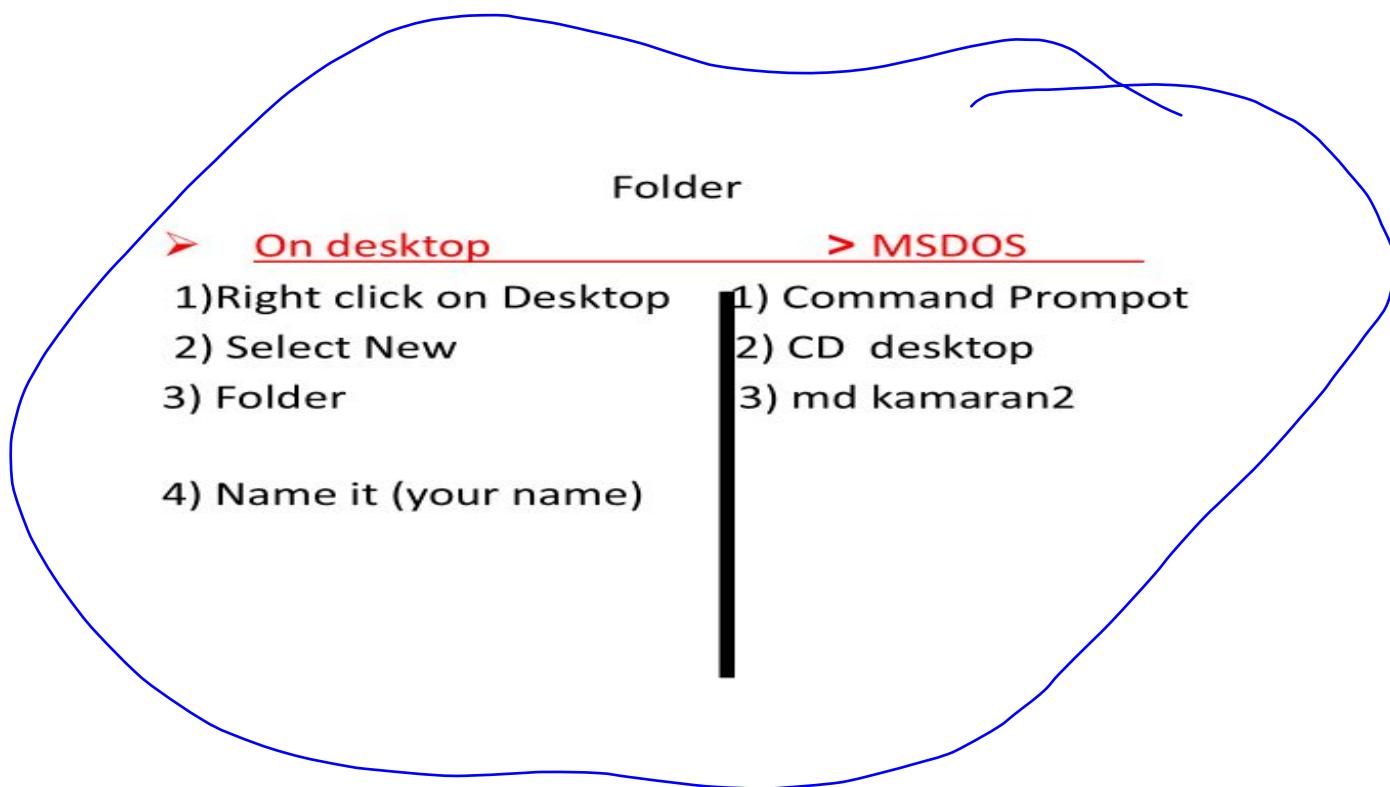


GUI & CUI Example



- ❑ Direct relation between cloud computing and tier architecture???
- ❑ Direct relation between cloud computing and layer architecture???

Python or Php

Using Python as a replacement for PHP can be a great choice, especially for web development.

Here's a general approach to transitioning from PHP to Python, including key frameworks, tools, and methodologies:

1. Choose a Web Framework

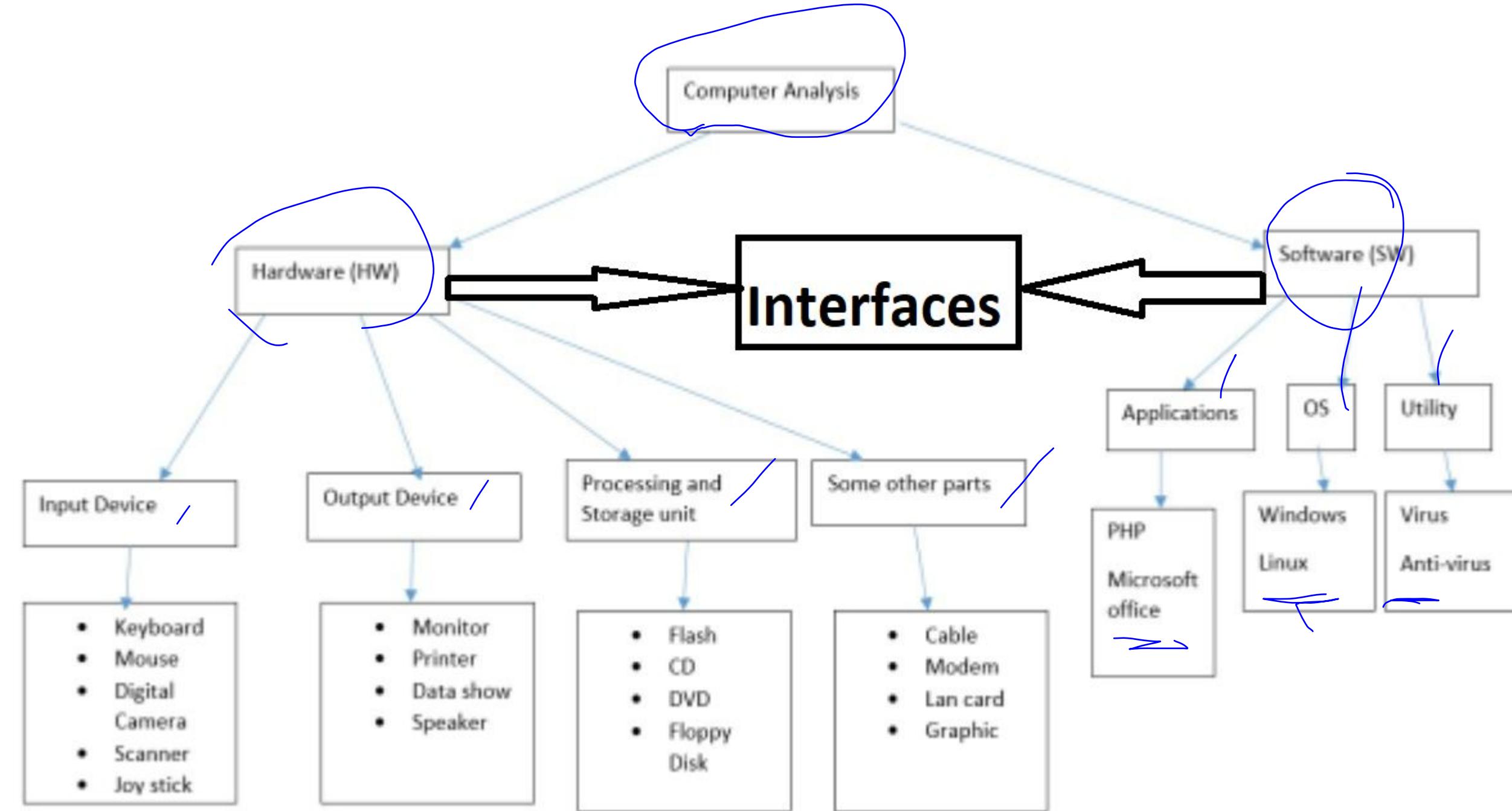
Python has several web frameworks that can serve as alternatives to PHP frameworks like Laravel or Symfony. Here are a few popular ones:

why django is better than flask?



Flask: A micro-framework that is lightweight and easy to get started with. Best for small to medium-sized applications.

Django: A high-level framework that is suitable for larger applications.



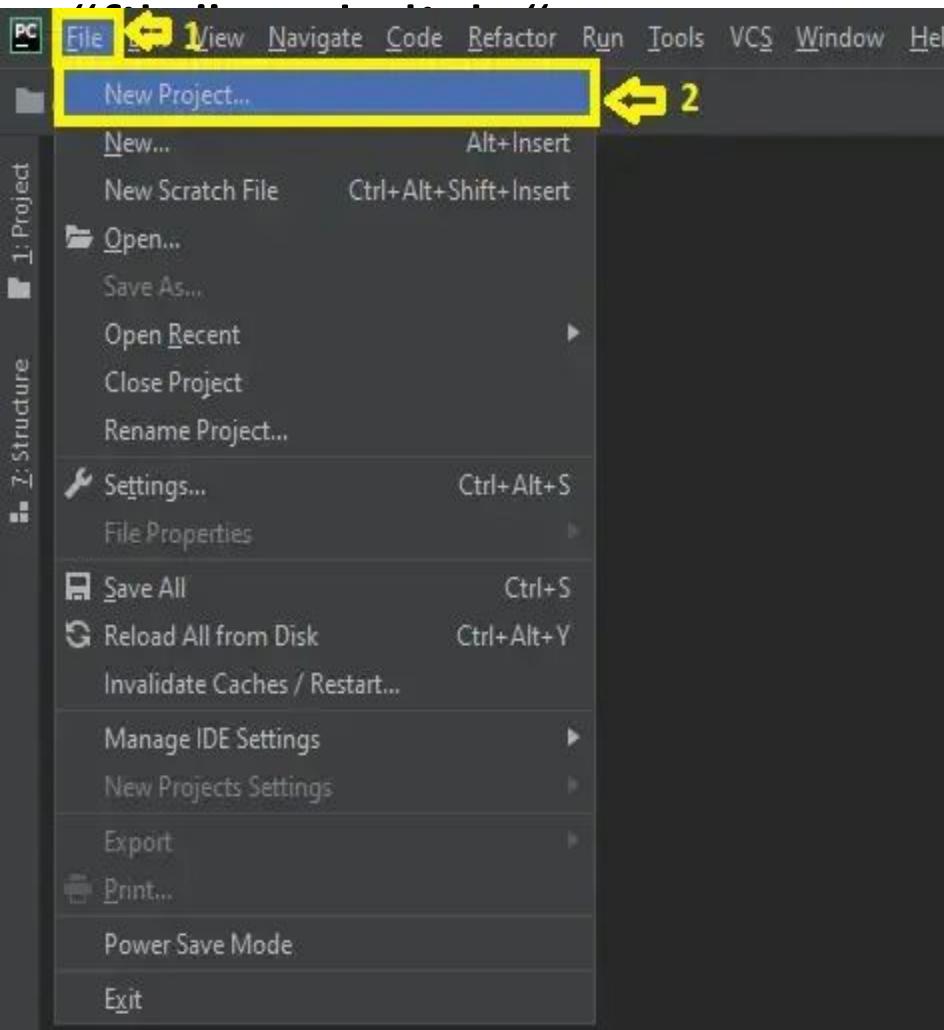
How to create an Ecommerce website in Django?

1. Step 1: Open file. First, open “pycharm professional” after that click “file” and click “new project“.
2. Step 2: Choose Django.
3. Step 3: Select the file location.
4. Step 4: Create application name.
5. Step 5: Click Create.
6. Step 6: Start Coding.

How to create an Ecommerce website in Django?

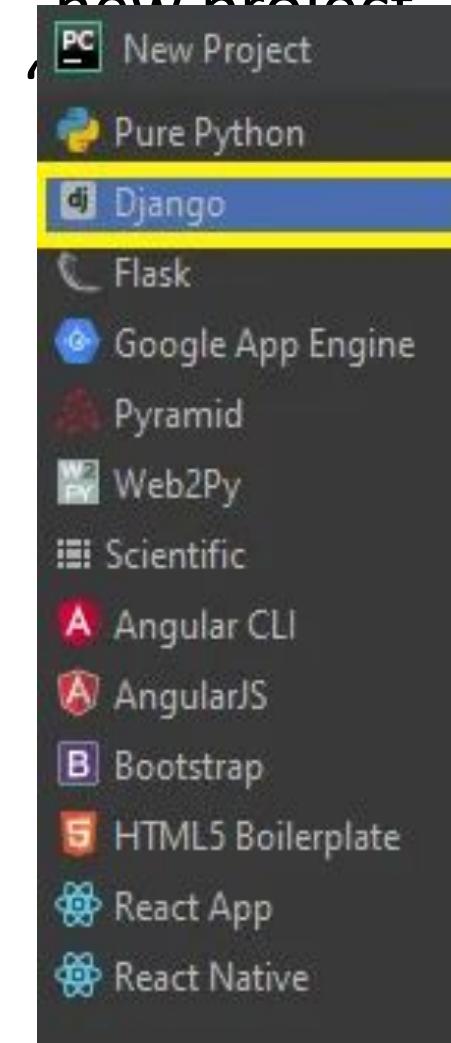
Step 1: Open file.

- First, open “pycharm professional” after that click “File”



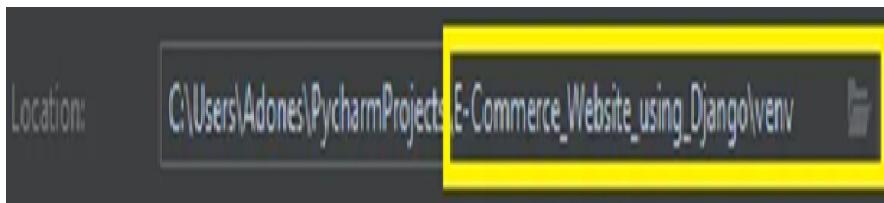
- Step 2: Choose Django.

Second, after clicking “new project” choose “Django” click.



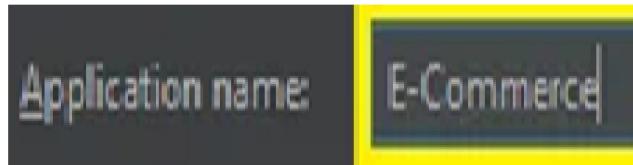
- **Step 3: Select the file location.**

Third, select a file location wherever you want.



Step 4: Create application name

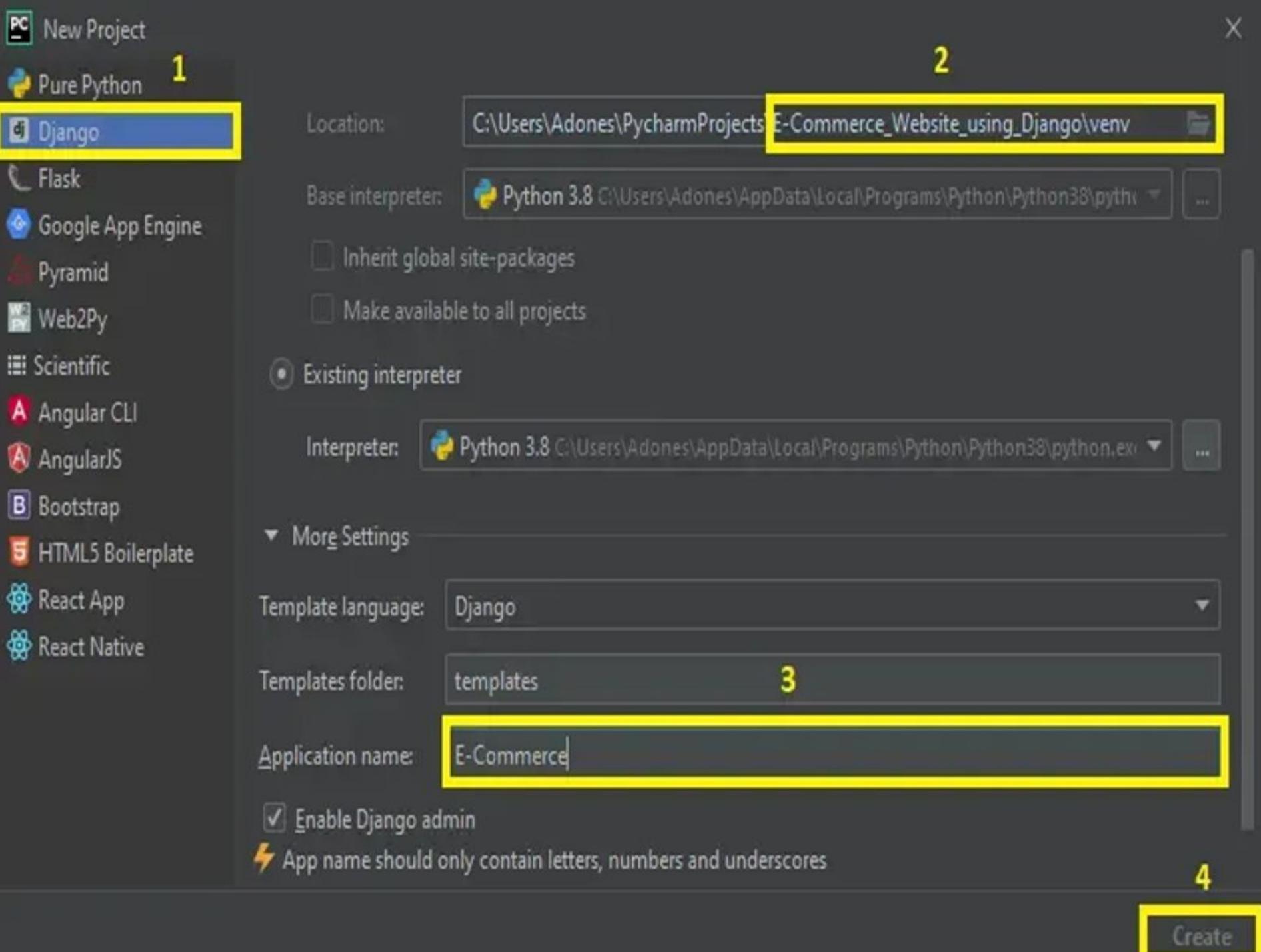
Fourth, name your application.



Step 5: Click Create.

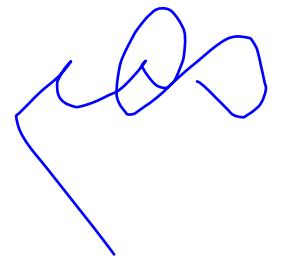
Fifth, finish creating the project by clicking the “create” button.

Step 6: Start Coding.
This first step will start adding functionality to our Django Framework by adding some functional codes.



Infrastructure for E-commerce

(E-Server)



- **The Internet**
 - system of interconnected networks that spans the globe
 - routers, TCP/IP, firewalls, network infrastructure, network protocols
- **The World Wide Web (WWW)**
 - part of the Internet and allows users to share information with an easy-to-use interface
 - Web browsers, web servers, HTTP, HTML
- **Web architecture**
 - Client/server model
 - N-tier architecture; e.g, web servers, application servers, database servers

- There are several areas of concern when first setting up SERS

- Simple
- Semi restricted
- Restricted



Version: 2021.1.3

Build: 211.7628.24

30 June 2021

[System requirements](#)

[Installation Instructions](#)

Download PyCharm

[Windows](#)

[macOS](#)

[Linux](#)

Professional

For both Scientific and Web Python development. With HTML, JS, and SQL support.

[Download](#)

.dmg (Intel) ▾

Free trial

Available for Intel and Apple Silicon

Community

For pure Python development

[Download](#)

.dmg (Intel) ▾

Free, open-source

Available for Intel and Apple Silicon



PyCharm
2021.1.3

Search projects

New Project

Open

Get from VCS

Projects

Customize

Plugins

Learn PyCharm

Code_of_the_Future

~/Desktop/Code_of_the_Future

Code of the Future

~/Desktop/Code of the Future

Python Codes by Chapter

~/Documents/MATH3001/Python Codes/Python Codes by Chapter



PyCharm

2020.3.2

Search projects

New Project

Open

Get from VCS

Projects

Customize

Plugins

Learn PyCharm

manage

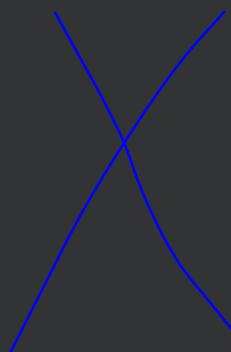
- \AppData\Local\Temp\manage.py

wsgi

- \AppData\Local\Temp\wsgi.py



C:\Users\Sherdil\Store\AppData\Local\Temp\wsgi.py (unavailable)



Type here to search



19°C

11:24 AM
5/4/2025

Location: /Users/elliesleightholm/PycharmProjects/NewPythonProject

▼ Python Interpreter: New Virtualenv environment

• New environment using



Virtualenv



Location:

/Users/elliesleightholm/PycharmProjects/NewPythonProject/venv



Base interpreter:

/usr/bin/python3



Inherit global site-packages

Make available to all projects

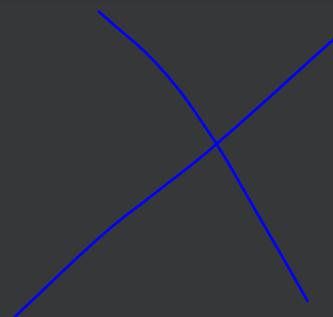
○ Previously configured interpreter

Interpreter: Python 2.7 /usr/bin/python2.7



Create a main.py welcome script

Create a Python script that provides an entry point to coding in PyCharm.



Creating first Python django web app

Prerequisites

- 1 Install python
- 2 Install django
- 3 Install pycharm

Creating first Python django web app

|
Step 1 - Open Pycharm and create a new project

Step 2 - Open terminal and install django

pip install django

Set Up Dev. Environment

- Python 3.12 Installed
- Install Text Editor
- Install Pip
- Install Virtualenv
- Install Git

requirement

- Install python
- Install virtual environment
- Install python

www.Python.org

Anaconda

1. What is PyCharm?

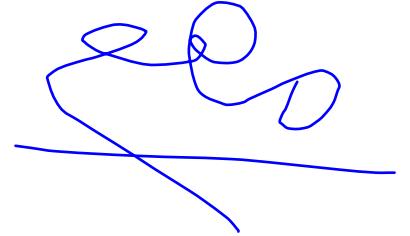
- a) A Python IDE developed by JetBrains
- b) A Python library for scientific computing
- c) A Python IDE developed by Microsoft
- d) A Python web framework

PyCharm is a Python integrated development environment (IDE) developed by JetBrains. It provides a range of features including code completion, debugging, testing, and code analysis.

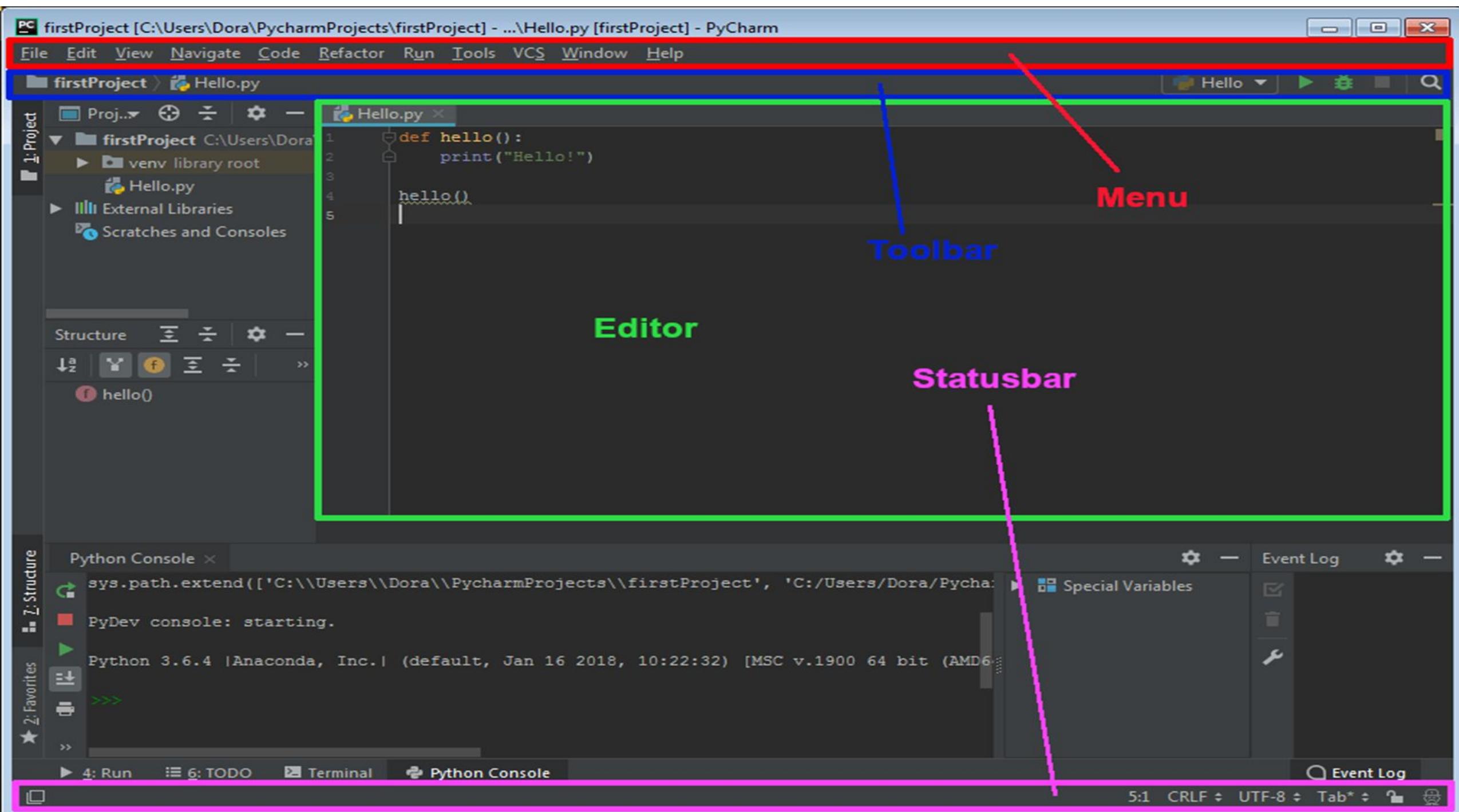
User Interface of the Editor

In almost all Python IDEs, the working area is divided into several parts that help make working with files and code more convenient. The screen below illustrates these different parts and what they are doing.

PyCharm layout :-



On the top is the main menu, which contains commands like open file, open project, create project or file, run, debug code, etc. Under the main menu is a toolbar with the same functionality, but it provides quick access to these functions. At the bottom is a status bar that displays messages about errors, warnings, and the status of a project. The central part of the screen consists of the editor where you read and write code. To the left, right, and bottom of the editor are tool windows. They allow for many different tasks, for example: see the node of the project and quickly open it, search in files, run options, change debugging settings, etc.

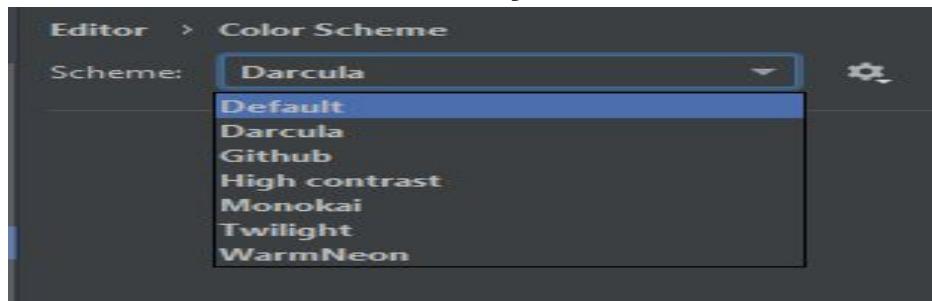
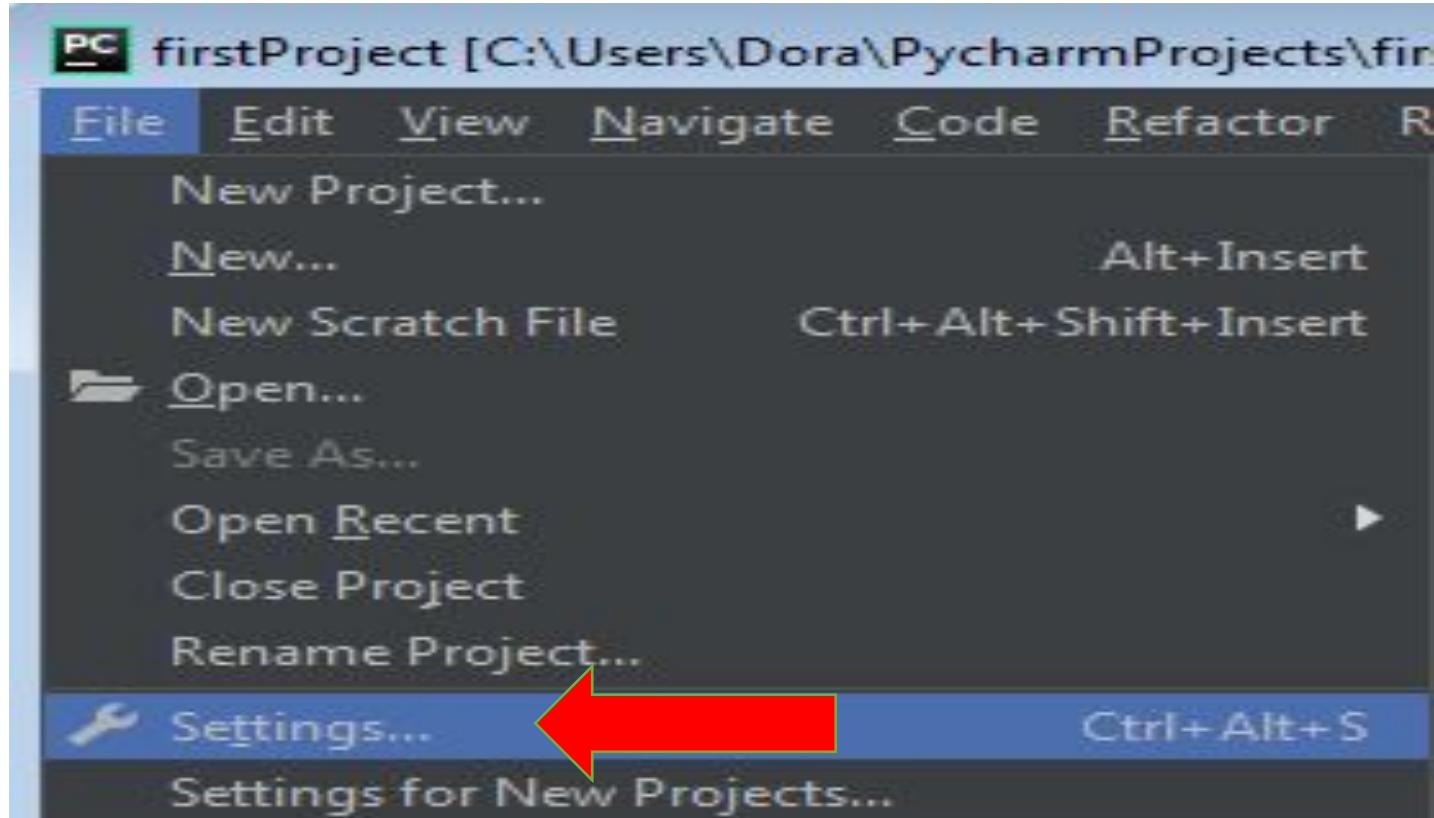


How to Customize the PyCharm Theme and Color Scheme

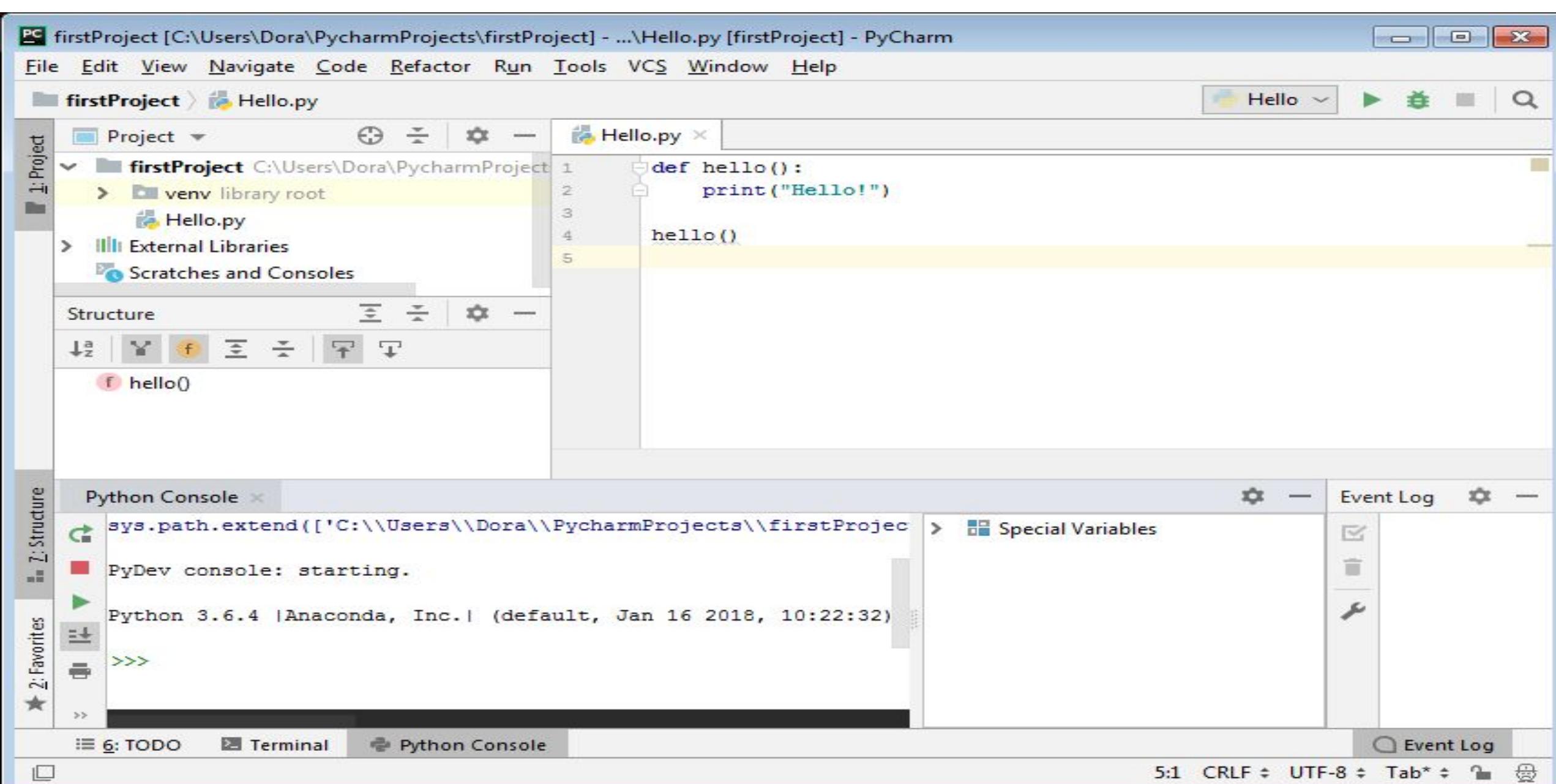
The PyCharm IDE allows you to customize many options. The first custom function is the theme of the IDE. You have a choice among different themes. To access the themes click on File > Settings.

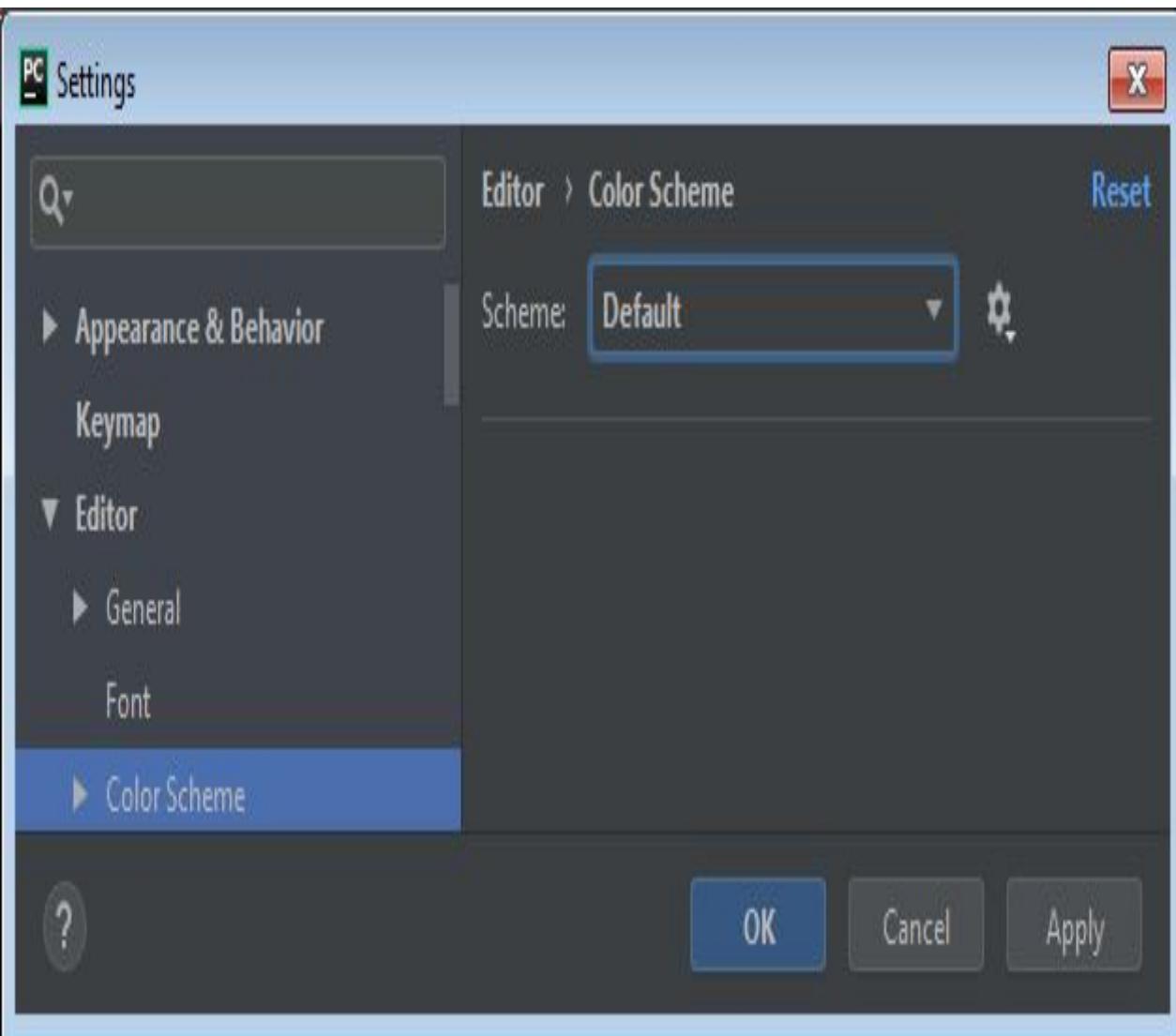
The **Settings** window appears. From the left pane, expand the **Editor and Color Scheme** menus.

In the right pane select from the Scheme drop-down list one of the scheme names. For example it may be currently set to the Default scheme. Please note: the default color in PyCharm is Darcula and here, Default means your OS's default theme.

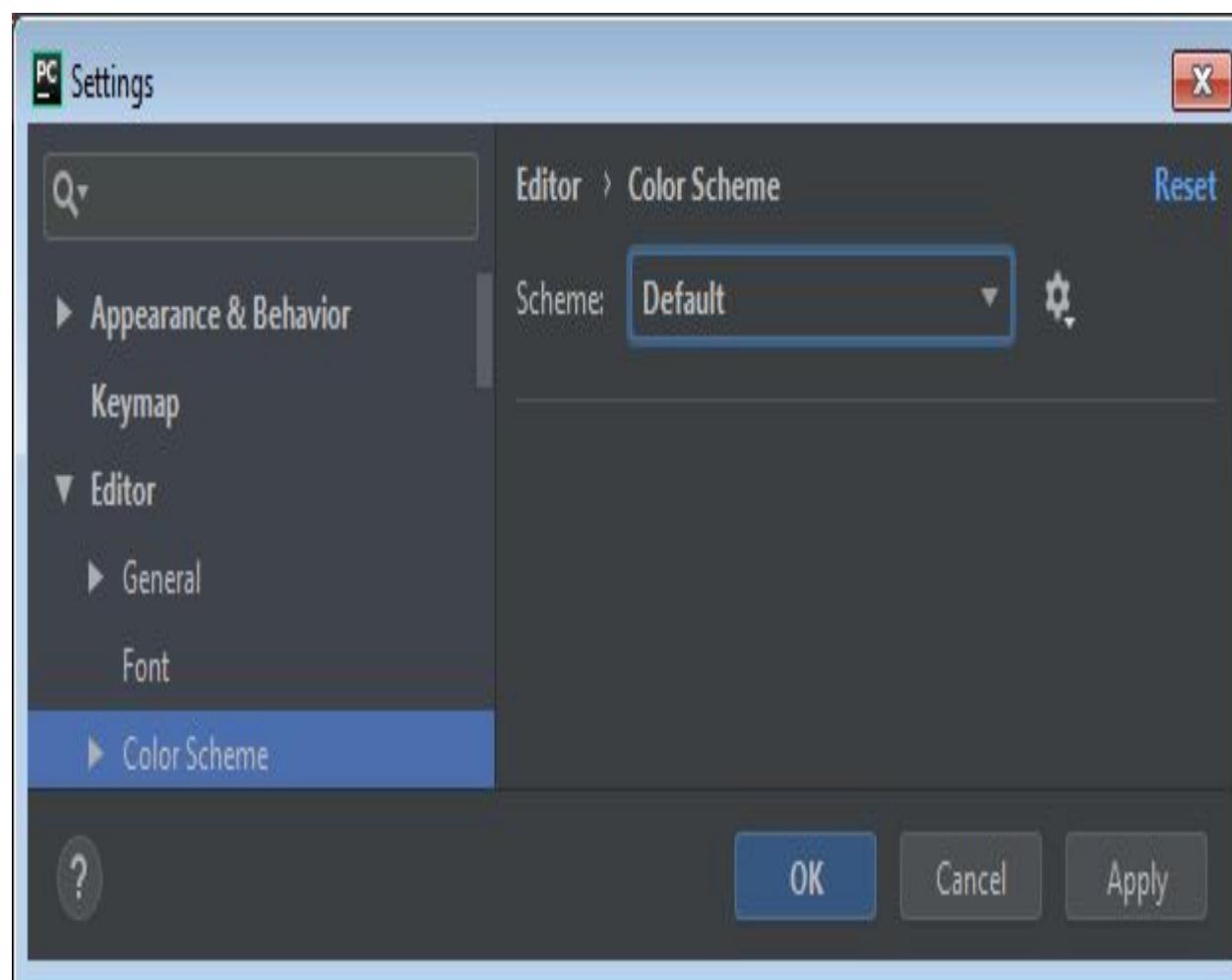


If the Change PyCharm Theme window appears, click the Yes button. You will see a new theme like this below.





- Click the OK button.



If the **Change PyCharm Theme** window appears, click the **Yes** button. You will see a new theme like this below.



PyCharm

2020.3.2

Projects

Customize

Plugins

Learn PyCharm

Welcome to PyCharm

Create a new project to start from scratch.

Open existing project from disk or version control.



New Project



Open



Get from VCS

Location: C:\Users\Sherdil Store\pythonProject

▼ Python Interpreter: New Virtualenv environment

New environment using  Virtualenv ▾

Location: C:\Users\Sherdil Store\pythonProject\venv

Base interpreter:  C:\Users\Sherdil Store\AppData\Local\Microsoft\WindowsApps\python3.9.exe ▾

Inherit global site-packages

Make available to all projects

Previously configured interpreter

Interpreter: <No interpreter> ▾

Create a main.py welcome script

Create a Python script that provides an entry point to coding in PyCharm.

How to create a web application using Django in PyCharm?

- **Create a new Django project**

1. Go to File | New Project, or click the New Project button in the Welcome screen. The New Project dialog opens.
2. In the New Project dialog, do the following: Specify project type Django. Specify the project location. ...
3. Click More Settings, and specify the following: ...
4. Click Create.

New Project

- Pure Python
- Django **1**
- FastAPI
- Flask
- Google App Engine
- Pyramid
- Scientific
- Angular CLI
- Bootstrap
- Express
- HTML5 Boilerplate
- Next.js
- Node.js
- React
- React Native
- Vite
- Vue.js

Location: /Users/jetbrains/PycharmProjects/djangoTutorial **2**

Python Interpreter: New Virtualenv environment

New environment using **3** Virtualenv

Location: /Users/jetbrains/PycharmProjects/djangoTutorial/venv

Base interpreter: /usr/local/bin/python3.11

Inherit global site-packages

Make available to all projects

Previously configured interpreter

Interpreter: <No interpreter>

More Settings

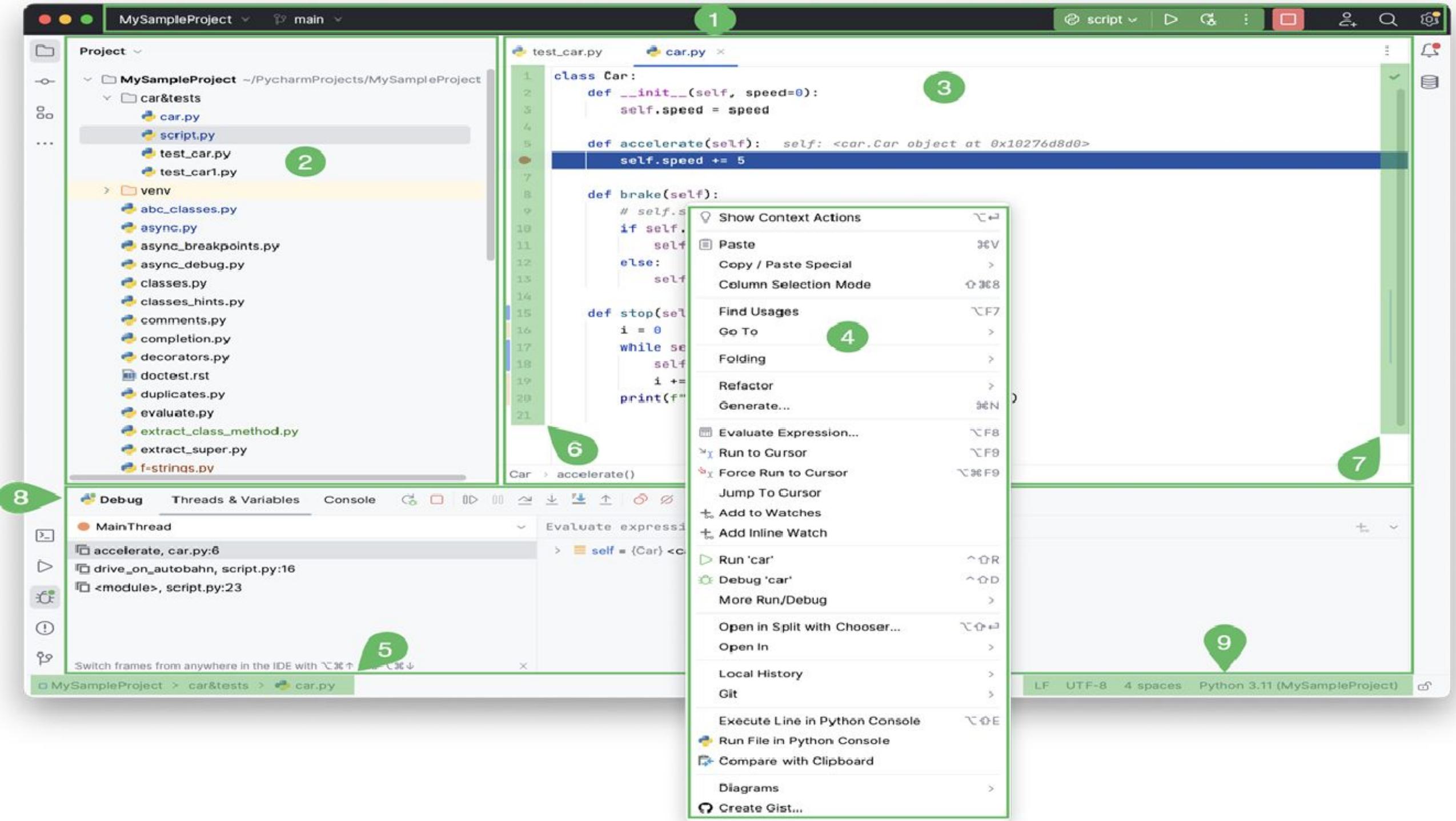
Template language: Django

Templates folder: templates

Application name: meteo **4**

Enable Django admin

Create



pythonProject

Project

Project Files ▾



- ✓ C:\Users\SherdellStore\PycharmProjects\pythonProject
 - > .idea
 - ✓ venv
 - Include
 - > Lib
 - > Scripts
 - .gitignore
 - pyvenv.cfg

Search Everywhere Double Shift

Open Project



Projects can either be opened in a new window or replace the project in the existing window or be attached to the already opened projects
How would you like to open the project?

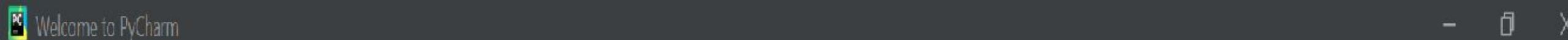
This Window

New Window

Attach

Cancel

Drop files here to open



PyCharm

2020.3.2

Projects

Q Search projects

manage

~\AppData\Local\Temp\manage.py

New Project

Open

Get from VCS



Customize

wsgi

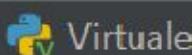
~\AppData\Local\Temp\wsgi.py



Plugins

Learn PyCharm

▼ Python Interpreter: New Virtualenv environment

 New environment using

Virtualenv

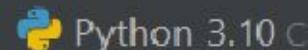


Location:

C:\Users\SherdIIStore\PycharmProjects\pythonProject1\venv



Base interpreter:



Python 3.10 C:\Users\SherdIIStore\AppData\Local\Microsoft\WindowsApps\python3.13.exe

 Inherit global site-packages Make available to all projects Previously configured interpreter

Interpreter:



Python 3.10 C:\Users\SherdIIStore\AppData\Local\Microsoft\WindowsApps\python3.13.exe

 Create a main.py welcome script

Create a Python script that provides an entry point to coding in PyCharm.



Create



pythonProject

Add Configuration...



Project

Project Files ▾



- ✓ C:\Users\SherdilStore\PycharmProjects\pythonPi
 - > .idea
 - ✓ venv
 - Include
 - > Lib
 - > Scripts
 - .gitignore
 - pyvenv.cfg

Search Everywhere Double Shift



Projects can either be opened in a new window or replace the project in the existing window or be attached to the already opened projects.
How would you like to open the project?

This Window

New Window

Attach

Cancel

Drop files here to open

ucture



Project

⊕ ▾ × ⋮ -

> 📂 pythonProject C:\Users\SherdilStore\PycharmProjects\1\

External Libraries

Scratches and Consoles

Search Everywhere Double Shift

Go to File Ctrl+Shift+N

Installing Python 3.12.0

Preparing for installation...

Cancel

Downloading python-3.12.0-amd64.exe

Drop files here to open them



1. _____ refers to the speed in which web pages are downloaded and displayed on the user's web browser.

- A. Web performance
- B. Web databases
- C. Web storage
- D. Web data

Explanation: Web performance refers to the speed in which web pages are downloaded and displayed on the user's web browser.

2. website optimization is the field of knowledge about increasing web performance

- A. TRUE
- B. FALSE
- C. Can be true or false
- D. Can not say

3. Web performance optimization improves?

- A. UX
- B. frontend
- C. backend
- D. database

4. Major portion of web page contributes _____

- A. image
- B. text
- C. video
- D. audio

Explanation: 64% of any website's page is made up of images. The loading speed of the websites also slows down due to this much contribution of images in a web page. To reduce this loading time we use web performance optimization.

5. What is the maximum cache size for Chrome?

- A. 300 MB
- B. unlimited
- C. 400 MB
- D. 1024 MB

Explanation: Maximum Cache size for Chrome is 300 MB, for Safari it is unlimited, For Opera 10+ it is 400 MB, for Firefox 17 the maximum cache size is 1024 MB, for Internet Explorer 6,7,8 it is 50 MB and for Internet Explorer maximum cache size is 250 MB.

6. HTTP request is between -----

- A. client and server
- B. client and host
- C. server and host
- D. user and server

7. Does web caching optimization reduces server load, bandwidth usage and latency? A. TRUE

B. FALSE C. Can be true or false D. Can not say

True, Web Caching Optimization reduces server load, bandwidth usage and latency.

8. Web caches are located on web-server side of a client CDN. side
A. Both A and B. on web-server side C. a client CDN side
Web caches are located on either the client side (forward position) or web-server side (reverse position) of a CDN.

9. Which of the following is not render blocking resource?

- a) CSS b) HTML c) JavaScript d) Jquery

HTML, CSS and JavaScript are render blocking resources to the DOM. To enhance the speed of your web page these resources should be properly used.

10. For best speed position of CSS code should be at _____

- a) at the top of the code b) at the middle of the code c) at the bottom of the code d) anywhere in the code

Explanation: CSS styling and code should be placed at the top of the code for best loading result of the webpage. JavaScript code should be placed at the bottom of the page for best performance and rapid loading speed of the website.