

## Prerequisites for Internet of Things (IoT)

### Hardware Specifications:

- Windows (minimum 10), Mac OS, Ubuntu
- Ram - 4GB ( minimum)
- Hard disk - 256GB (minimum)
- Processor - Intel i3 (minimum), Mac M1

### Software Specifications:

- Anaconda Navigator - <https://www.anaconda.com/products/distribution>
- Spyder / VS Code / Pycharm

### Create an Account in Thinkercad

- <https://www.tinkercad.com>

### IBM:

IBM Account Creation - <https://vimeo.com/742609168/1824d26a5b> (Follow this video for IBM Skill Build Account Creation)

- IBM Skill Build - <https://www.ibm.com/academic/home>
- Webmail - <https://sg2plmcpnl492529.prod.sin2.secureserver.net:2096/>
- IBM Cloud - <https://cloud.ibm.com/login>

**TEAM ID:PNT2022TMID36623**

**Member1:Team lead:BANDLA VENU MADHAV**

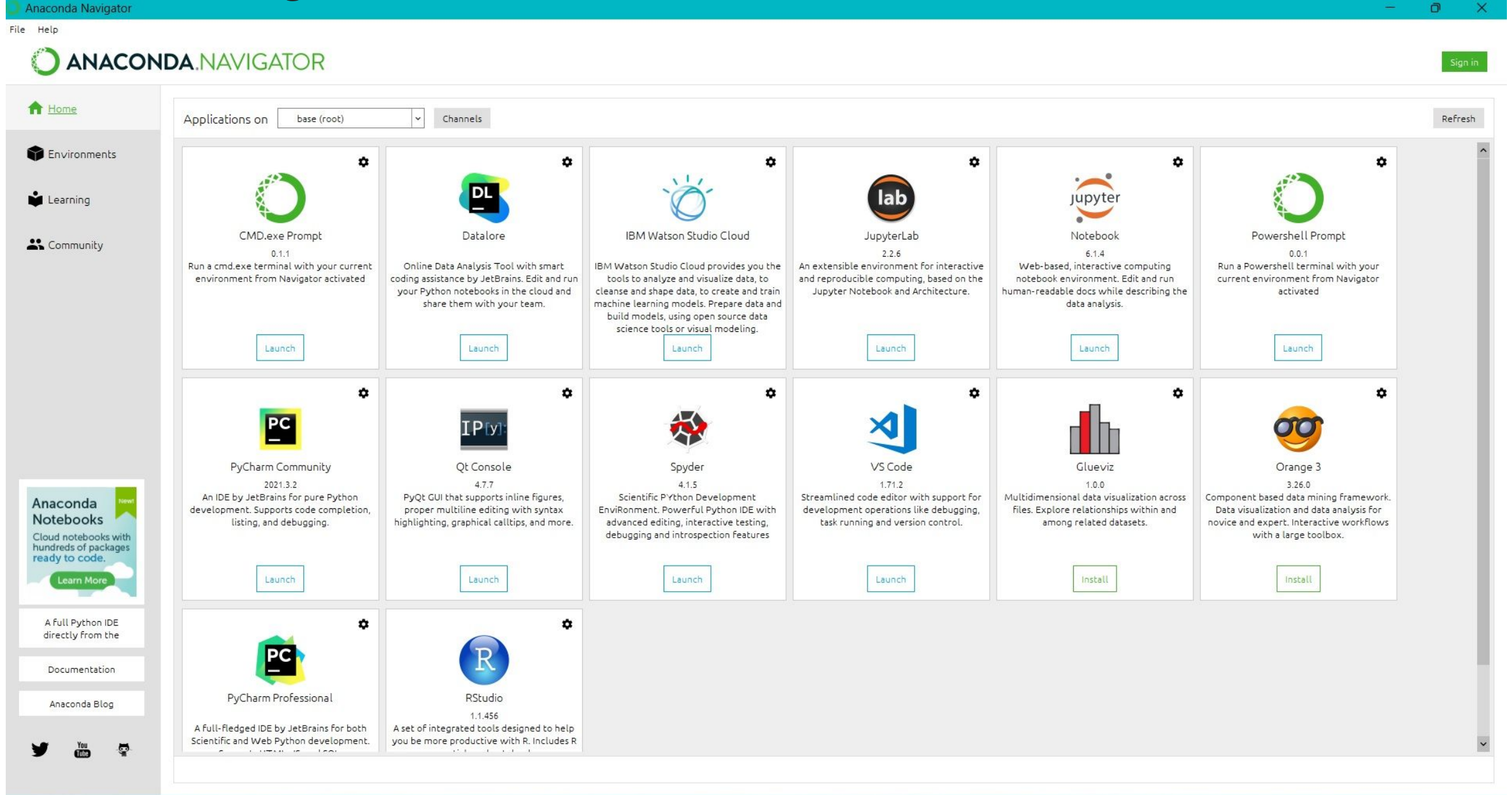
**Member2:KUMAR.A**

**Member3:BALU SUNDAR T.S**

**Member4:SARAVANAN.V**

## 1.Anaconda Navigator:

**Member1:Team lead:BANDLA VENU MADHAV**  
**Member2:KUMAR.A**  
**Member3:BALU SUNDAR T.S**  
**Member4:SARAVANAN.V**



# 2.Spyder:

The image shows the Spyder Python IDE interface. The top menu bar includes File, Edit, Search, Source, Run, Debug, Consoles, Projects, Tools, View, and Help. The toolbar contains icons for file operations, editing, and running code. The current file is `C:\Users\KUMAR\AppData\Local\Temp\kite_tutorial.py`. The editor shows a Python script with a welcome message and instructions on how to use Kite. The console displays an error message: "An error occurred while starting the kernel". The error message includes several warnings about permissions and a traceback showing the error occurred in `start.main()` at line 320 of `start.py`. A "Usage" box is also visible, explaining how to get help for any object by pressing `Ctrl+H`.

```
1 # Welcome to...
2 #
3 #      `hmy+.      ://:
4 #      .mMMMMMNho:` NMMm
5 #      :NMMMMMMMMMds/.` NMMm      :ss:
6 #      +NMMMMMMMMMMMMMMMMmy+ NMMm      -MMM- ---
7 #      `oMMMMMMMMMMMMMMMMMo NMMm      /ss/ :MM+
8 #      `yMMMMMMMMMNshNMMMMMN NMMm      /MM+
9 #      .dMMMMMMm/hmhssydMMM+ NMMm      `yhhy. shhy ohmMMmhhhh. ./ydmmdho-
10 # omMMMMMMd/mMMMMmhsosy` NMMm .omMMo. mMMN odmMMmddd. omMNdsohNMNy`
11 # .+dMMMy/mMMMMMMMMMm- NMMm-yNMMh/` mMMN /MM+ sMMN:~ `:NMMy
12 # -ymo/NMMMMMMMMMMd NMMNMMN/ mMMN :MM+ MMNdMMMMMMN
13 # ``hMMMMMMMMMM: NMMm+mMMNs. mMMN :MM+ MMh/////////
14 # `:yNMMMMMMh NMMm `/dMMNy- mMMN :MM+ `sMMNo` `:-
15 # .+mMMMMM- NMMm `/dMMNy- mMMN .MMNdNN/ +NMMNdhydNMs
16 # `:yMMMy yhhs `/hhh shhs :ymmdho: `/sdmmmh/`
17 # `om.
18
19
20 """ Kite is your Python programming copilot. Kite will try to show you the
21 right information at the right time as you code to prevent you from context
22 switching out of your current line of thought.
23
24 This tutorial will teach you how to use all of Kite's core features. You
25 should be able to learn everything in 5 minutes.
26
27 If you get stuck at any point, please visit https://help.kite.com/ or file
28 an issue at https://github.com/kiteco/issue-tracker.
29 """
30
31
32
33
34 """ PART 0: BEFORE WE START =====
35
36 Spyder will by default try to start the Kite backend when the editor first
37 starts. You can change this behavior by opening settings, clicking on
38 "Completion and linting", "Advanced", and then changing Kite's "Start Kite
39 Engine on editor startup" setting.
40
41 Look for the Kite indicator in the bottom left corner of Spyder's status
```

Usage

Here you can get help of any object by pressing `Ctrl+H` in front of it, either on the Editor or the Console.

Help can also be shown automatically after writing a left parenthesis next to an object. You can activate this behavior in *Preferences > Help*.

New to Spyder? Read our [tutorial](#)

An error occurred while starting the kernel

```
[SpyderKernelApp] WARNING | Could not set permissions on
C:\Users\KUMAR\.ipython\profile_default\security
[SpyderKernelApp] WARNING | Could not set permissions on
C:\Users\KUMAR\.ipython\profile_default\pid
[SpyderKernelApp] WARNING | Could not set permissions on
C:\Users\KUMAR\.ipython\profile_default\security
[SpyderKernelApp] WARNING | Could not set permissions on
C:\Users\KUMAR\.ipython\profile_default\pid
Traceback (most recent call last):
File "C:\Users\KUMAR\anaconda3\lib\runpy.py", line 194, in _run_module_as_main
return _run_code(code, main_globals, None,
File "C:\Users\KUMAR\anaconda3\lib\runpy.py", line 87, in _run_code
exec(code, run_globals)
File "C:\Users\KUMAR\anaconda3\lib\site-packages\spyder_kernels\console\_main_.py", line 23,
in
start.main()
File "C:\Users\KUMAR\anaconda3\lib\site-packages\spyder_kernels\console\start.py", line 320, in
main
kernel.initialize()
```

IPython console History

LSP Python: ready Kite: initializing conda: base (Python 3.8.5) Line 1, Col 1 UTF-8-GUESSED CRLF RW Mem 84%



# 3.Vs Code:

The image shows the Visual Studio Code interface with a Python file named `first.py` open. The code in the editor is as follows:

```
1 import turtle
2 paper = turtle.Screen()
3 pen = turtle.Turtle()
4
5 sides=int(input("enter the number of sides:"))
6
7 for i in range(sides):
8     a=360/sides
9     pen.color("magenta")
10    pen.fd(100)
11    pen.right(a)
12
13
```

The bottom panel shows the **TERMINAL** tab with the following output:

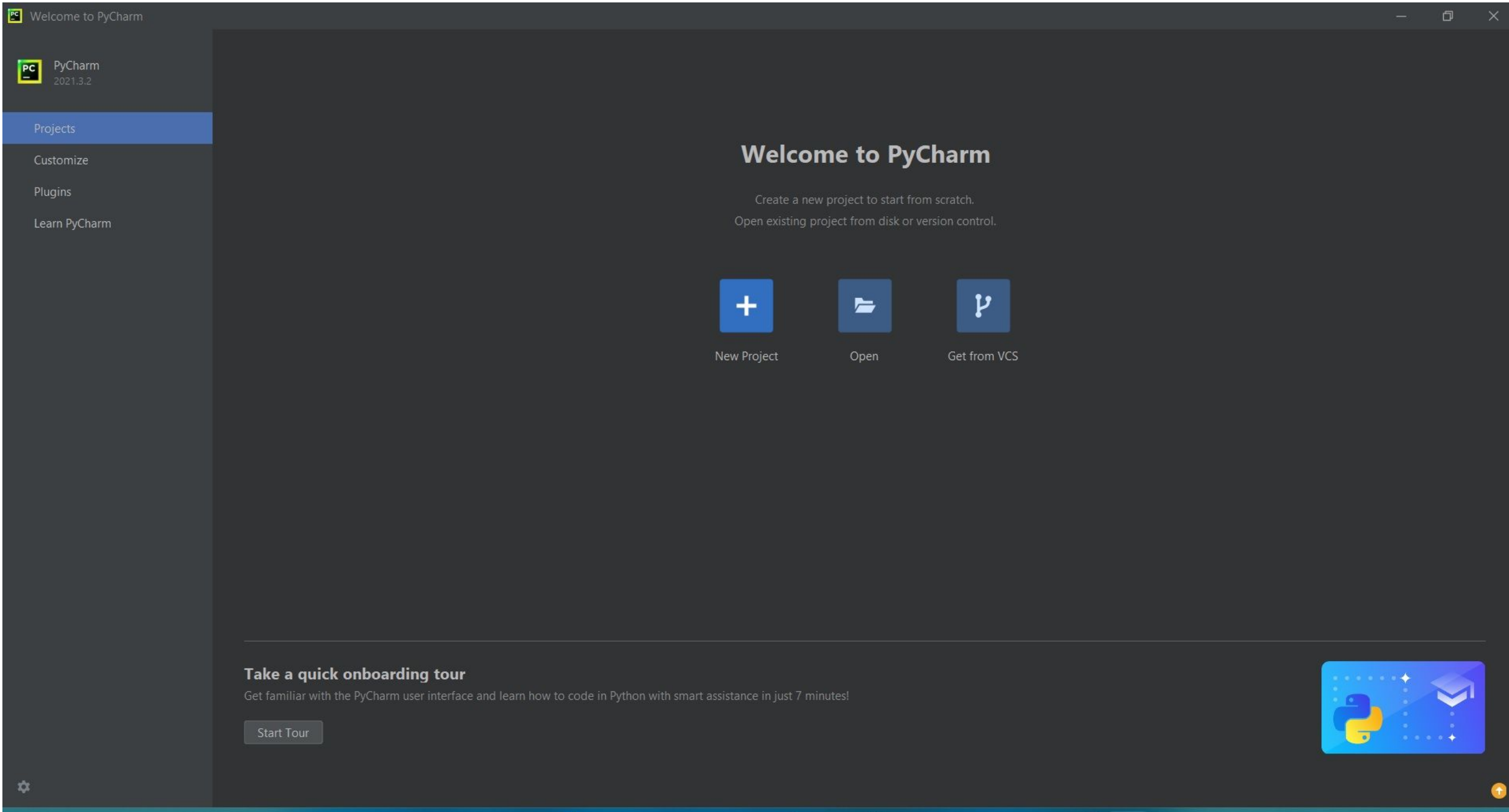
```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

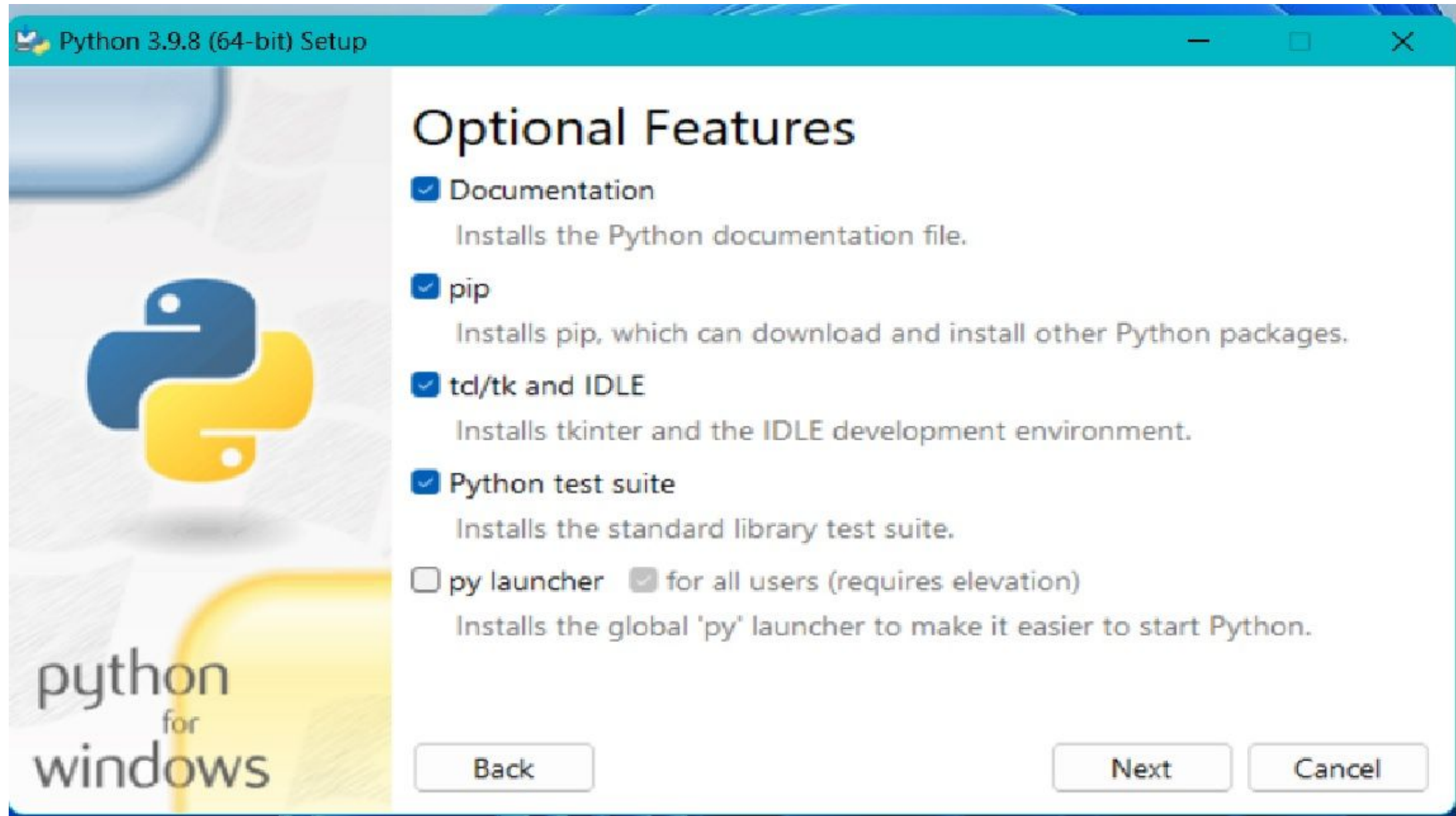
PS Z:\0 ALL PROGRAMS\Python> & C:/Users/KUMAR/AppData/Local/Programs/Python/Python39/python.exe "z:/0 ALL PROGRAMS/Python/first.py"
Error reading or writing history file 'C:\Users\KUMAR\AppData\Roaming\Microsoft\Windows\PowerShell\PSReadLine\ConsoleHost_history.txt': Access to the path is denied.
umenter the number of sides:
```

The status bar at the bottom indicates the current position is **Ln 1, Col 1**, with **Spaces: 4**, **UTF-8** encoding, **CRLF** line endings, and the **Python** interpreter selected.

# 4.PyCharm:



## 5. Python-3.9.8



Python 3.9.8 (tags/v3.9.8:bb3fdcf, Nov 5 2021, 20:48:33) [MSC v.1929 64 bit (AMD64)] on win32

Type "help", "copyright", "credits" or "license()" for more information.

```
>>> print("TEAM ID:PNT2022TMID36623")
```

```
TEAM ID:PNT2022TMID36623
```

```
>>> print("Member1:Team lead:Vennu Madhav.B")
```

```
Member1:Team lead:Vennu Madhav.B
```

```
>>> print("Member2:KUMAR.A")
```

```
Member2:KUMAR.A
```

```
>>> print("Member3:BALU SUNDAR T.S")
```

```
Member3:BALU SUNDAR T.S
```

```
>>> print("Member4:SARAVANAN.V")
```

```
Member4:SARAVANAN.V
```

```
>>> |
```