

Malaika Abid (malaika.ma25@gmail.com)

Bytewise Deep Learning Fellow

TASK # 03

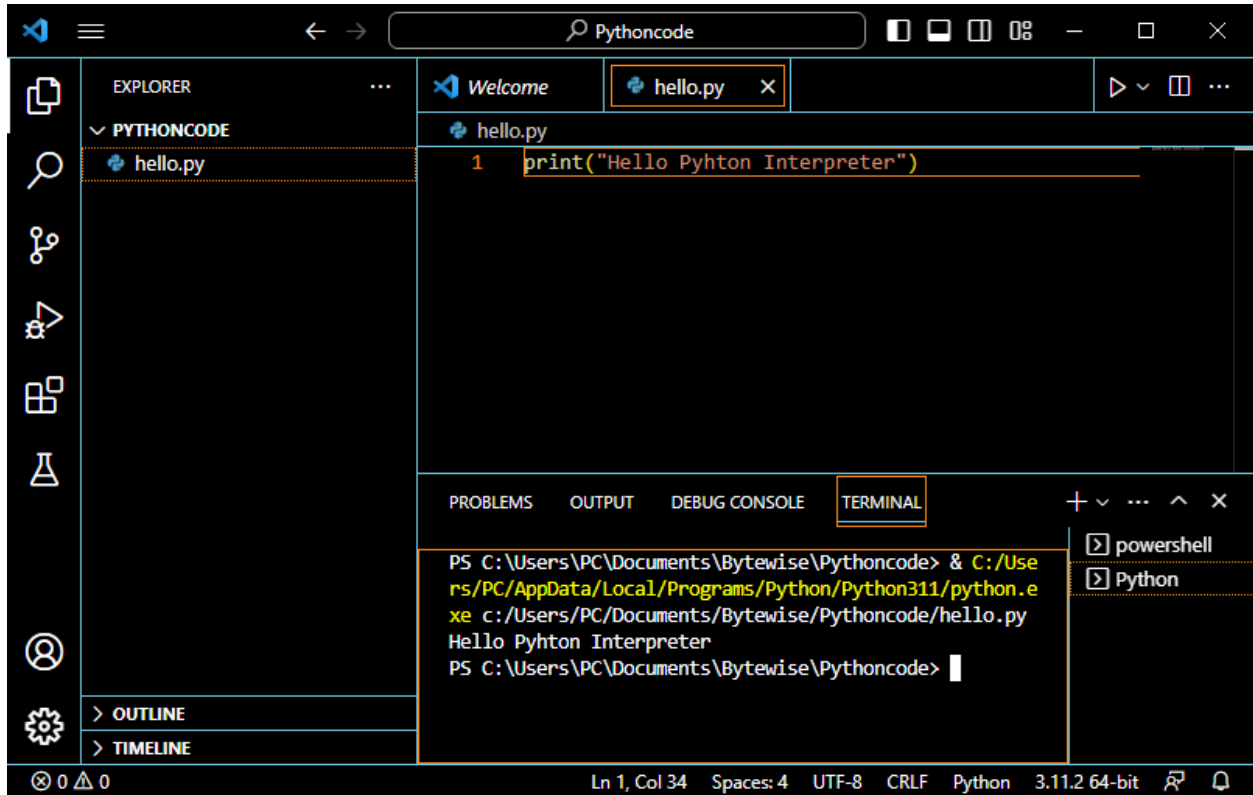
Contents

Testing Python	3
• Hello Python Interpreter	3
• Hello World Program	3
• Python Version in CMD	4
• Changing Directory and showing list.....	4
• Running Python Code on terminals (WINDOWS)	5
• Running Python Code on terminals	6
Variables	6
• Assigning a Variable	6
• Printing two lines of code	6
• Generating errors on Purpose	7
• Error Correction	8
• Exercise Solution (2-1 & 2-2).....	8
Data Types.....	9
1. Strings	9
• Printing string using single and double quote	9
• Changing Cases using .title() -- .upper() -- .lower()	9
• Concatenating Strings	9
• Using /n & /t.....	10
• Lstrip() ,rstrip() , strip().....	11
• Avoiding errors(aposhtrophe).....	11
• Exercise Solution 2-3 , 2-4, 2-5, 2-6, 2-8	12
• Comments.....	13
2. Numbers.....	14

- Integers 14
- Floats 15
- Str() function 15
- Exercise Solution 2-8, 2-9 16

Testing Python

- Hello Python Interpreter



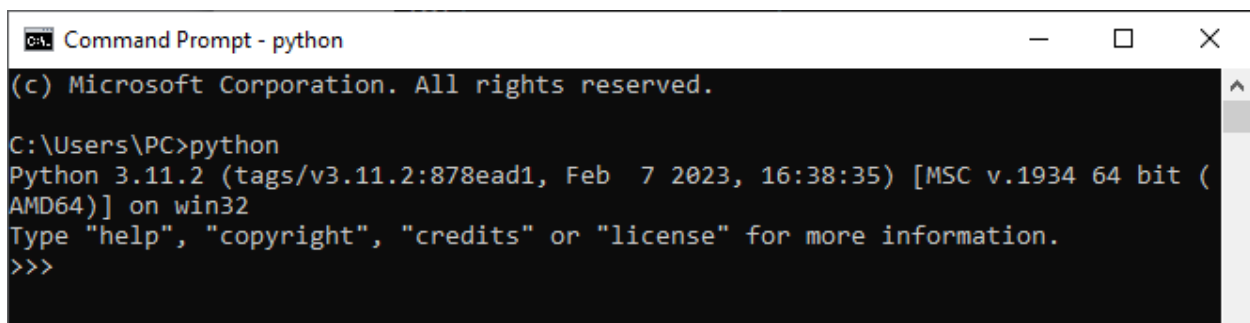
The screenshot shows the Visual Studio Code interface. The Explorer pane on the left shows a folder named 'PYTHONCODE' containing a file 'hello.py'. The main editor area shows the contents of 'hello.py', which is a single line of Python code: `print("Hello Pyhton Interpreter")`. The terminal window at the bottom shows the command prompt with the following commands and output:

```
PS C:\Users\PC\Documents\Bytewise\Pythoncode> & C:/Users/PC/AppData/Local/Programs/Python/Python311/python.exe c:/Users/PC/Documents/Bytewise/Pythoncode/hello.py
Hello Pyhton Interpreter
PS C:\Users\PC\Documents\Bytewise\Pythoncode>
```

- Hello World Program



- Python Version in CMD



- Changing Directory and showing list

```
Command Prompt
C:\Users\PC> cd documents/bytewise/Pythoncode

C:\Users\PC\Documents\Bytewise\Pythoncode> dir
Volume in drive C has no label.
Volume Serial Number is 64B2-5794

Directory of C:\Users\PC\Documents\Bytewise\Pythoncode

18/03/2023  03:18 am    <DIR>          .
18/03/2023  03:18 am    <DIR>          ..
18/03/2023  03:45 am                20 hello.py
               1 File(s)                20 bytes
               2 Dir(s)  65,839,722,496 bytes free

C:\Users\PC\Documents\Bytewise\Pythoncode>
```

- **Running Python Code on terminals (WINDOWS)**

```
C:\Users\PC\Documents\Bytewise\Pythoncode> python hello.py
Hello World

C:\Users\PC\Documents\Bytewise\Pythoncode>
```

- Running Python Code on terminals

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

Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\PC> cd documents/Bytewise/pythoncode
PS C:\Users\PC\documents\Bytewise\pythoncode> ls

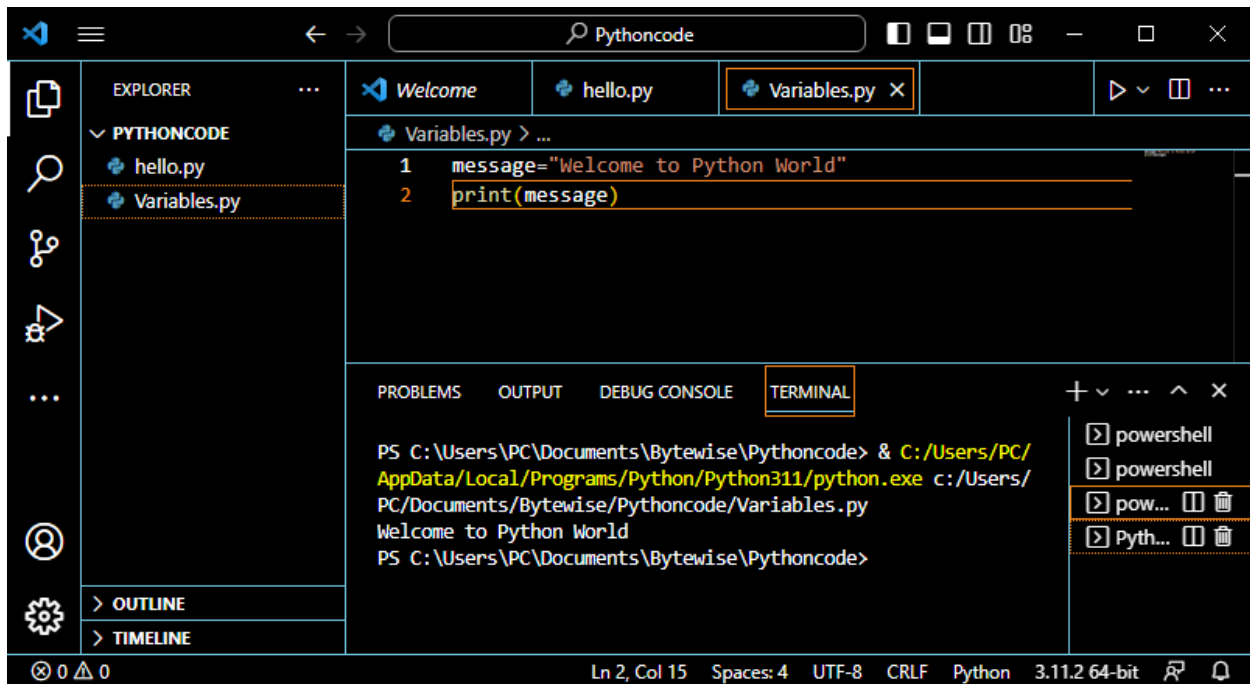
    Directory: C:\Users\PC\documents\Bytewise\pythoncode

Mode                LastWriteTime         Length Name
----                -
-a----           3/18/2023   3:45 AM             20 hello.py

PS C:\Users\PC\documents\Bytewise\pythoncode> python hello.py
Hello World
```

Variables

- Assigning a Variable



- Printing two lines of code

The screenshot shows the Visual Studio Code interface with a file explorer on the left containing 'hello.py' and 'Variables.py'. The main editor displays 'Variables.py' with the following code:

```
1 message="Welcome to Python World"
2 print(message)
3 message="Welcome to Python Crash Course World"
4 print (message)
```

The 'TERMINAL' pane at the bottom shows the command prompt output:

```
PS C:\Users\PC\Documents\Bytewise\Pythoncode> & C:/Users/PC/AppData/Local/Programs/Python/Python311/python.exe c:/Users/PC/Documents/Bytewise/Pythoncode/Variables.py
Welcome to Python World
Welcome to Python Crash Course World
PS C:\Users\PC\Documents\Bytewise\Pythoncode>
```

The status bar at the bottom indicates 'Ln 4, Col 16 Spaces: 4 UTF-8 CRLF Python 3.11.2 64-bit'.

- Generating errors on Purpose

The screenshot shows the Visual Studio Code interface with a file explorer on the left containing 'Errors.py', 'hello.py', and 'Variables.py'. The main editor displays 'Errors.py' with the following code:

```
1 message="Hi I am going to generate and understand errors"
2 print(mesage)
```

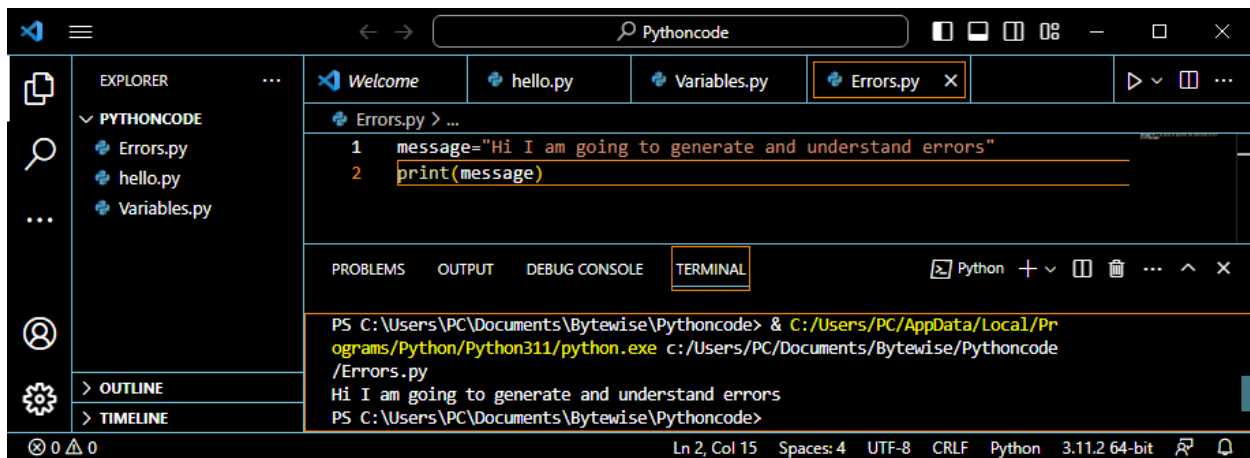
The 'TERMINAL' pane at the bottom shows the command prompt output, including a traceback for a `NameError`:

```
PS C:\Users\PC\Documents\Bytewise\Pythoncode> & C:/Users/PC/AppData/Local/Programs/Python/Python311/python.exe c:/Users/PC/Documents/Bytewise/Pythoncode/Errors.py
Traceback (most recent call last):
  File "c:\Users\PC\Documents\Bytewise\Pythoncode\Errors.py", line 2, in <module>
    print(mesage)
          ^^^^^
NameError: name 'mesage' is not defined. Did you mean: 'message'?
PS C:\Users\PC\Documents\Bytewise\Pythoncode>
```

The status bar at the bottom indicates 'Ln 2, Col 14 Spaces: 4 UTF-8 CRLF Python 3.11.2 64-bit'.

- Error Correction

Change message -> message.



The screenshot shows the Visual Studio Code interface. The Explorer sidebar on the left shows a project named 'PYTHONCODE' containing three files: 'Errors.py', 'hello.py', and 'Variables.py'. The 'Errors.py' file is open in the editor, showing the following code:

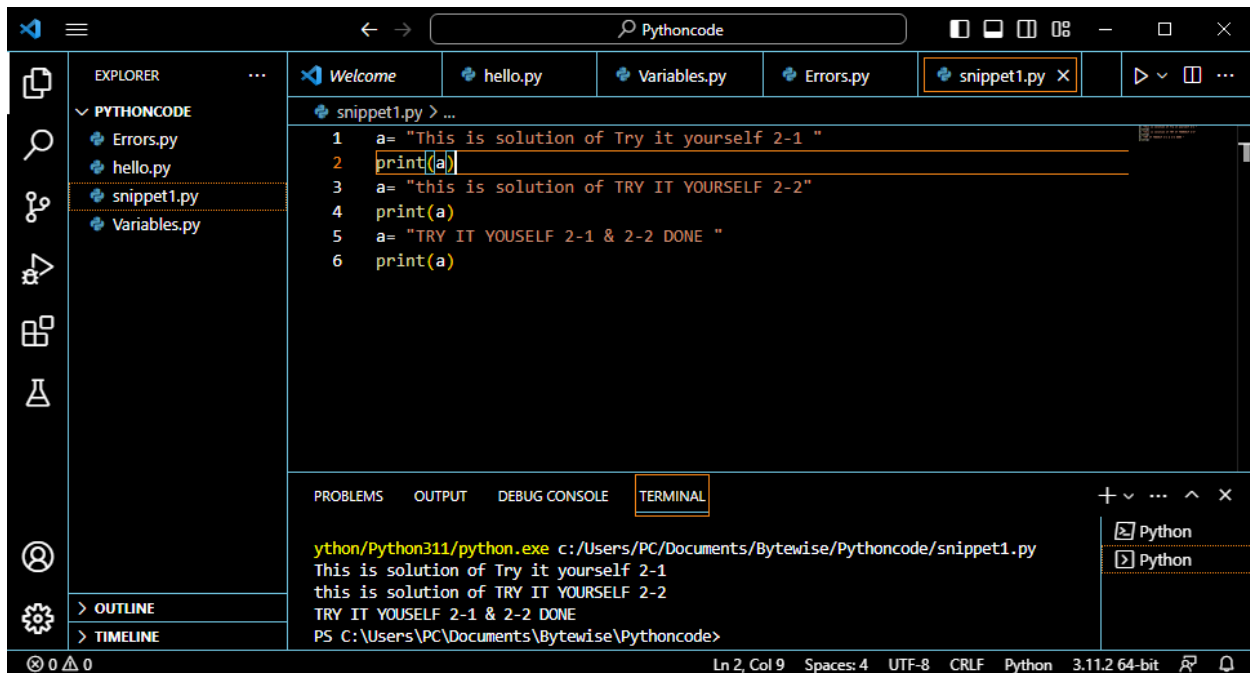
```
1 message="Hi I am going to generate and understand errors"
2 print(message)
```

The 'TERMINAL' tab at the bottom shows the command prompt output:

```
PS C:\Users\PC\Documents\Bytewise\Pythoncode> & C:/Users/PC/AppData/Local/Programs/Python/Python311/python.exe c:/Users/PC/Documents/Bytewise/Pythoncode/Errors.py
Hi I am going to generate and understand errors
PS C:\Users\PC\Documents\Bytewise\Pythoncode>
```

The status bar at the bottom indicates the cursor is at Line 2, Column 15, with 4 spaces, UTF-8 encoding, CRLF line endings, Python 3.11.2 64-bit.

- Exercise Solution (2-1 & 2-2)



The screenshot shows the Visual Studio Code interface. The Explorer sidebar on the left shows a project named 'PYTHONCODE' containing four files: 'Errors.py', 'hello.py', 'snippet1.py', and 'Variables.py'. The 'snippet1.py' file is open in the editor, showing the following code:

```
1 a= "This is solution of Try it yourself 2-1 "
2 print(a)
3 a= "this is solution of TRY IT YOURSELF 2-2"
4 print(a)
5 a= "TRY IT YOURSELF 2-1 & 2-2 DONE "
6 print(a)
```

The 'TERMINAL' tab at the bottom shows the command prompt output:


```
python/Python311/python.exe c:/Users/PC/Documents/Bytewise/Pythoncode/snippet1.py
This is solution of Try it yourself 2-1
this is solution of TRY IT YOURSELF 2-2
TRY IT YOURSELF 2-1 & 2-2 DONE
PS C:\Users\PC\Documents\Bytewise\Pythoncode>
```

The status bar at the bottom indicates the cursor is at Line 2, Column 9, with 4 spaces, UTF-8 encoding, CRLF line endings, Python 3.11.2 64-bit.

Data Types

1. Strings

- Printing string using single and double quote

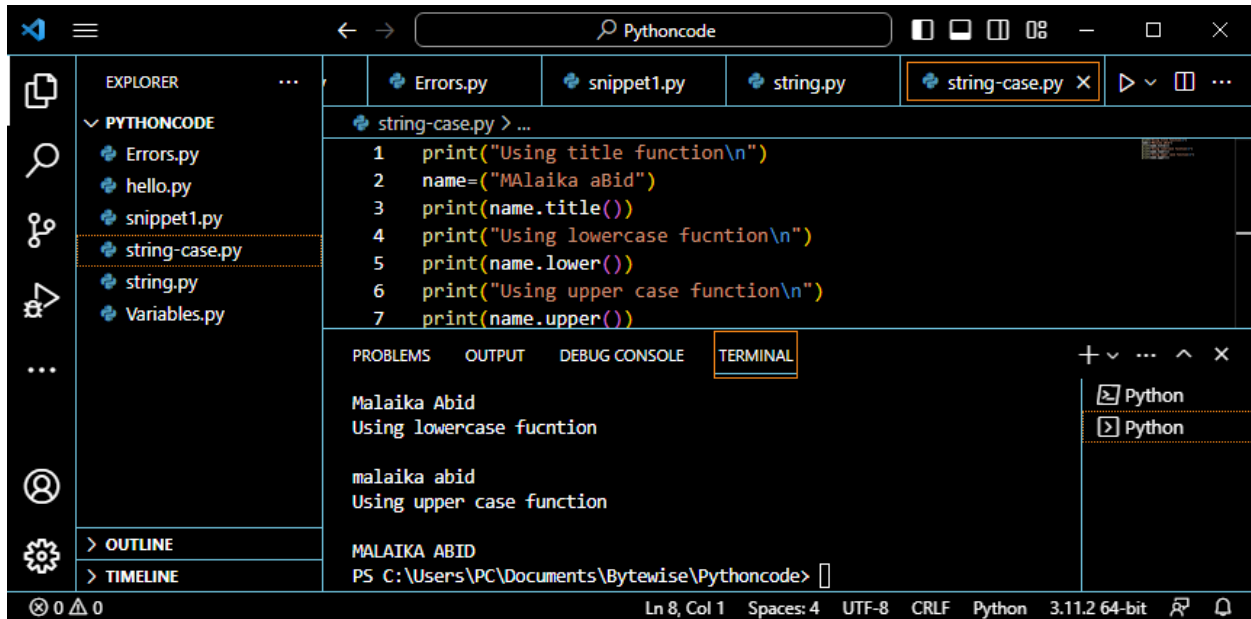


```
1 print("this is a string")
2 print('this is also a string')
3 print('string is a simply series of character. In Python it can be represented in double or single quotes')
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

/Pythoncode/string.py
this is a string
this is also a string
string is a simply series of character. In Python it can be represented in double or single quotes
PS C:\Users\PC\Documents\Bytewise\Pythoncode>

- Changing Cases using .title() -- .upper() -- .lower()



```
1 print("Using title function\n")
2 name=("Malaika aBid")
3 print(name.title())
4 print("Using lowercase fucntion\n")
5 print(name.lower())
6 print("Using upper case function\n")
7 print(name.upper())
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

Malaika Abid
Using lowercase fucntion

malaika abid
Using upper case function

MALAIKA ABID
PS C:\Users\PC\Documents\Bytewise\Pythoncode>

- Concatenating Strings

This screenshot shows the Visual Studio Code editor with a Python file named `string-concatenate.py` open. The Explorer sidebar on the left lists several Python files, with `string-concatenate.py` selected. The main editor area contains the following Python code:

```
2 first= "Malaika"  
3 Last='Abid'  
4 Full=first + " " +Last  
5 print(Full)  
6 message="Hello,"+ Full.title() + "! How are you?"  
7 print(message)  
8
```

Below the code editor, the TERMINAL panel is active, showing the output of the program:

```
Local/Programs/Python/Python311/python.exe c:/Users/PC/Documents/Bytewise/Pythoncode/string-concatenate.py  
  
Concatenating strings  
  
Malaika Abid  
Hello,Malaika Abid! How are you?  
PS C:\Users\PC\Documents\Bytewise\Pythoncode>
```

The status bar at the bottom indicates the current position is Line 7, Column 15, with 4 spaces, UTF-8 encoding, CRLF line endings, and Python 3.11.2 64-bit.

- Using `/n` & `/t`

This screenshot shows the Visual Studio Code editor with a Python file named `nextline-tab.py` open. The Explorer sidebar on the left lists several Python files, with `nextline-tab.py` selected. The main editor area contains the following Python code:

```
1 print("Programming Languages\tPython\tC++\tHTML\n")  
2 print("Prgramming Languages:\t\nPython\nC++\nHTML\n")
```

Below the code editor, the TERMINAL panel is active, showing the output of the program:

```
Programming Languages Python C++ HTML  
  
Prgramming Languages:  
Python  
C++  
HTML  
PS C:\Users\PC\Documents\Bytewise\Pythoncode>
```

The status bar at the bottom indicates the current position is Line 1, Column 50, with 4 spaces, UTF-8 encoding, CRLF line endings, and Python 3.11.2 64-bit.

- `Lstrip()` ,`rstrip()` , `strip()`

The screenshot shows the VS Code interface with a file explorer on the left containing various Python files. The main editor displays a file named `try-it2.py` with the following code:

```
20 print("Stripping Names")
21 name=" 'anna' "
22 print(name)
23 print(name.lstrip())
24 print(name.rstrip())
25 print(name.strip())
26
27
28
29
30
```

The bottom panel shows the `TERMINAL` tab with the output of the script:

```
Famous Quote 2:
Ali said, 'Purpose of life is to be HAPPY'
Stripping Names
'anna'
'anna'
'anna'
'anna'
```

The terminal prompt is `PS C:\Users\PC\Documents\Bytewise\Pythoncode>`.

- Avoiding errors(apostrophe)

The screenshot shows the VS Code interface with a file explorer on the left. The main editor displays a file named `apostrophe.py` with the following code:

```
1 fav="Avoiding APOSTRPOHE ERROR N STRINGS"
2 print(fav.title())
3 print("one of the python's strength is diversity")
4 print("Message with error:")
5 print('\t one of the Python's strength is diversity')
6
7
```

The bottom panel shows the `TERMINAL` tab with the output of the script:

```
Local/Programs/Python/Python311/python.exe c:/Users/PC/Documents/Bytewise/Pythoncode/apostrophe.py
File "c:\Users\PC\Documents\Bytewise\Pythoncode\apostrophe.py", line 5
print('\t one of the Python's strength is diversity')
^
SyntaxError: unterminated string literal (detected at line 5)
PS C:\Users\PC\Documents\Bytewise\Pythoncode>
```

The terminal prompt is `PS C:\Users\PC\Documents\Bytewise\Pythoncode>`.

- **Exercise Solution 2-3 , 2-4, 2-5, 2-6, 2-8**

[illegible]

The screenshot displays the Visual Studio Code editor with the 'Pythoncode' project open. The Explorer sidebar on the left shows a file tree with the following files: `apostrophe.py`, `errors.py`, `hello.py`, `newline-tab.py`, `string-case.py`, `string-concatenate.py`, `string.py`, `stripping-strings.py`, `try-1.py`, `try-2.py`, and `Variables.py`. The main editor window shows the code from `try-2.py`:

```

PS C:\Users\PC\Documents\bytouice\Pythoncode> & C:\Users\PC\AppData\Local\Program\Python\Python111\python.exe c:\Users\PC\Documents\bytouice\Pythoncode\try-12.py

TRY IT YOURSELF

Personal Message:
hello toufel ! would you like to go out with me?

Name Cases
Toufel
toufel
TOUFEL

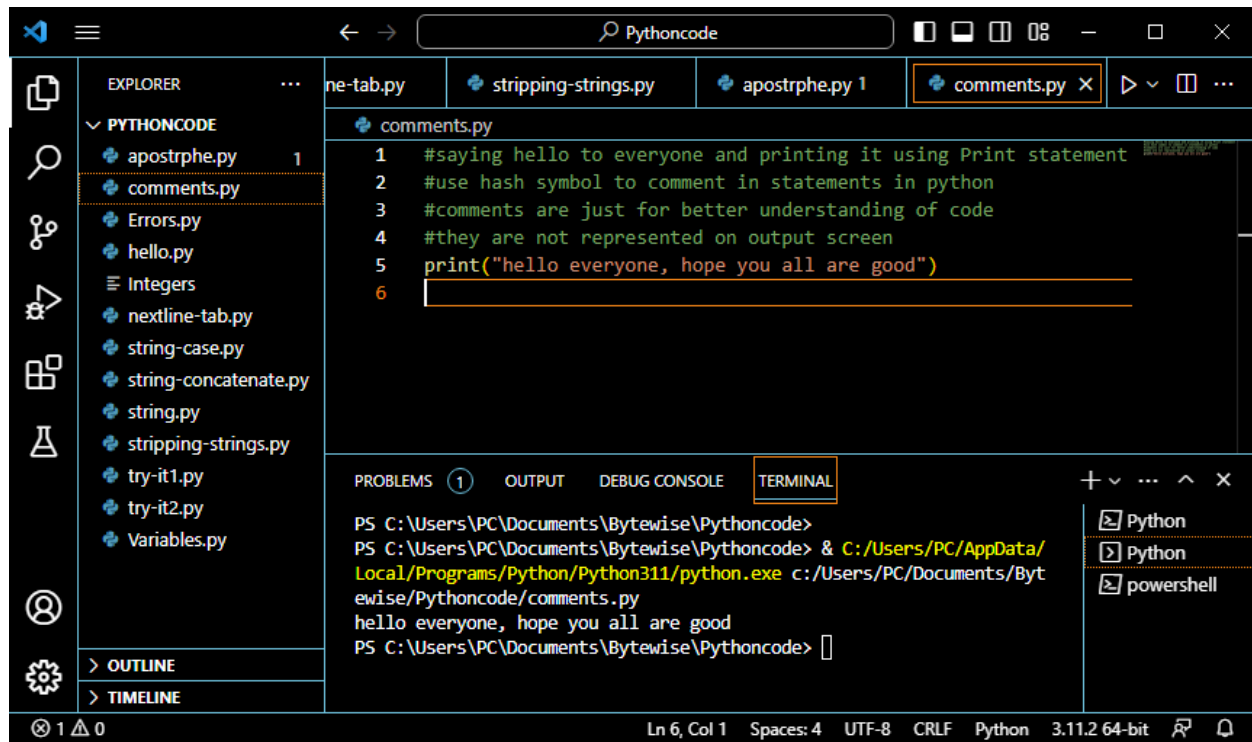
Toufel once said, "If you can dream it, you can achieve it"

Famous Quote 1:
All said, 'Purpose of life is to be HAPPY'
Stripping Names
'anna'
'anna'
'anna'
'anna'
PS C:\Users\PC\Documents\bytouice\Pythoncode>

```

The Output pane at the bottom shows the execution results of the code, which are identical to the code content shown in the editor.

- Comments



The screenshot shows a Python IDE with a dark theme. The Explorer panel on the left lists files under 'PYTHONCODE', including 'apostrophe.py', 'comments.py', 'Errors.py', 'hello.py', 'Integers', 'nextline-tab.py', 'string-case.py', 'string-concatenate.py', 'string.py', 'stripping-strings.py', 'try-it1.py', 'try-it2.py', and 'Variables.py'. The main editor displays the contents of 'comments.py':

```
1 #saying hello to everyone and printing it using Print statement
2 #use hash symbol to comment in statements in python
3 #comments are just for better understanding of code
4 #they are not represented on output screen
5 print("hello everyone, hope you all are good")
6
```

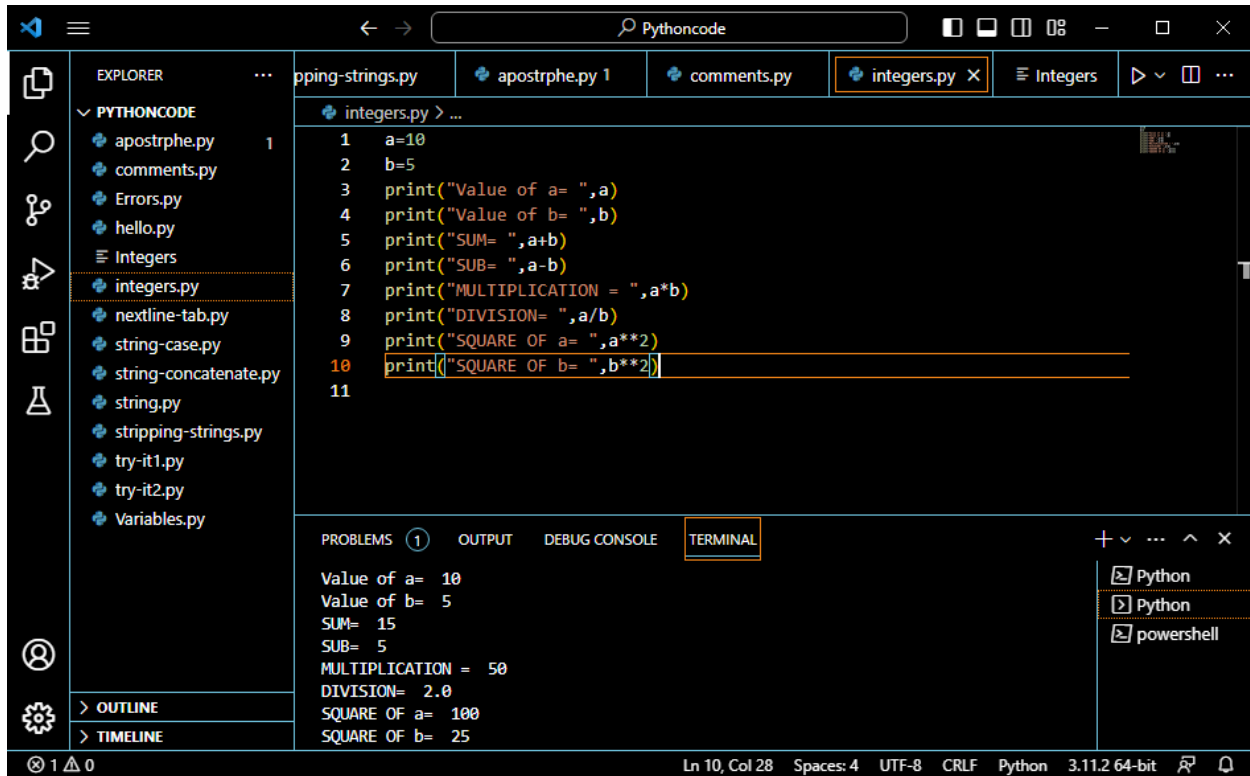
The bottom panel shows the 'TERMINAL' tab with the following commands and output:

```
PS C:\Users\PC\Documents\Bytewise\Pythoncode>
PS C:\Users\PC\Documents\Bytewise\Pythoncode> & C:/Users/PC/AppData/Local/Programs/Python/Python311/python.exe c:/Users/PC/Documents/Bytewise/Pythoncode/comments.py
hello everyone, hope you all are good
PS C:\Users\PC\Documents\Bytewise\Pythoncode>
```

The status bar at the bottom indicates 'Ln 6, Col 1', 'Spaces: 4', 'UTF-8', 'CRLF', 'Python', '3.11.2 64-bit', and a file icon.

2. Numbers

- Integers



The screenshot shows the Visual Studio Code interface. The Explorer sidebar on the left lists several Python files under the 'PYTHONCODE' folder, with 'integers.py' selected. The main editor window displays the code for 'integers.py', which defines variables 'a' and 'b', and performs various arithmetic operations and prints the results. The code is as follows:

```
1 a=10
2 b=5
3 print("Value of a= ",a)
4 print("Value of b= ",b)
5 print("SUM= ",a+b)
6 print("SUB= ",a-b)
7 print("MULTIPLICATION = ",a*b)
8 print("DIVISION= ",a/b)
9 print("SQUARE OF a= ",a**2)
10 print("SQUARE OF b= ",b**2)
11
```

Below the code editor, the 'TERMINAL' tab is active, showing the output of the script:

```
Value of a= 10
Value of b= 5
SUM= 15
SUB= 5
MULTIPLICATION = 50
DIVISION= 2.0
SQUARE OF a= 100
SQUARE OF b= 25
```

The status bar at the bottom indicates the current position is 'Ln 10, Col 28' and provides details about the file encoding (UTF-8), line endings (CRLF), and the Python interpreter version (3.11.2 64-bit).

- Floats

The screenshot shows the Visual Studio Code editor with a Python file named `floats.py` open. The file contains the following code:

```
1 a=2.0
2 b=5.3
3 print("Value of a= ",a)
4 print("Value of b= ",b)
5 print("SUM= ",a+b)
6 print("SUB= ",a-b)
7 print("MULTIPLICATION = ",a*b)
8 print("DIVISION= ",a/b)
9 print("SQUARE OF a= ",a**2)
10 print("SQUARE OF b= ",b**2)
11
```

The terminal window at the bottom shows the output of the script:

```
Value of b= 5.3
SUM= 7.3
SUB= -3.3
MULTIPLICATION = 10.6
DIVISION= 0.37735849056603776
SQUARE OF a= 4.0
SQUARE OF b= 28.09
PS C:\Users\PC\Documents\Bytewise\Pythoncode>
```

- Str() function

The screenshot shows the Visual Studio Code editor with a Python file named `int-to-str.py` open. The file contains the following code:

```
1 age=19
2 message='Hi I am Malaika'
3 #print(message + "and I am " +str(age) + " years old")
4 #age is integer and cannot be converted into string so we have used
5 #str() function to convert it an print meaning full message
6 print(message + "and I am " +str(age) + " years old")
```

The terminal window at the bottom shows the command to run the script and its output:

```
PS C:\Users\PC\Documents\Bytewise\Pythoncode> & C:/Users/PC/AppData/Local/Programs/Python/Python311/python.exe "c:/Users/PC/Documents/Bytewise/Pythoncode/int -to-str.py"
Hi I am Malaikaand I am 19 years old
PS C:\Users\PC\Documents\Bytewise\Pythoncode>
```

- Exercise Solution 2-8, 2-9

The screenshot shows a Python IDE with a file explorer on the left, a code editor in the center, and a terminal at the bottom. The file explorer lists several Python files under the 'PYTHONCODE' folder, including 'try-it3.py'. The code editor displays the contents of 'try-it3.py', which is a script that prints the results of various arithmetic operations and a message. The terminal shows the output of the script, which matches the expected results for the exercise.

```
1 print("NUMBER 8:")
2 print(4+4)
3 print(12-4)
4 print(2*4)
5 print(64/8)
6 print(2**3)
7 print("Try it Yourself 2-9: ")
8 a= 5
9 message=" is my favourite Number"
10 print(str(a) + message)
11
```

PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL

NUMBER 8:
8
8
8
8.0
8
Try it Yourself 2-9:
5 is my favourite Number
PS C:\Users\PC\Documents\Bytewise\Pythoncode>

Python
Python
powershell

Ln 11, Col 1 Spaces: 4 UTF-8 CRLF Python 3.11.2 64-bit

