

DAY 1 Task Solutions

Task 2:

Some Mega Projects hosted in Python are :

- **Prime Factorization** – Program in which user enters a number and it finds all Prime Factors (if there are any) and display them.
- **Find Cost of Tile to Cover W x H Floor** – Calculates the total cost of tile it would take to cover a floor plan of width and height, using a cost entered by the user.
- **Fibonacci Sequence** – Enters a number from user and generates the Fibonacci sequence to that number or to the Nth number.
- **Binary to Decimal and Back Converter** – Converts a decimal number to binary or a binary number to its decimal equivalent.
- **Mortgage Calculator** – Calculates the monthly payments of a fixed term mortgage over given Nth terms at a given interest rate.
- **Calculator** – Its a simple calculator to do basic operators. Make it a scientific calculator for added complexity.

Task 3:

Python Libraries Used in Different IT Domains are:

1. Python Libraries For **Data Science And Machine Learning**:

- Statistical Analysis - NumPy, SciPy, Pandas, StatsModels
- Data Visualization - Matplotlib, Seaborn, Plotly, Bokeh
- Data Modelling and Machine Learning - Scikit-learn, XGBoost, Eli5
- Deep Learning - TensorFlow, Pytorch, Keras
- Natural Language Processing (NLP) - NLTK, SpaCy, Gensim

2. Python Libraries For **Web Development**:

- Django Framework
- Flask Framework
- Web2py Framework
- Pyramid Framework
- Dash Framework

3. Python Libraries For **IOT**:

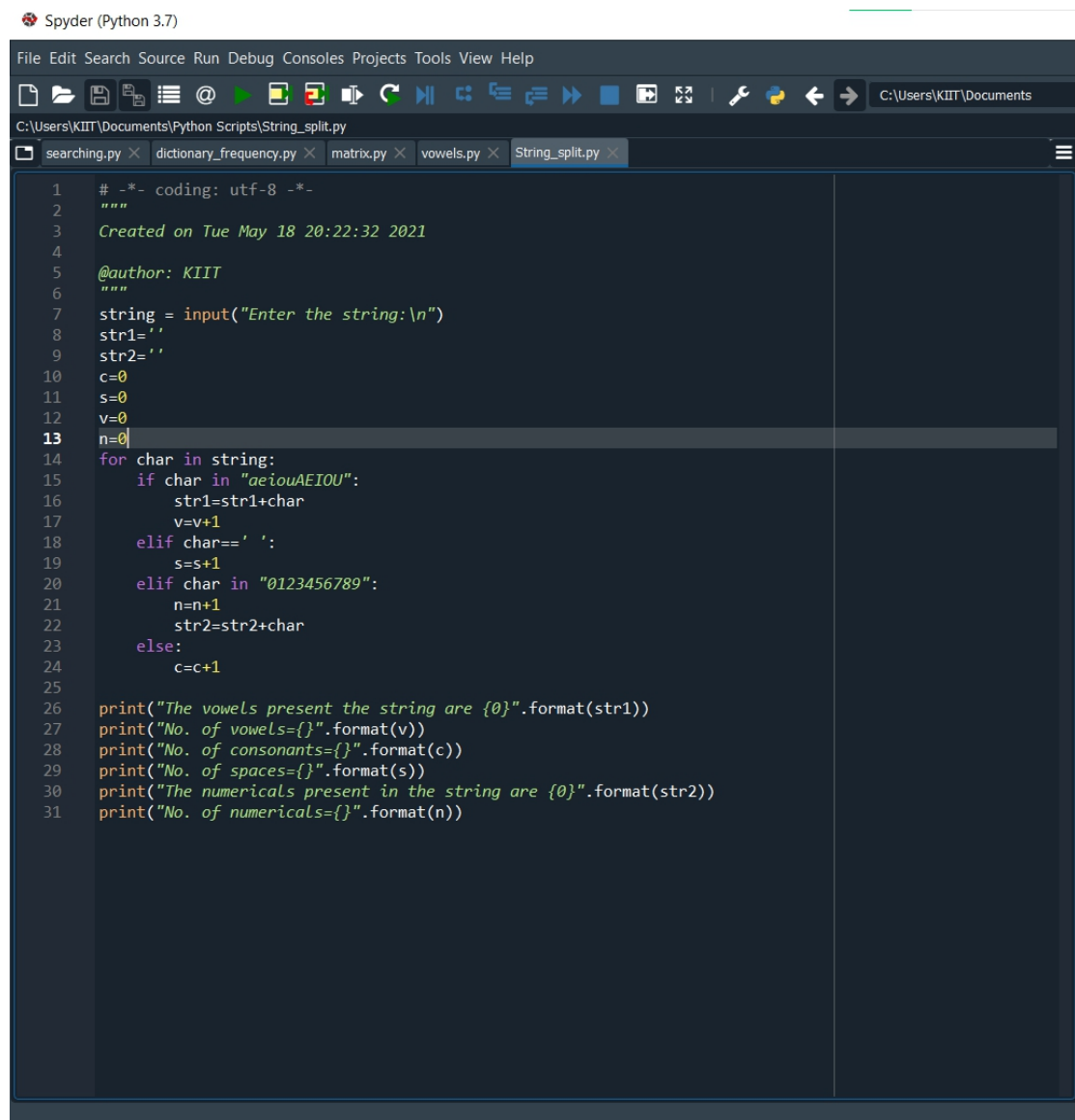
- mraa
- sockets
- mysqldb
- numpy
- matplotlib
- pandas
- opencv
- Tkinter

4. Python Libraries For **Android Development**:

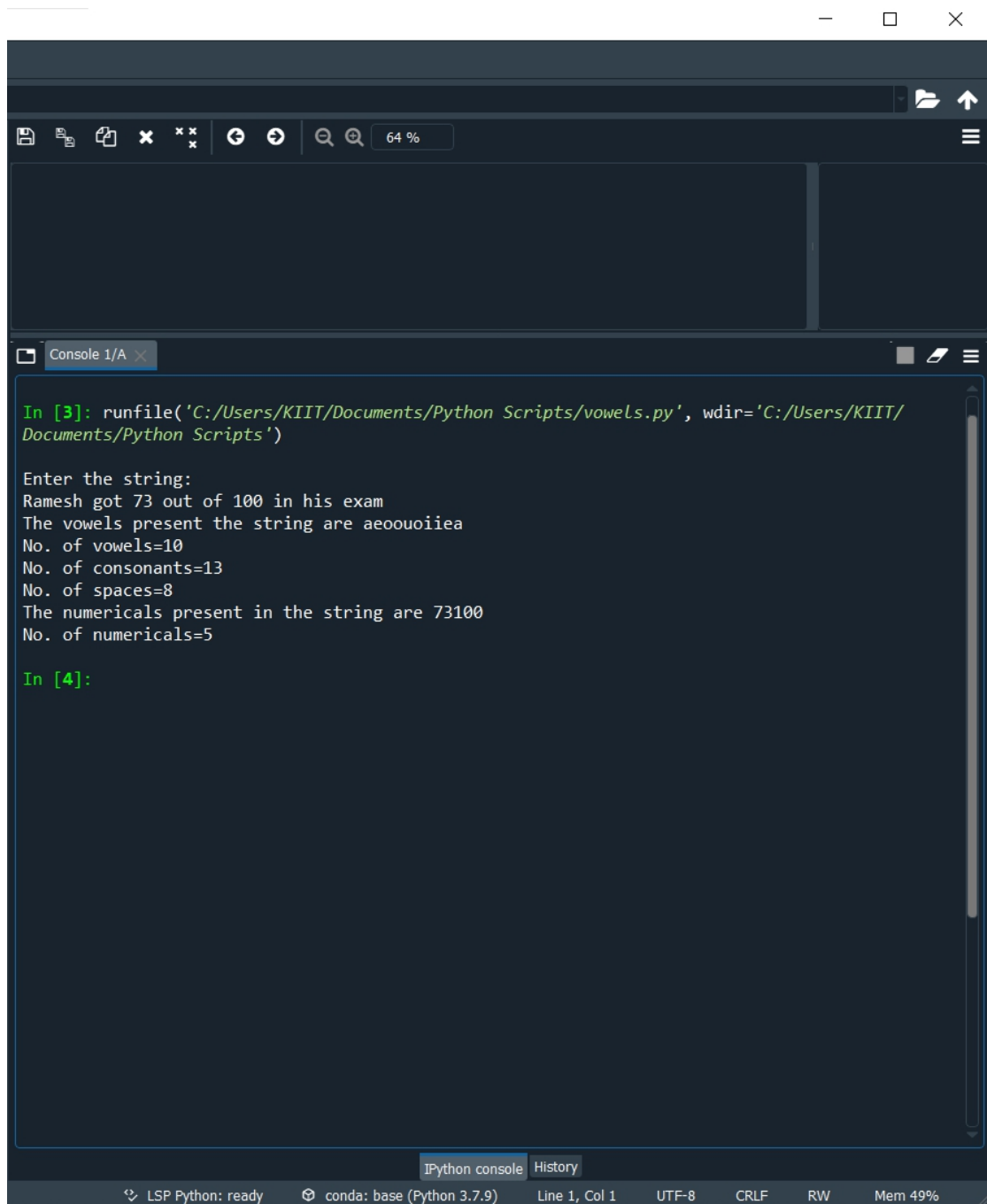
- Kivy
- BeeWare

Task 4:

Write a program in Python to take a string as user input and print the total number of Vowels, Consonants, Spaces and Numeric values.



```
1  # -*- coding: utf-8 -*-
2  """
3  Created on Tue May 18 20:22:32 2021
4
5  @author: KIIT
6  """
7  string = input("Enter the string:\n")
8  str1=''
9  str2=''
10 c=0
11 s=0
12 v=0
13 n=0
14 for char in string:
15     if char in "aeiouAEIOU":
16         str1=str1+char
17         v=v+1
18     elif char==' ':
19         s=s+1
20     elif char in "0123456789":
21         n=n+1
22         str2=str2+char
23     else:
24         c=c+1
25
26 print("The vowels present the string are {}".format(str1))
27 print("No. of vowels={}".format(v))
28 print("No. of consonants={}".format(c))
29 print("No. of spaces={}".format(s))
30 print("The numerals present in the string are {}".format(str2))
31 print("No. of numerals={}".format(n))
```



The screenshot displays a Jupyter Notebook environment. The top section is a file editor with a dark theme, showing a file named `vowels.py` at 64% zoom. The bottom section is an IPython console window titled "Console 1/A". It shows the execution of `runfile('C:/Users/KIIT/Documents/Python Scripts/vowels.py', wdir='C:/Users/KIIT/Documents/Python Scripts')`. The console output includes a prompt to enter a string, followed by the input "Ramesh got 73 out of 100 in his exam". The program then analyzes the string, reporting 10 vowels, 13 consonants, 8 spaces, and 5 numericals (73100). The console also shows the start of a new input prompt "In [4]:".

```
In [3]: runfile('C:/Users/KIIT/Documents/Python Scripts/vowels.py', wdir='C:/Users/KIIT/
Documents/Python Scripts')

Enter the string:
Ramesh got 73 out of 100 in his exam
The vowels present the string are aeououiiea
No. of vowels=10
No. of consonants=13
No. of spaces=8
The numericals present in the string are 73100
No. of numericals=5

In [4]:
```

IPython console History

LSP Python: ready conda: base (Python 3.7.9) Line 1, Col 1 UTF-8 CRLF RW Mem 49%