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

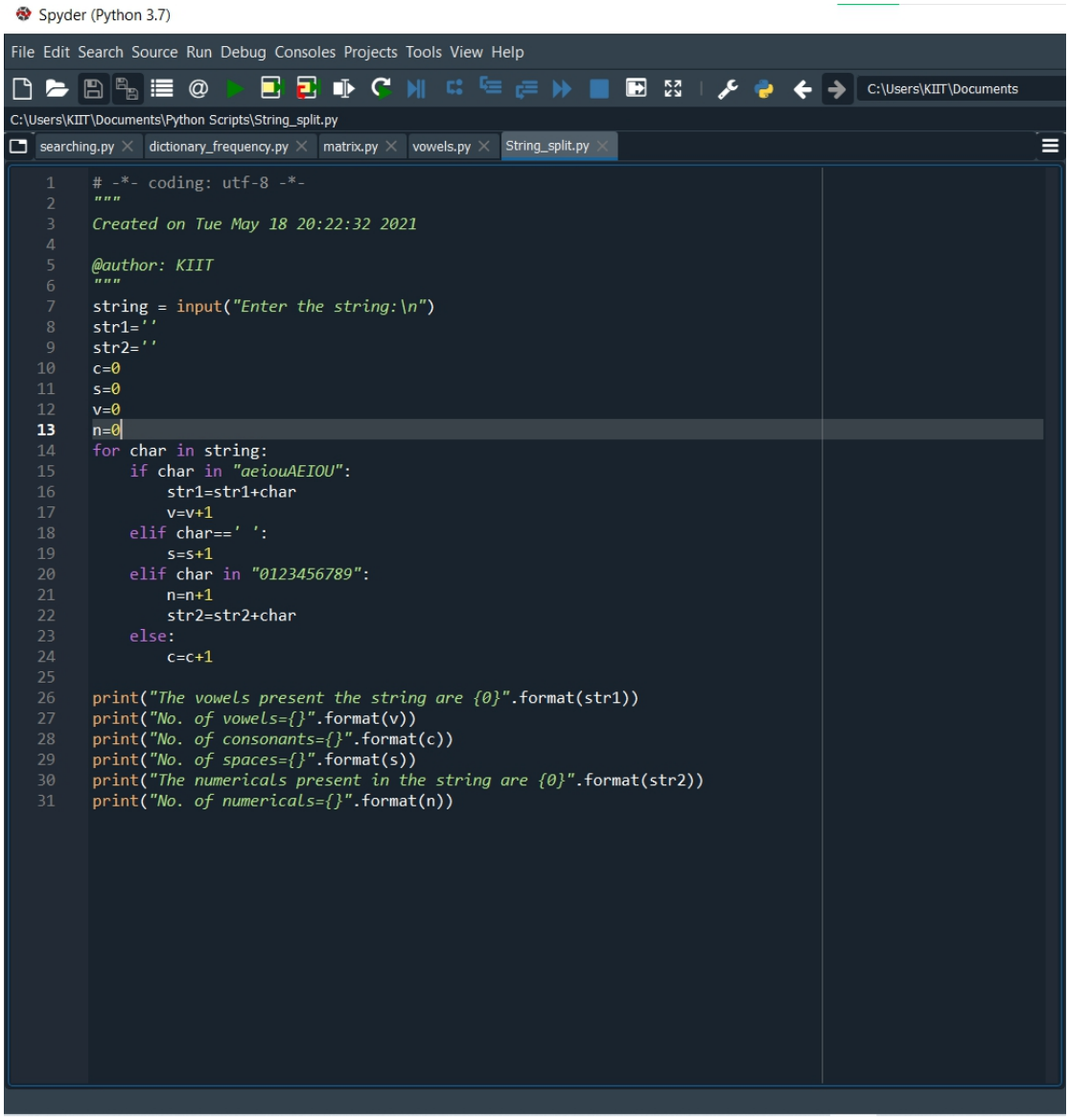
2. Python Libraries For **Web Development**:
    - Django Framework
    - Flask Framework
    - Web2py Framework
    - Pyramid Framework
    - Dash Framework

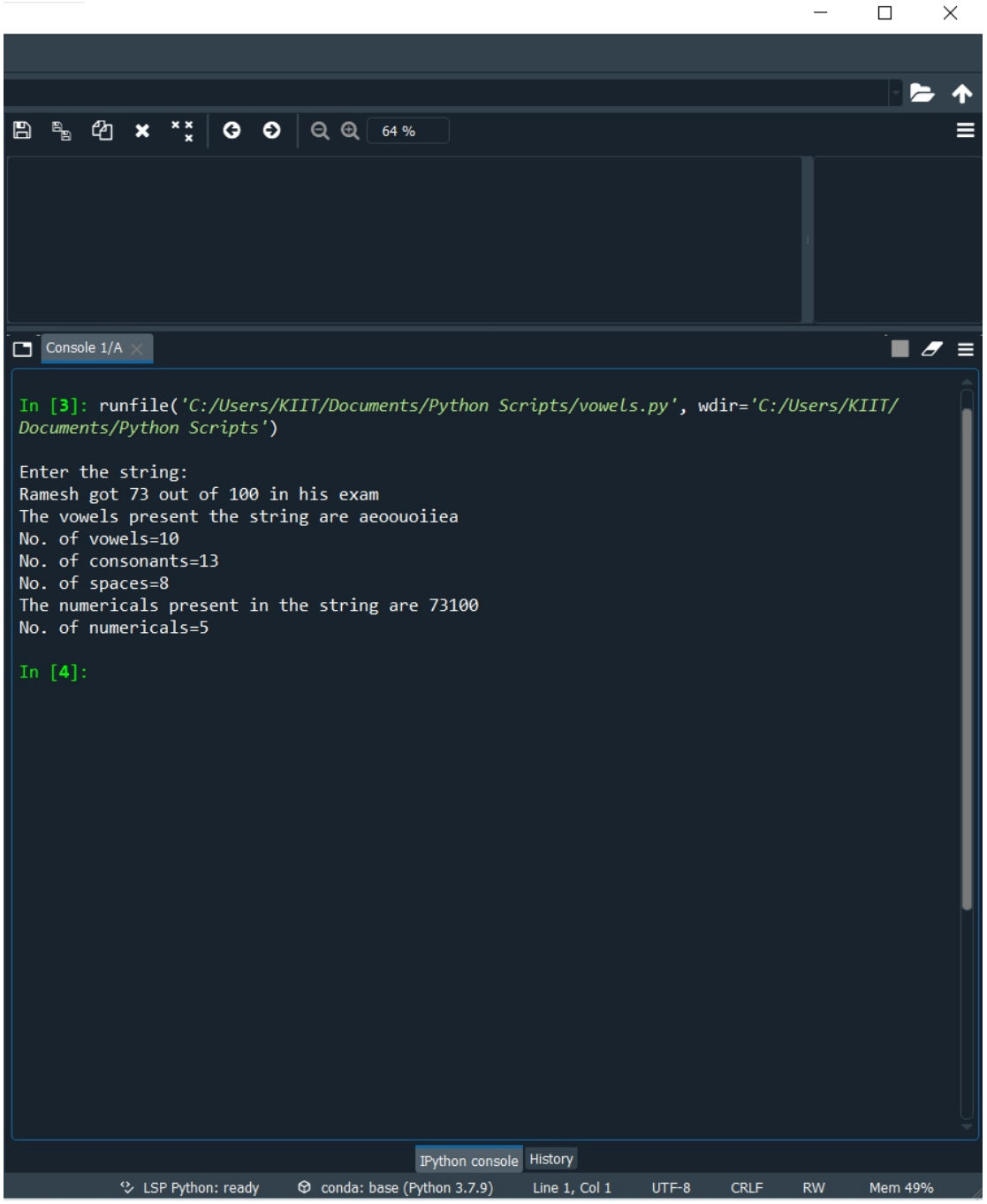
3. Python Libraries For **IOT:**
    - mraa
    - sockets
    - mysqldb
    - numpy
    - matplotlib
    - pandas
    - opencv
    - Tkinter

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.




64 %
Console 1/A
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 aeoouoiiea
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%