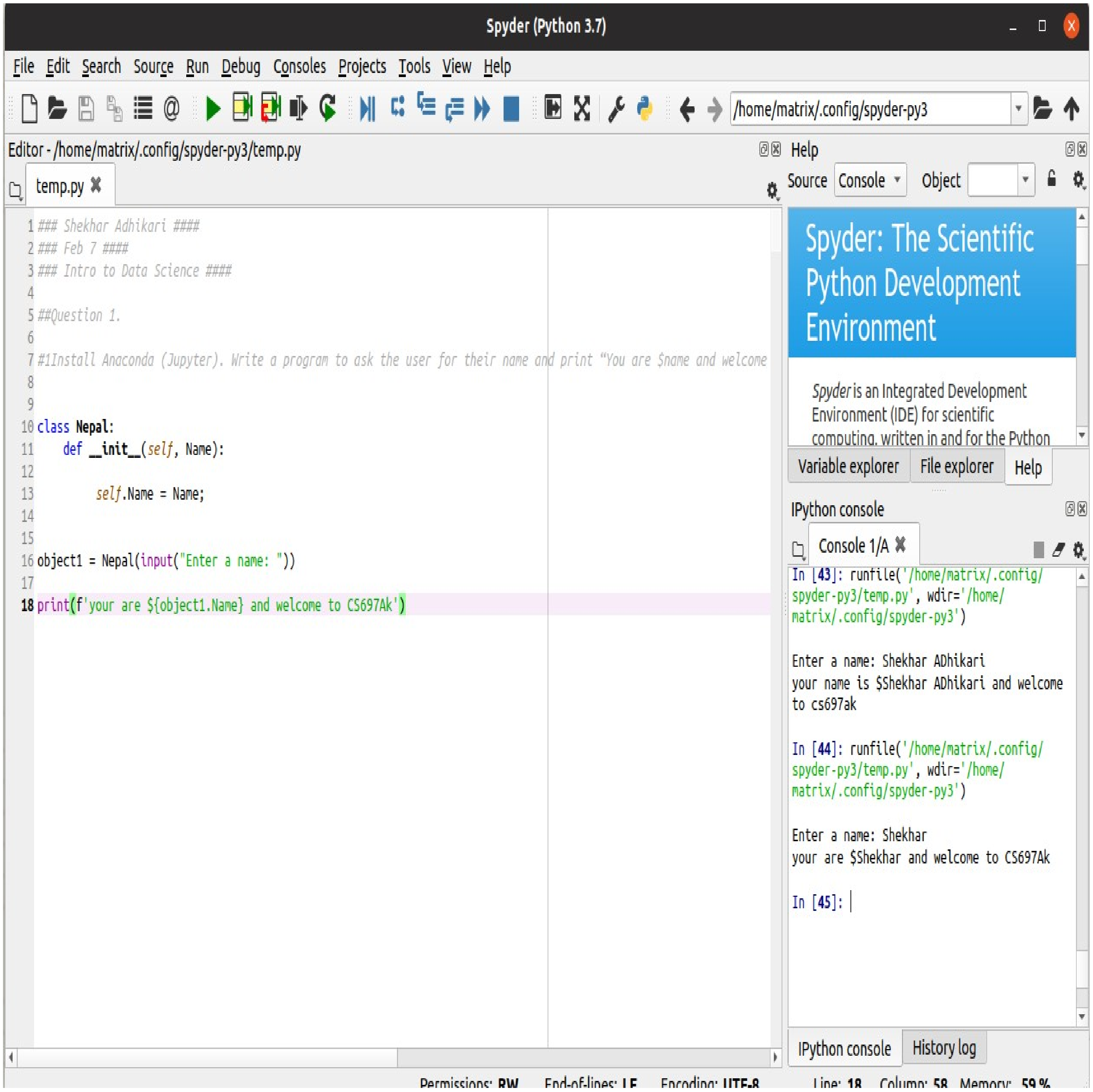
Shekhar Adhikari

1.



Spyder (Python 3.7)

Editor - /home/matrix/.config/spyder-py3/temp.py

```python
### Shekhar Adhikari ####
### Feb 7 ####
### Intro to Data Science ####

##Question 1.

#1Install Anaconda (Jupyter). Write a program to ask the user for their name and print “You are $name and welcome


class Nepal:
    def __init__(self, Name):

        self.Name = Name;


object1 = Nepal(input("Enter a name: "))

print(f'your are ${object1.Name} and welcome to CS697Ak')
```

Spyder: The Scientific Python Development Environment

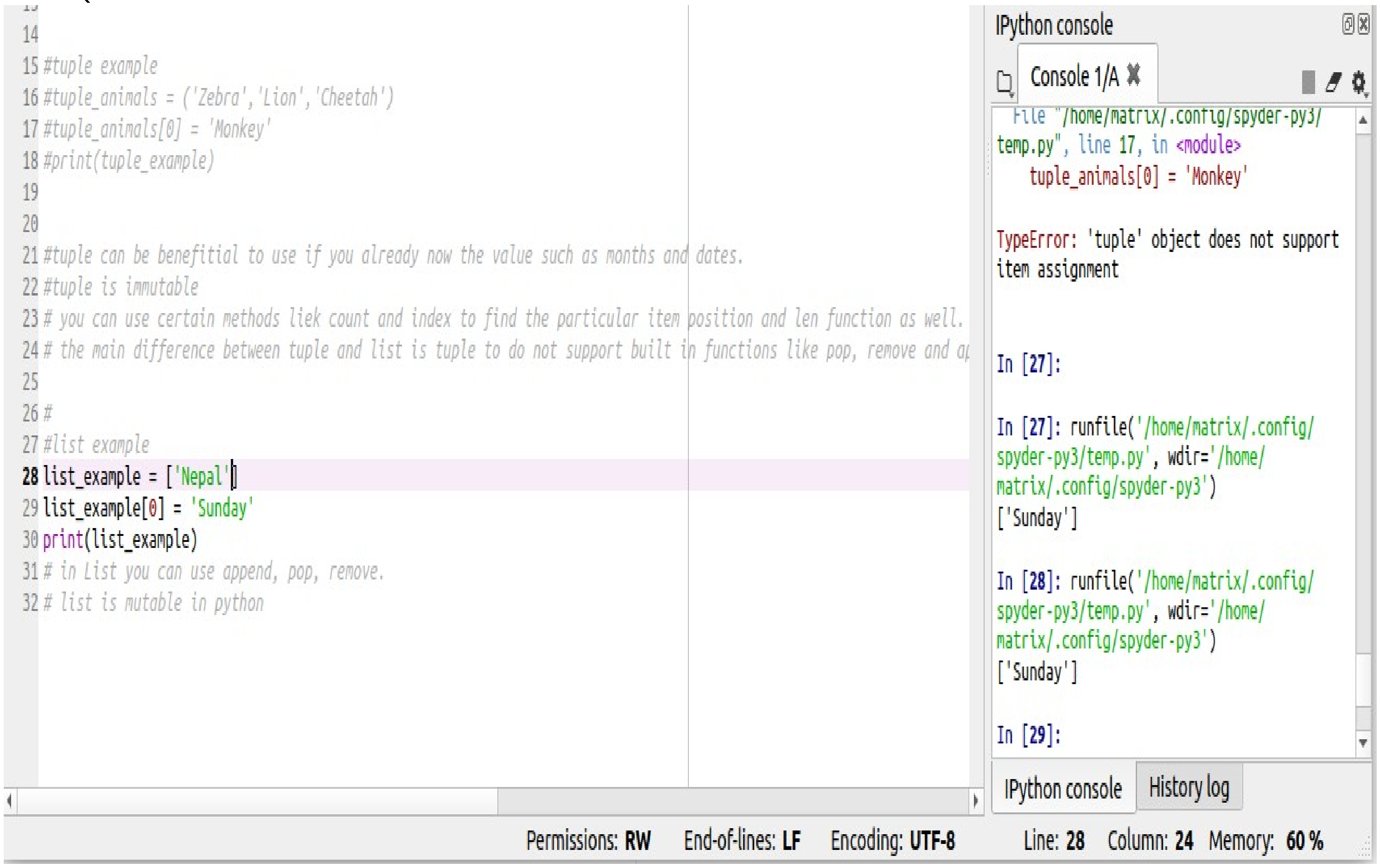
Spyder is an Integrated Development Environment (IDE) for scientific computing, written in and for the Python

IPython console

```
In [43]: runfile('/home/matrix/.config/
spyder-py3/temp.py', wdir='/home/
matrix/.config/spyder-py3')

Enter a name: Shekhar ADhikari
your name is $Shekhar ADhikari and welcome
to cs697ak

In [44]: runfile('/home/matrix/.config/
spyder-py3/temp.py', wdir='/home/
matrix/.config/spyder-py3')

Enter a name: Shekhar
your are $Shekhar and welcome to CS697Ak

In [45]:
```

Permissions: RW End-of-lines: LF Encoding: UTF-8 Line: 18 Column: 58 Memory: 59 %

Question No 2:



```
#tuple example
#tuple_animals = ('Zebra','Lion','Cheetah')
#tuple_animals[0] = 'Monkey'
#print(tuple_example)


#tuple can be benefitial to use if you already now the value such as months and dates.
#tuple is immutable
# you can use certain methods liek count and index to find the particular item position and len function as well.
# the main difference between tuple and list is tuple to do not support built in functions like pop, remove and ap

#
#list example
list_example = ['Nepal']
list_example[0] = 'Sunday'
print(list_example)
# in List you can use append, pop, remove.
# list is mutable in python
```

```
  File "/home/matrix/.config/spyder-py3/temp.py", line 17, in <module>
    tuple_animals[0] = 'Monkey'

TypeError: 'tuple' object does not support item assignment



In [27]:

In [27]: runfile('/home/matrix/.config/spyder-py3/temp.py', wdir='/home/matrix/.config/spyder-py3')
['Sunday']

In [28]: runfile('/home/matrix/.config/spyder-py3/temp.py', wdir='/home/matrix/.config/spyder-py3')
['Sunday']

In [29]:
```

Permissions: RW   End-of-lines: LF   Encoding: UTF-8   Line: 28   Column: 24   Memory: 60 %

In this screenshot, I have pointed out the differences between tuple and list. Also, on the output screen we can see that tuple does not support item assignment. However, list supports item assignment as per the output on right hand side. Hence, tuple is immutable therefore it cannot be modified and that is one disadvantages and list are mutable and it can be modified so that is an advantage. A list has a variable size while a tuple has a fixed size. Tuples cannot be copied because it is immutable. In list you can store different data types such as [‘Shekhar’,10] but in tuple can only be (‘Shekhar’,’Lion’)

Question 3:

Rock, Paper and Scissor Game

Pseudo Algorithm:

1) Import random module

2) Make a variable called choices for computer(Rock, Paper, Scissors) and use the random method so that computer will shuffle between Rock, Paper and Scissors.

3) Assign score for computer and user wins as: 0

4) Start a while True loop:

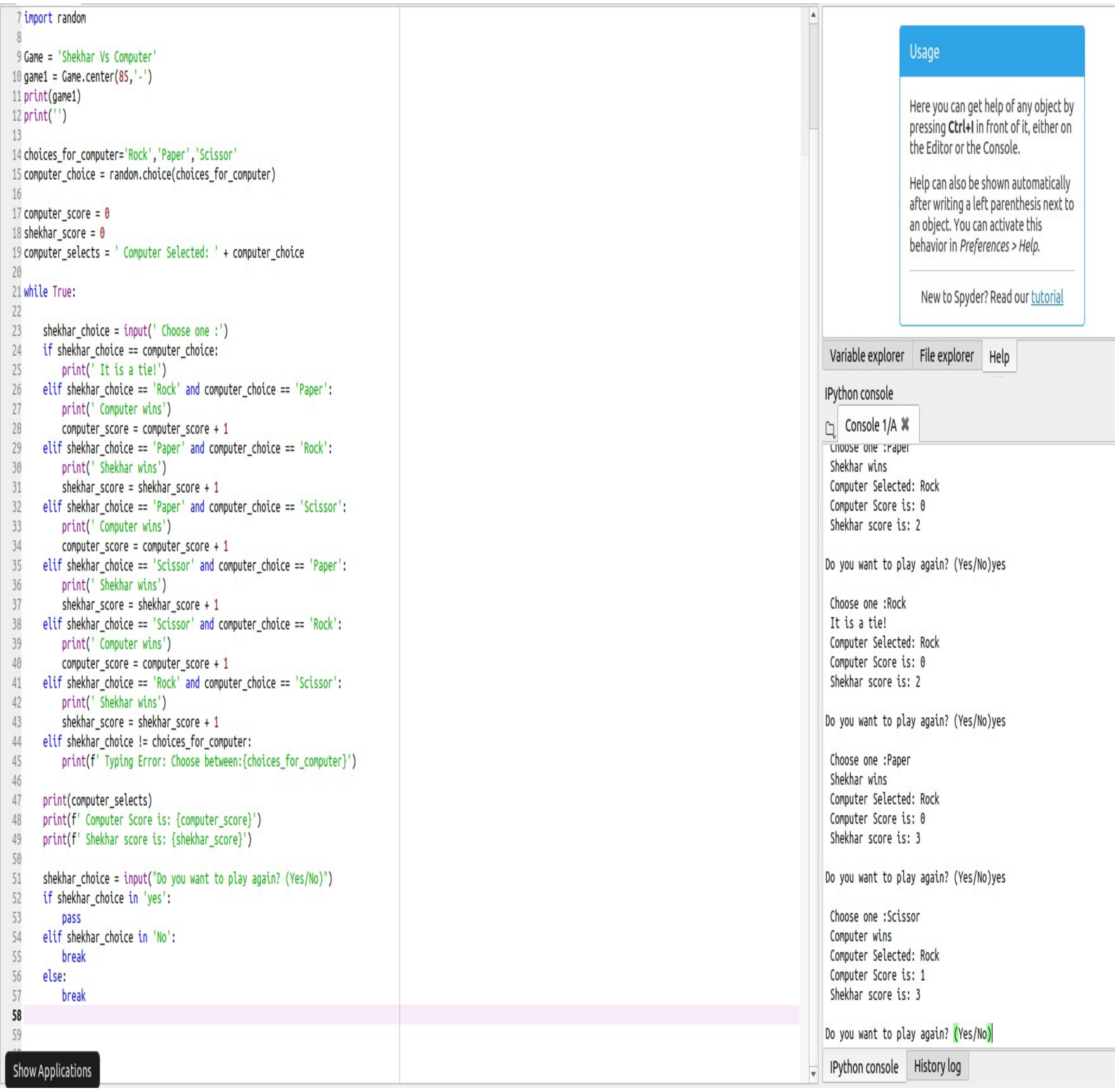
5) make a variable and ask user to input(if they wanna choose Rock, Paper or Scissors)

6) run if, elif condition and check the 9 combinations for rock, paper and scissors.

7) Every time computer or user wins increment the value by 1.

8) print the new computer score and user score

9) After the game ends ask user if they wanna play again if they wanna play again loop runs again if they press no. We can break the loop and exit out of the game.



```python
import random

Game = 'Shekhar Vs Computer'
game1 = Game.center(85,'-')
print(game1)
print('')

choices_for_computer='Rock','Paper','Scissor'
computer_choice = random.choice(choices_for_computer)

computer_score = 0
shekhar_score = 0
computer_selects = ' Computer Selected: ' + computer_choice

while True:

    shekhar_choice = input(' Choose one :')
    if shekhar_choice == computer_choice:
        print(' It is a tie!')
    elif shekhar_choice == 'Rock' and computer_choice == 'Paper':
        print(' Computer wins')
        computer_score = computer_score + 1
    elif shekhar_choice == 'Paper' and computer_choice == 'Rock':
        print(' Shekhar wins')
        shekhar_score = shekhar_score + 1
    elif shekhar_choice == 'Paper' and computer_choice == 'Scissor':
        print(' Computer wins')
        computer_score = computer_score + 1
    elif shekhar_choice == 'Scissor' and computer_choice == 'Paper':
        print(' Shekhar wins')
        shekhar_score = shekhar_score + 1
    elif shekhar_choice == 'Scissor' and computer_choice == 'Rock':
        print(' Computer wins')
        computer_score = computer_score + 1
    elif shekhar_choice == 'Rock' and computer_choice == 'Scissor':
        print(' Shekhar wins')
        shekhar_score = shekhar_score + 1
    elif shekhar_choice != choices_for_computer:
        print(f' Typing Error: Choose between:{choices_for_computer}')

    print(computer_selects)
    print(f' Computer Score is: {computer_score}')
    print(f' Shekhar score is: {shekhar_score}')

    shekhar_choice = input("Do you want to play again? (Yes/No)")
    if shekhar_choice in 'yes':
        pass
    elif shekhar_choice in 'No':
        break
    else:
        break
```

Usage

Here you can get help of any object by pressing **Ctrl+I** 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*.

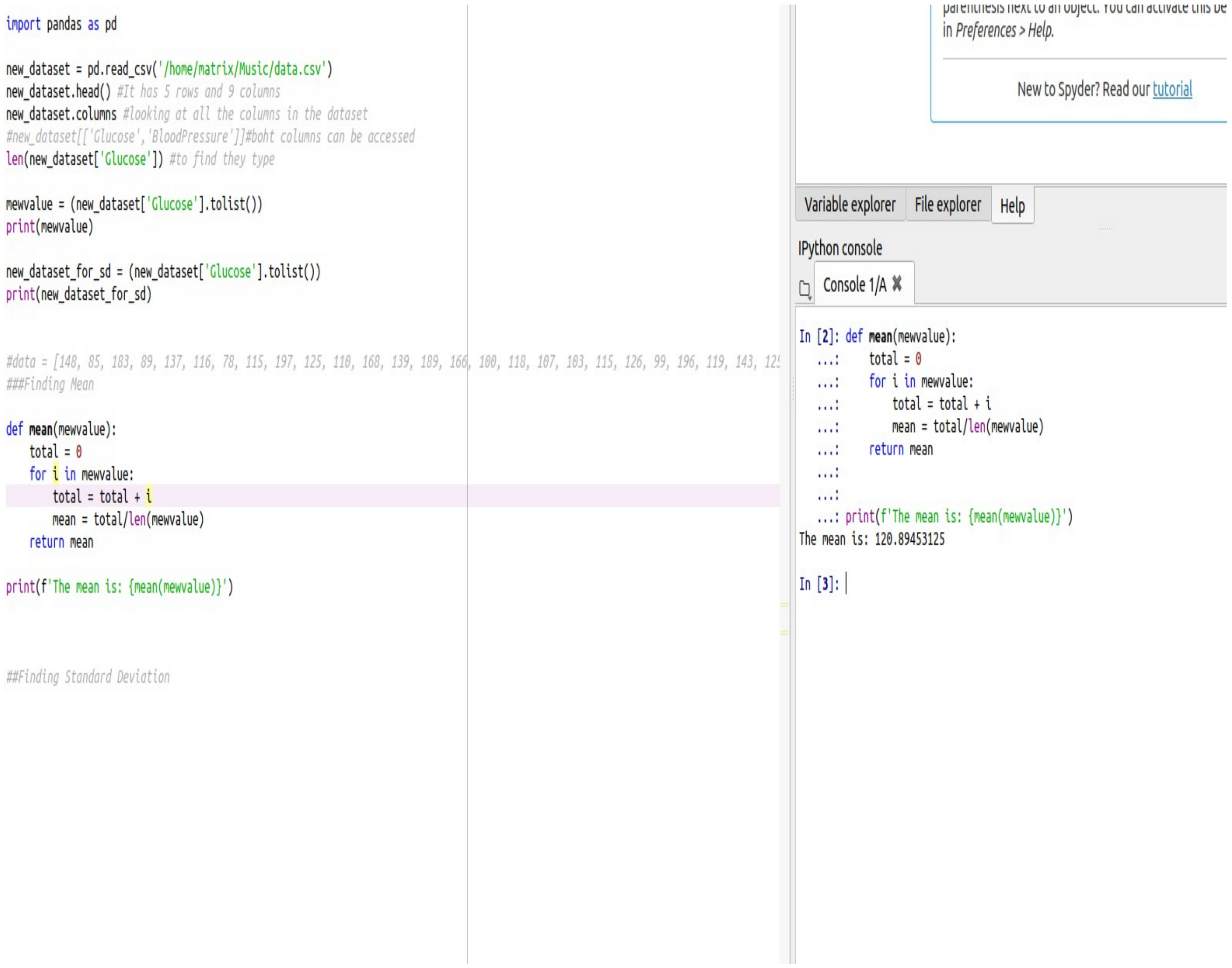
New to Spyder? Read our tutorial

```
 Choose one :Paper
 Shekhar wins
 Computer Selected: Rock
 Computer Score is: 0
 Shekhar score is: 2

Do you want to play again? (Yes/No)yes

 Choose one :Rock
 It is a tie!
 Computer Selected: Rock
 Computer Score is: 0
 Shekhar score is: 2

Do you want to play again? (Yes/No)yes

 Choose one :Paper
 Shekhar wins
 Computer Selected: Rock
 Computer Score is: 0
 Shekhar score is: 3

Do you want to play again? (Yes/No)yes

 Choose one :Scissor
 Computer wins
 Computer Selected: Rock
 Computer Score is: 1
 Shekhar score is: 3

Do you want to play again? (Yes/No)
```

Question 4:

Write a python program that calculates the max, mean, standard deviation, median, 75 percentile of the Glucose column of the Prima data. This data can be found at https://www.kaggle.com/uciml/pima-indians-diabetes-database#diabetes.csv

1) Finding the mean



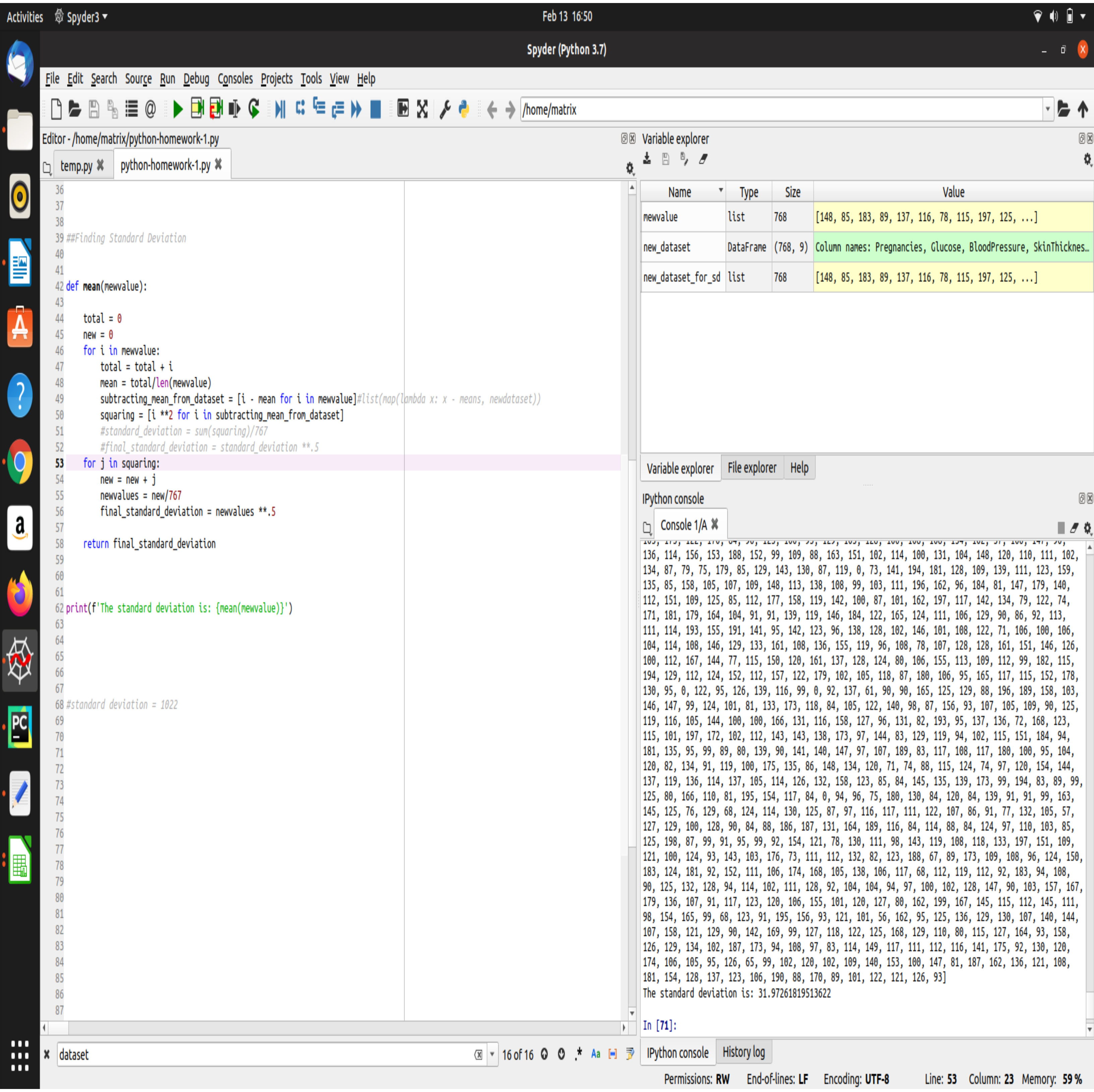
```python
import pandas as pd

new_dataset = pd.read_csv('/home/matrix/Music/data.csv')
new_dataset.head() #It has 5 rows and 9 columns
new_dataset.columns #looking at all the columns in the dataset
#new_dataset[['Glucose','BloodPressure']]#boht columns can be accessed
len(new_dataset['Glucose']) #to find they type

mewvalue = (new_dataset['Glucose'].tolist())
print(mewvalue)

new_dataset_for_sd = (new_dataset['Glucose'].tolist())
print(new_dataset_for_sd)


#data = [148, 85, 183, 89, 137, 116, 78, 115, 197, 125, 110, 168, 139, 189, 166, 100, 118, 107, 103, 115, 126, 99, 196, 119, 143, 12
###Finding Mean

def mean(mewvalue):
    total = 0
    for i in mewvalue:
        total = total + i
        mean = total/len(mewvalue)
    return mean

print(f'The mean is: {mean(mewvalue)}')



##Finding Standard Deviation
```

parenthesis next to an object. You can activate this be
in *Preferences > Help.*

New to Spyder? Read our tutorial

```
In [2]: def mean(mewvalue):
   ...:     total = 0
   ...:     for i in mewvalue:
   ...:         total = total + i
   ...:         mean = total/len(mewvalue)
   ...:     return mean
   ...:
   ...:
   ...: print(f'The mean is: {mean(mewvalue)}')
The mean is: 120.89453125

In [3]: 
```

2) Standard Deviation:



Editor - /home/matrix/python-homework-1.py

```python


##Finding Standard Deviation


def mean(newvalue):

    total = 0
    new = 0
    for i in newvalue:
        total = total + i
        mean = total/len(newvalue)
        subtracting_mean_from_dataset = [i - mean for i in newvalue]#list(map(lambda x: x - means, newdataset))
        squaring = [i **2 for i in subtracting_mean_from_dataset]
        #standard_deviation = sum(squaring)/767
        #final_standard_deviation = standard_deviation **.5
    for j in squaring:
        new = new + j
        newvalues = new/767
        final_standard_deviation = newvalues **.5

    return final_standard_deviation



print(f'The standard deviation is: {mean(newvalue)}')





#standard deviation = 1022
```

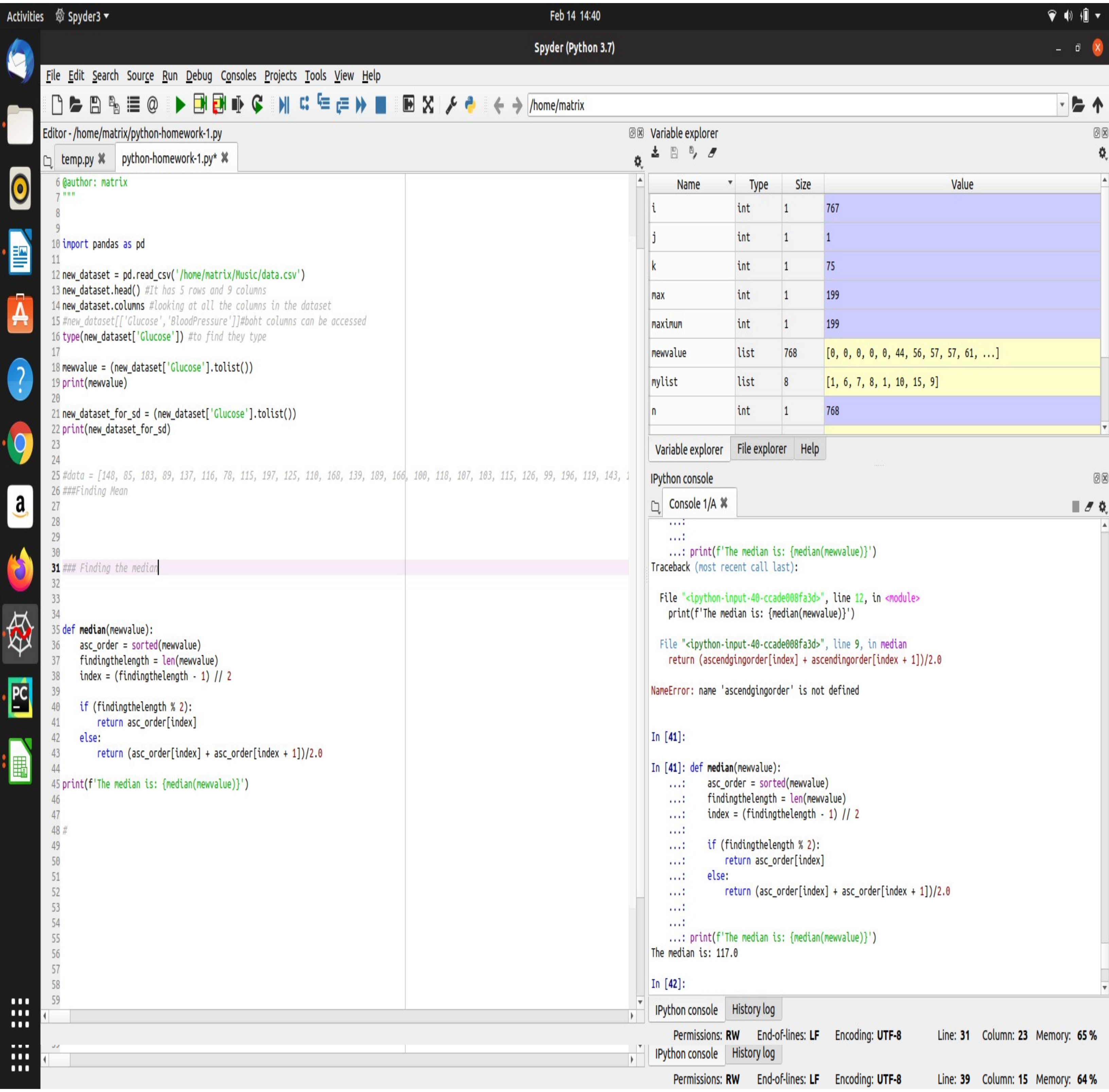
Variable explorer

Name	Type	Size	Value
newvalue	list	768	[148, 85, 183, 89, 137, 116, 78, 115, 197, 125, ...]
new_dataset	DataFrame	(768, 9)	Column names: Pregnancies, Glucose, BloodPressure, SkinThicknes…
new_dataset_for_sd	list	768	[148, 85, 183, 89, 137, 116, 78, 115, 197, 125, ...]

IPython console — Console 1/A

```
136, 114, 156, 153, 188, 152, 99, 109, 88, 163, 151, 102, 114, 100, 131, 104, 148, 120, 110, 111, 102,
134, 87, 79, 75, 179, 85, 129, 143, 130, 87, 119, 0, 73, 141, 194, 181, 128, 109, 139, 111, 123, 159,
135, 85, 158, 105, 107, 109, 148, 113, 138, 108, 99, 103, 111, 196, 162, 96, 184, 81, 147, 179, 140,
112, 151, 109, 125, 85, 112, 177, 158, 119, 142, 100, 87, 101, 162, 197, 117, 142, 134, 79, 122, 74,
171, 181, 179, 164, 104, 91, 91, 139, 119, 146, 184, 122, 165, 124, 111, 106, 129, 90, 86, 92, 113,
111, 114, 193, 155, 191, 141, 95, 142, 123, 96, 138, 128, 102, 146, 101, 108, 122, 71, 106, 100, 106,
104, 114, 108, 146, 129, 133, 161, 108, 136, 155, 119, 96, 108, 78, 107, 128, 128, 161, 151, 146, 126,
100, 112, 167, 144, 77, 115, 150, 120, 161, 137, 128, 124, 80, 106, 155, 113, 109, 112, 99, 182, 115,
194, 129, 112, 124, 152, 112, 157, 122, 179, 102, 105, 118, 87, 180, 106, 95, 165, 117, 115, 152, 178,
130, 95, 0, 122, 95, 126, 139, 116, 99, 0, 92, 137, 61, 90, 90, 165, 125, 129, 88, 196, 189, 158, 103,
146, 147, 99, 124, 101, 81, 133, 173, 118, 84, 105, 122, 140, 98, 87, 156, 93, 107, 105, 109, 90, 125,
119, 116, 105, 144, 100, 100, 166, 131, 116, 158, 127, 96, 131, 82, 193, 95, 137, 136, 72, 168, 123,
115, 101, 197, 172, 102, 112, 143, 143, 138, 173, 97, 144, 83, 129, 119, 94, 102, 115, 151, 184, 94,
181, 135, 95, 99, 89, 80, 139, 90, 141, 140, 147, 97, 107, 189, 83, 117, 108, 117, 180, 100, 95, 104,
120, 82, 134, 91, 119, 100, 175, 135, 86, 148, 134, 120, 71, 74, 88, 115, 124, 74, 97, 120, 154, 144,
137, 119, 136, 114, 137, 105, 114, 126, 132, 158, 123, 85, 84, 145, 135, 139, 173, 99, 194, 83, 89, 99,
125, 80, 166, 110, 81, 195, 154, 117, 84, 0, 94, 96, 75, 180, 130, 84, 120, 84, 139, 91, 91, 99, 163,
145, 125, 76, 129, 68, 124, 114, 130, 125, 87, 97, 116, 117, 111, 122, 107, 86, 91, 77, 132, 105, 57,
127, 129, 100, 128, 90, 84, 88, 186, 187, 131, 164, 189, 116, 84, 114, 88, 84, 124, 97, 110, 103, 85,
125, 198, 87, 99, 91, 95, 99, 92, 154, 121, 78, 130, 111, 98, 143, 119, 108, 118, 133, 197, 151, 109,
121, 100, 124, 93, 143, 103, 176, 73, 111, 112, 132, 82, 123, 188, 67, 89, 173, 109, 108, 96, 124, 150,
183, 124, 181, 92, 152, 111, 106, 174, 168, 105, 138, 106, 117, 68, 112, 119, 112, 92, 183, 94, 108,
90, 125, 132, 128, 94, 114, 102, 111, 128, 92, 104, 104, 94, 97, 100, 102, 128, 147, 90, 103, 157, 167,
179, 136, 107, 91, 117, 123, 120, 106, 155, 101, 120, 127, 80, 162, 199, 167, 145, 115, 112, 145, 111,
98, 154, 165, 99, 68, 123, 91, 195, 156, 93, 121, 101, 56, 162, 95, 125, 136, 129, 130, 107, 140, 144,
107, 158, 121, 129, 90, 142, 169, 99, 127, 118, 122, 125, 168, 129, 110, 80, 115, 127, 164, 93, 158,
126, 129, 134, 102, 187, 173, 94, 108, 97, 83, 114, 149, 117, 111, 112, 116, 141, 175, 92, 130, 120,
174, 106, 105, 95, 126, 65, 99, 102, 120, 102, 109, 140, 153, 100, 147, 81, 187, 162, 136, 121, 108,
181, 154, 128, 137, 123, 106, 190, 88, 170, 89, 101, 122, 121, 126, 93]
The standard deviation is: 31.97261819513622


In [71]:
```

Permissions: RW End-of-lines: LF Encoding: UTF-8 Line: 53 Column: 23 Memory: 59 %



Activities Spyder3 ▾ Feb 14 14:40

Spyder (Python 3.7)

File Edit Search Source Run Debug Consoles Projects Tools View Help

/home/matrix

Editor - /home/matrix/python-homework-1.py

temp.py ✖ python-homework-1.py* ✖

```python
@author: matrix
"""


import pandas as pd

new_dataset = pd.read_csv('/home/matrix/Music/data.csv')
new_dataset.head() #It has 5 rows and 9 columns
new_dataset.columns #looking at all the columns in the dataset
#new_dataset[['Glucose','BloodPressure']]#boht columns can be accessed
type(new_dataset['Glucose']) #to find they type

newvalue = (new_dataset['Glucose'].tolist())
print(newvalue)

new_dataset_for_sd = (new_dataset['Glucose'].tolist())
print(new_dataset_for_sd)


#data = [148, 85, 183, 89, 137, 116, 78, 115, 197, 125, 110, 168, 139, 189, 166, 100, 118, 107, 103, 115, 126, 99, 196, 119, 143, 1
###Finding Mean




### Finding the median



def median(newvalue):
    asc_order = sorted(newvalue)
    findingthelength = len(newvalue)
    index = (findingthelength - 1) // 2

    if (findingthelength % 2):
        return asc_order[index]
    else:
        return (asc_order[index] + asc_order[index + 1])/2.0

print(f'The median is: {median(newvalue)}')


#
```

Variable explorer

Name	Type	Size	Value
i	int	1	767
j	int	1	1
k	int	1	75
max	int	1	199
maximum	int	1	199
newvalue	list	768	[0, 0, 0, 0, 0, 44, 56, 57, 57, 61, ...]
mylist	list	8	[1, 6, 7, 8, 1, 10, 15, 9]
n	int	1	768

Variable explorer File explorer Help

IPython console

Console 1/A ✖

```
   ...:
   ...:
   ...: print(f'The median is: {median(newvalue)}')
Traceback (most recent call last):

  File "<ipython-input-40-ccade008fa3d>", line 12, in <module>
    print(f'The median is: {median(newvalue)}')

  File "<ipython-input-40-ccade008fa3d>", line 9, in median
    return (ascendgingorder[index] + ascendingorder[index + 1])/2.0

NameError: name 'ascendgingorder' is not defined



In [41]:

In [41]: def median(newvalue):
    ...:     asc_order = sorted(newvalue)
    ...:     findingthelength = len(newvalue)
    ...:     index = (findingthelength - 1) // 2
    ...:
    ...:     if (findingthelength % 2):
    ...:         return asc_order[index]
    ...:     else:
    ...:         return (asc_order[index] + asc_order[index + 1])/2.0
    ...:
    ...:
    ...: print(f'The median is: {median(newvalue)}')
The median is: 117.0

In [42]:
```

IPython console History log

Permissions: RW End-of-lines: LF Encoding: UTF-8 Line: 31 Column: 23 Memory: 65 %

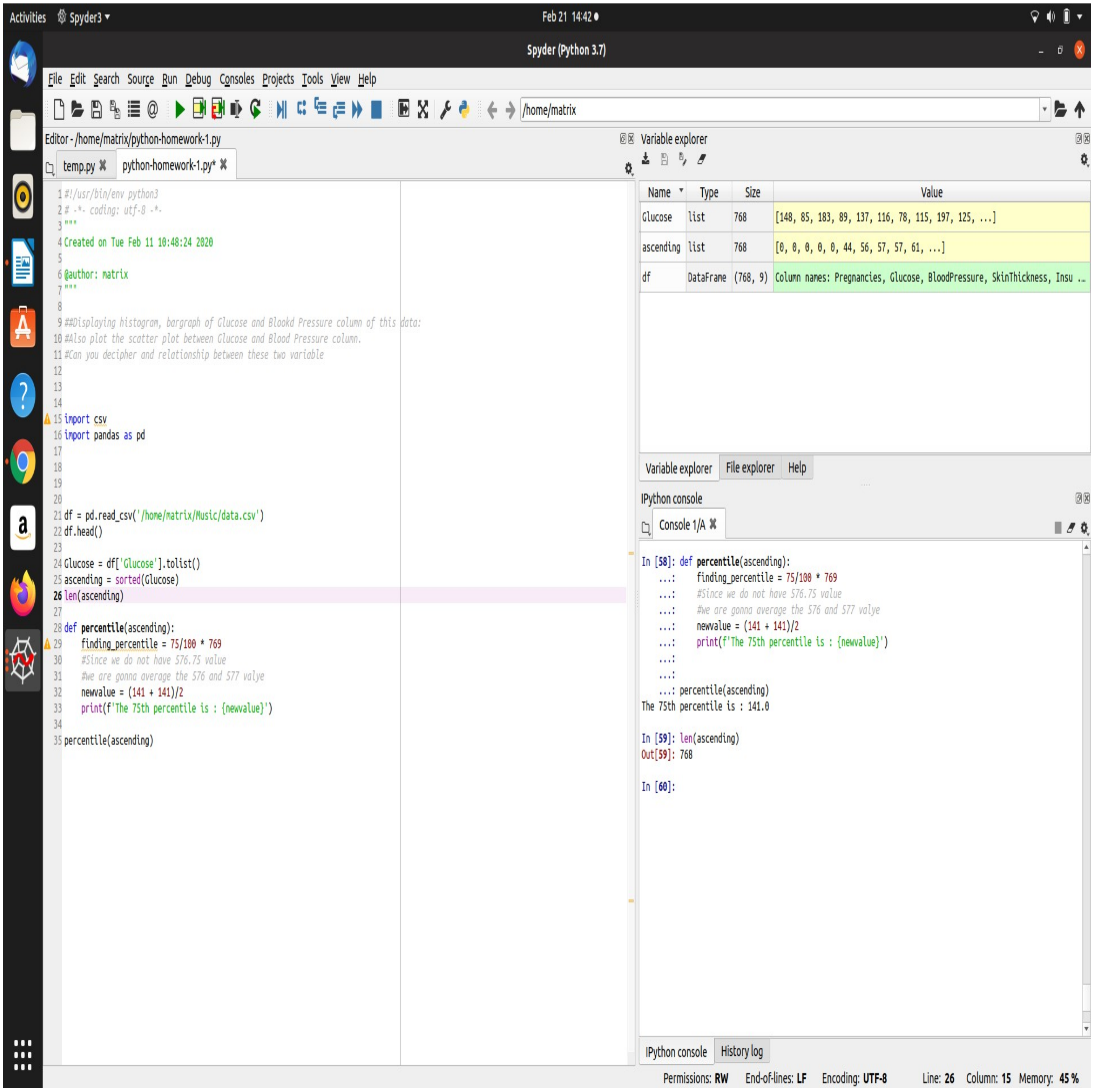
IPython console History log

Permissions: RW End-of-lines: LF Encoding: UTF-8 Line: 39 Column: 15 Memory: 64 %

5) Finding the 75th percentile:

Here I have arranged the data in ascending order and after checking the length of the glucose column it is 768. By following the formula.

By using the formula: p/100*(n+1) which leads up to 75/100*(767 + 1) I found 576.75 which is stored inside a variable called finding_percentile. But there is no n called 576.75 therefore I added the value of 576 and 577 position and divided it by 2 by following formula. And answer is 141 I am not sure why using numpy it has answer of 140.25.



```python
#!/usr/bin/env python3
# -*- coding: utf-8 -*-
"""
Created on Tue Feb 11 10:48:24 2020

@author: matrix
"""

##Displaying histogram, bargraph of Glucose and Blookd Pressure column of this data:
#Also plot the scatter plot between Glucose and Blood Pressure column.
#Can you decipher and relationship between these two variable



import csv
import pandas as pd




df = pd.read_csv('/home/matrix/Music/data.csv')
df.head()

Glucose = df['Glucose'].tolist()
ascending = sorted(Glucose)
len(ascending)

def percentile(ascending):
    finding_percentile = 75/100 * 769
    #Since we do not have 576.75 value
    #we are gonna average the 576 and 577 valye
    newvalue = (141 + 141)/2
    print(f'The 75th percentile is : {newvalue}')

percentile(ascending)
```

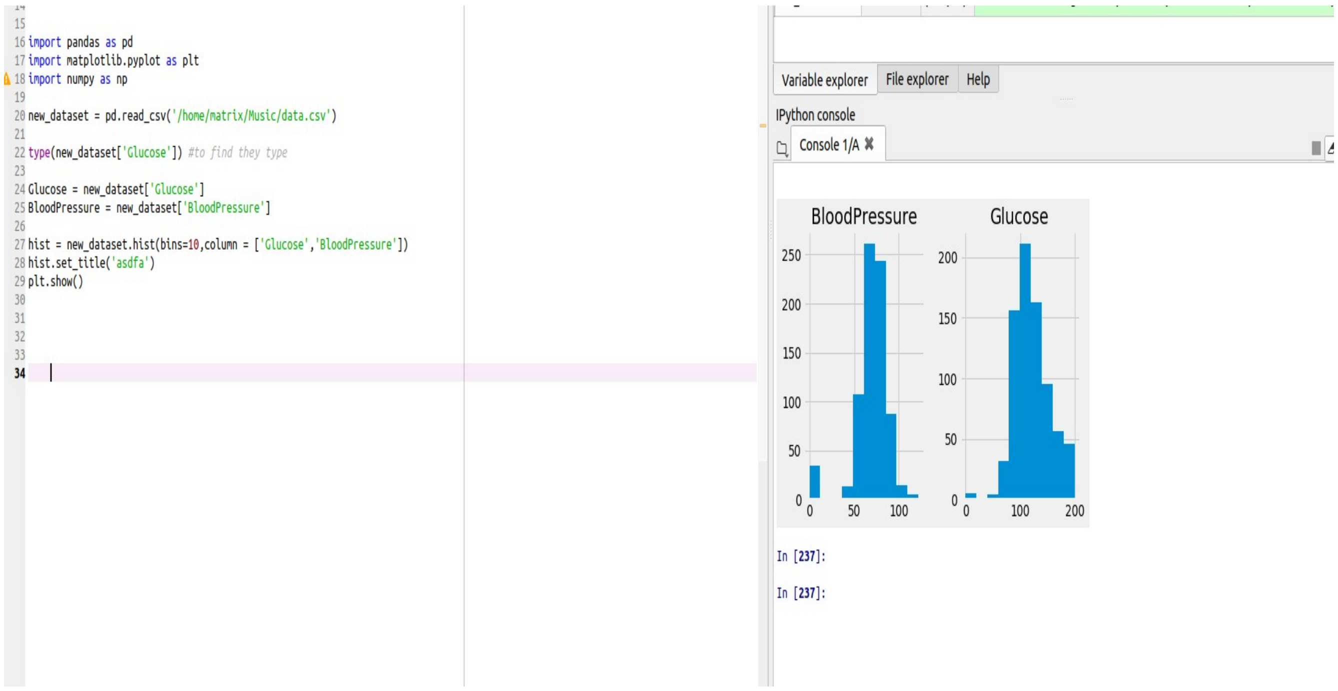
Name	Type	Size	Value
Glucose	list	768	[148, 85, 183, 89, 137, 116, 78, 115, 197, 125, ...]
ascending	list	768	[0, 0, 0, 0, 0, 44, 56, 57, 57, 61, ...]
df	DataFrame	(768, 9)	Column names: Pregnancies, Glucose, BloodPressure, SkinThickness, Insu ...

```
In [58]: def percentile(ascending):
    ...:     finding_percentile = 75/100 * 769
    ...:     #Since we do not have 576.75 value
    ...:     #we are gonna average the 576 and 577 valye
    ...:     newvalue = (141 + 141)/2
    ...:     print(f'The 75th percentile is : {newvalue}')
    ...:
    ...:
    ...: percentile(ascending)
The 75th percentile is : 141.0

In [59]: len(ascending)
Out[59]: 768

In [60]:
```

Permissions: RW   End-of-lines: LF   Encoding: UTF-8   Line: 26   Column: 15   Memory: 45 %

20 Points 6. Display histogram, bar-graph of Glucose and Blood pressure column of this data. Also, plot the scatter plot between Glucose and Blood pressure column. Can you decipher and relationship between these two variables based on the scatter plot.

Histogram:

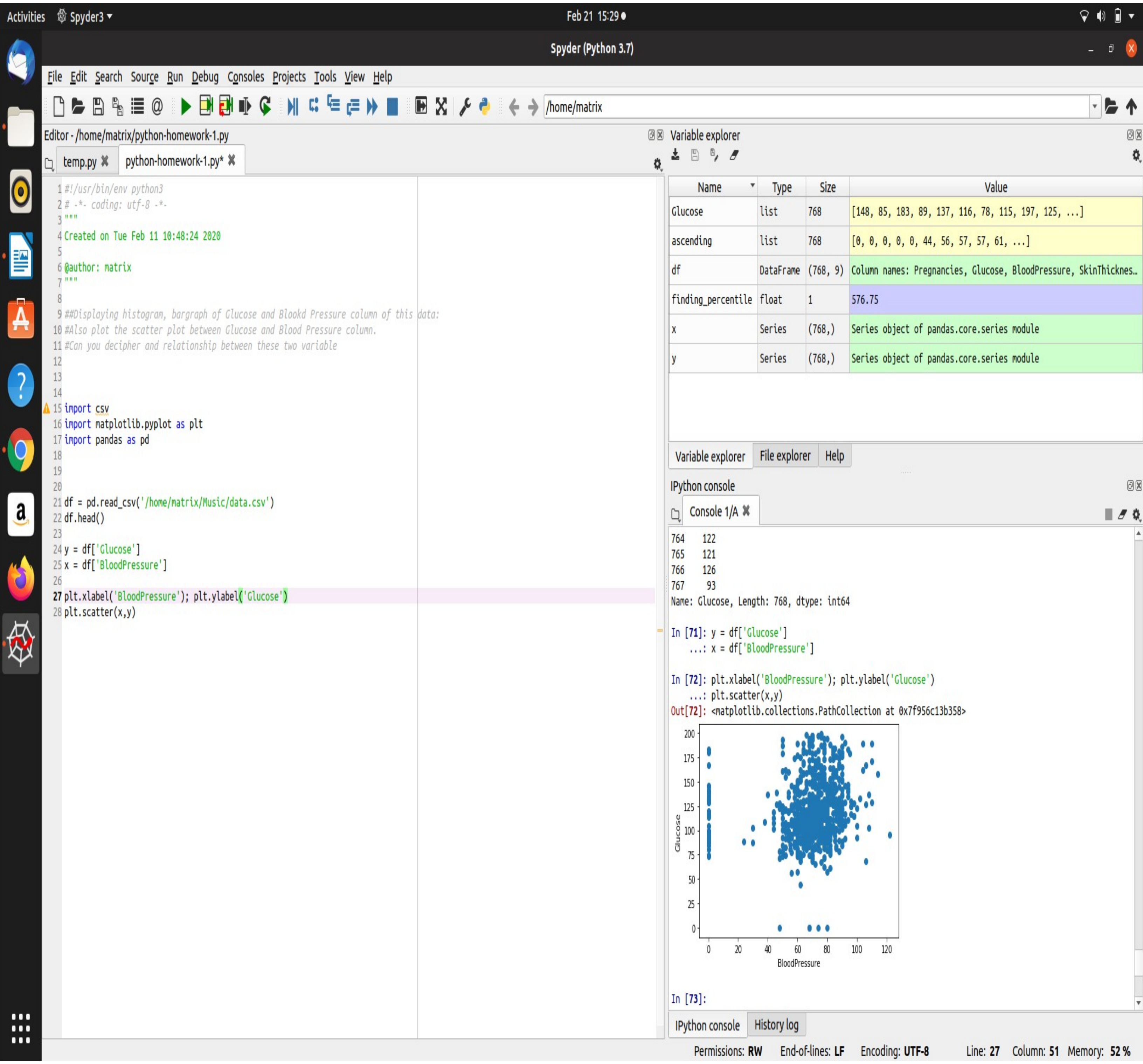


```
import pandas as pd
import matplotlib.pyplot as plt
import numpy as np

new_dataset = pd.read_csv('/home/matrix/Music/data.csv')

type(new_dataset['Glucose']) #to find they type

Glucose = new_dataset['Glucose']
BloodPressure = new_dataset['BloodPressure']

hist = new_dataset.hist(bins=10,column = ['Glucose','BloodPressure'])
hist.set_title('asdfa')
plt.show()
```

```
In [237]:

In [237]:
```

Scatter Plot:

Scatter Plot between Blood Pressure and Glucose column. From this scatter plot we can tell that Blood Pressure is always higher than Glucose in a human body. Also, from the scatter plot it is hard to tell if Blood Pressure and Glucose are directly related. In some cases person with lower blood pressure and high blood pressure have same amount of Glucose in their body.



Activities
Spyder3
Feb 21 15:29
Spyder (Python 3.7)
File Edit Search Source Run Debug Consoles Projects Tools View Help
/home/matrix
Editor - /home/matrix/python-homework-1.py
temp.py
python-homework-1.py*
Variable explorer
File explorer
Help
IPython console
Console 1/A
History log
Permissions: RW End-of-lines: LF Encoding: UTF-8 Line: 27 Column: 51 Memory: 52 %

```
#!/usr/bin/env python3
# -*- coding: utf-8 -*-
"""
Created on Tue Feb 11 10:48:24 2020

@author: matrix
"""

##Displaying histogram, bargraph of Glucose and Blookd Pressure column of this data:
#Also plot the scatter plot between Glucose and Blood Pressure column.
#Can you decipher and relationship between these two variable



import csv
import matplotlib.pyplot as plt
import pandas as pd



df = pd.read_csv('/home/matrix/Music/data.csv')
df.head()

y = df['Glucose']
x = df['BloodPressure']

plt.xlabel('BloodPressure'); plt.ylabel('Glucose')
plt.scatter(x,y)
```

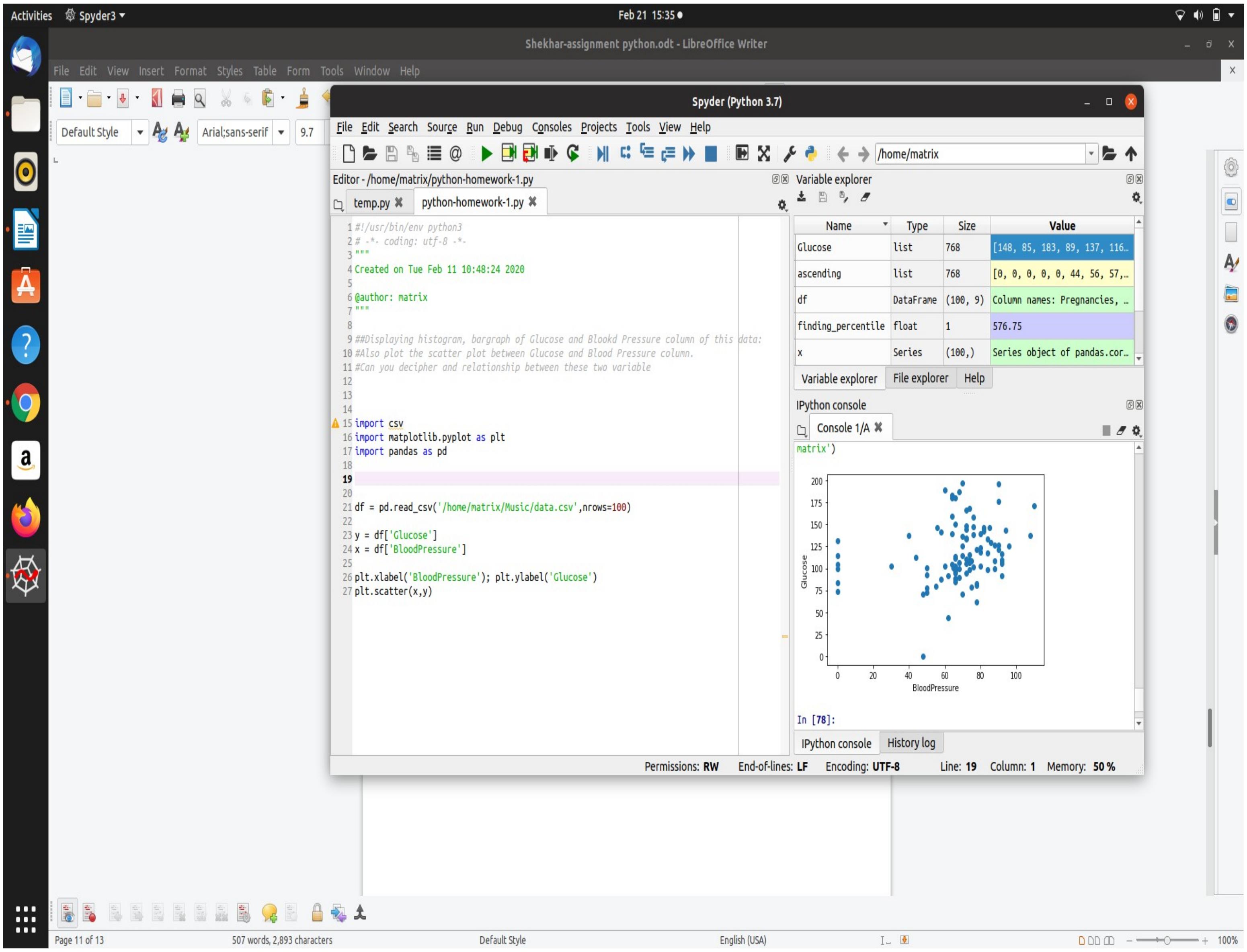
Name	Type	Size	Value
Glucose	list	768	[148, 85, 183, 89, 137, 116, 78, 115, 197, 125, ...]
ascending	list	768	[0, 0, 0, 0, 0, 44, 56, 57, 57, 61, ...]
df	DataFrame	(768, 9)	Column names: Pregnancies, Glucose, BloodPressure, SkinThicknes…
finding_percentile	float	1	576.75
x	Series	(768,)	Series object of pandas.core.series module
y	Series	(768,)	Series object of pandas.core.series module

```
764    122
765    121
766    126
767     93
Name: Glucose, Length: 768, dtype: int64

In [71]: y = df['Glucose']
    ...: x = df['BloodPressure']

In [72]: plt.xlabel('BloodPressure'); plt.ylabel('Glucose')
    ...: plt.scatter(x,y)
Out[72]: <matplotlib.collections.PathCollection at 0x7f956c13b358>
```

```
In [73]:
```

Scatter Plot:

This time we will analyze only 100 rows of the data set.



```
#!/usr/bin/env python3
# -*- coding: utf-8 -*-
"""
Created on Tue Feb 11 10:48:24 2020

@author: matrix
"""

##Displaying histogram, bargraph of Glucose and Blookd Pressure column of this data:
#Also plot the scatter plot between Glucose and Blood Pressure column.
#Can you decipher and relationship between these two variable



import csv
import matplotlib.pyplot as plt
import pandas as pd


df = pd.read_csv('/home/matrix/Music/data.csv',nrows=100)

y = df['Glucose']
x = df['BloodPressure']

plt.xlabel('BloodPressure'); plt.ylabel('Glucose')
plt.scatter(x,y)
```

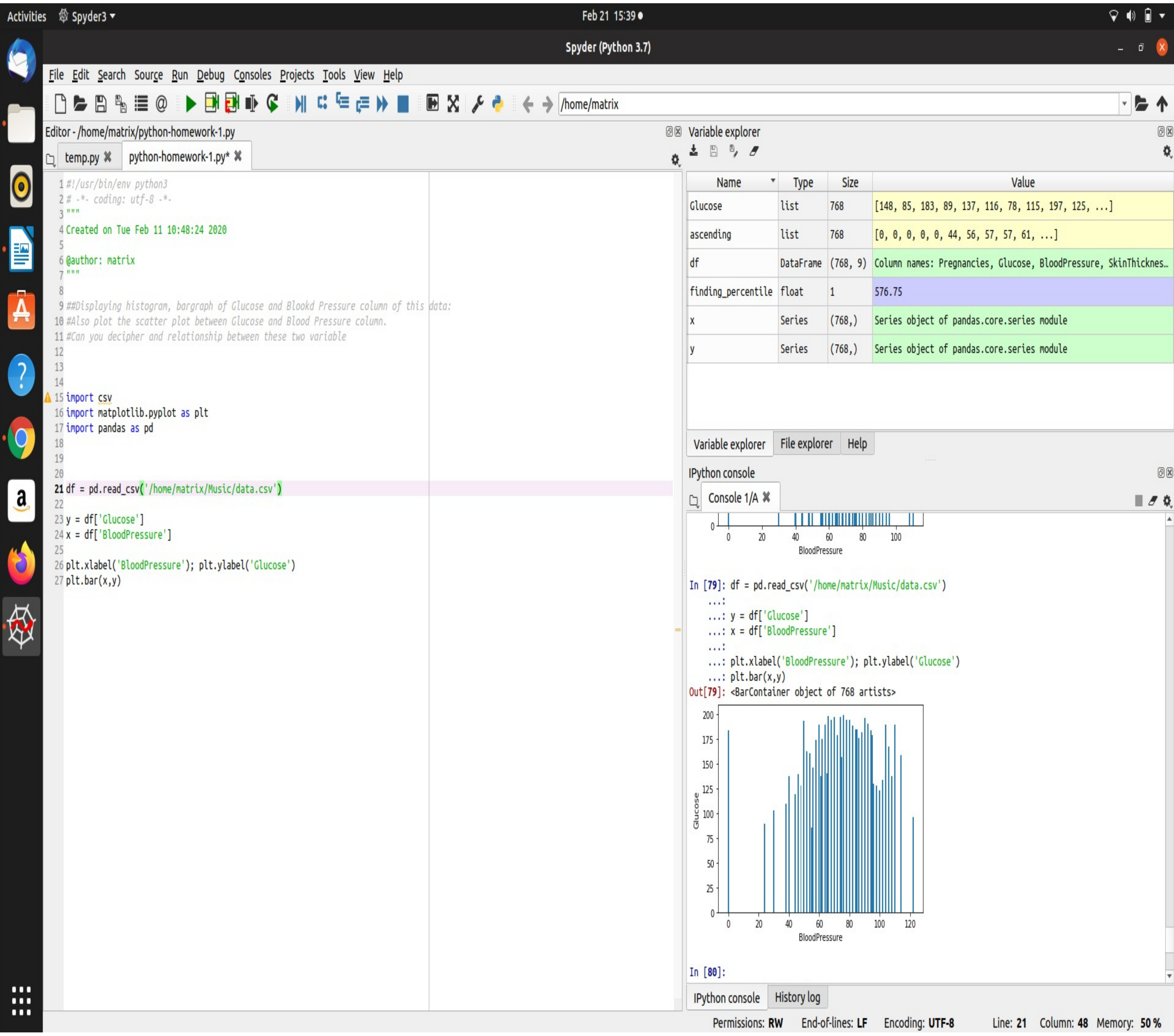
Name	Type	Size	Value
Glucose	list	768	[148, 85, 183, 89, 137, 116…
ascending	list	768	[0, 0, 0, 0, 0, 44, 56, 57,…
df	DataFrame	(100, 9)	Column names: Pregnancies, …
finding_percentile	float	1	576.75
x	Series	(100,)	Series object of pandas.cor…

```
matrix')
In [78]:
```

Permissions: RW End-of-lines: LF Encoding: UTF-8 Line: 19 Column: 1 Memory: 50 %

Bar Graph:

Bar Graph of Blood Pressure and Glucose column



```python
#!/usr/bin/env python3
# -*- coding: utf-8 -*-
"""
Created on Tue Feb 11 10:48:24 2020

@author: matrix
"""

##Displaying histogram, bargraph of Glucose and Blookd Pressure column of this data:
#Also plot the scatter plot between Glucose and Blood Pressure column.
#Can you decipher and relationship between these two variable



import csv
import matplotlib.pyplot as plt
import pandas as pd



df = pd.read_csv('/home/matrix/Music/data.csv')

y = df['Glucose']
x = df['BloodPressure']

plt.xlabel('BloodPressure'); plt.ylabel('Glucose')
plt.bar(x,y)
```

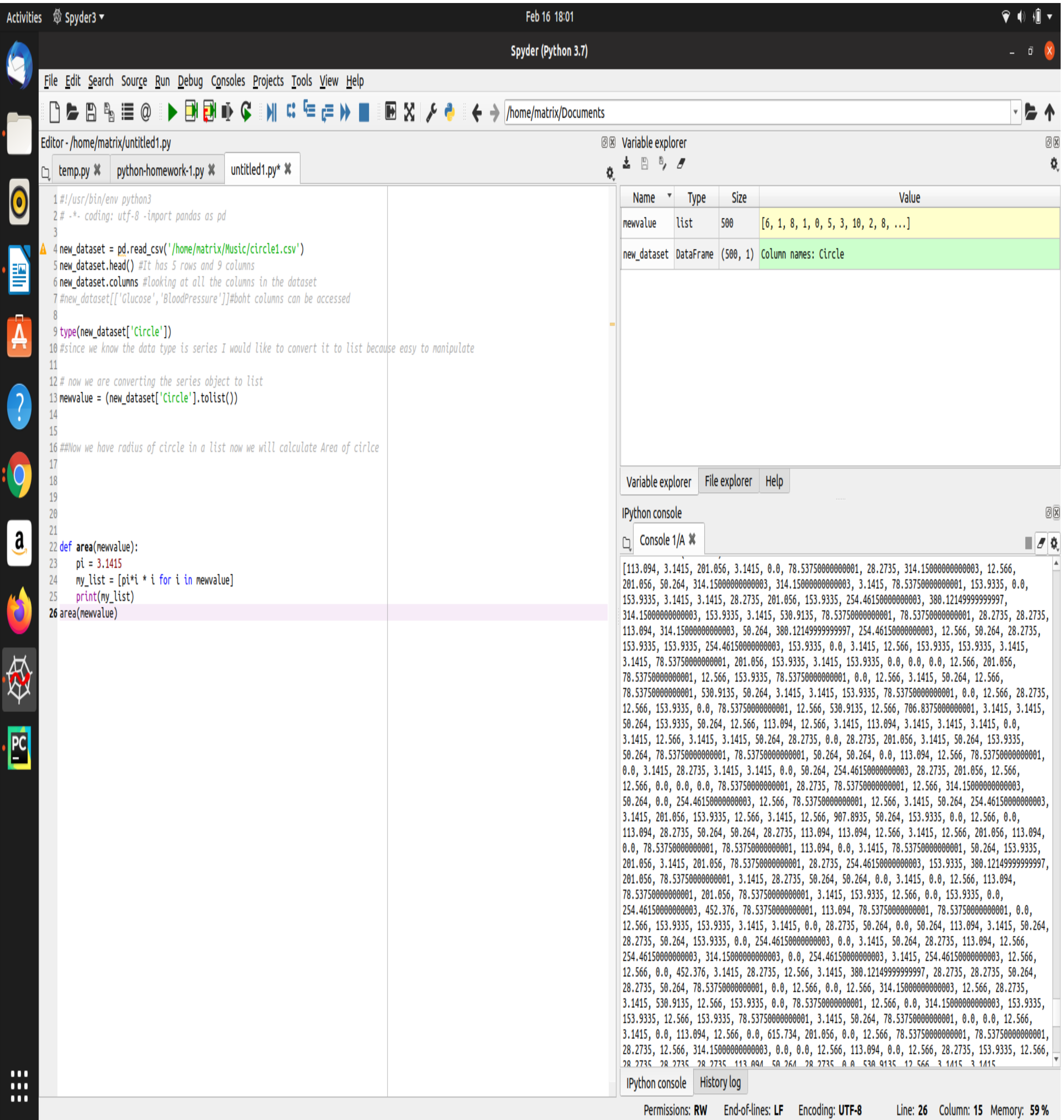
Name	Type	Size	Value
Glucose	list	768	[148, 85, 183, 89, 137, 116, 78, 115, 197, 125, ...]
ascending	list	768	[0, 0, 0, 0, 0, 44, 56, 57, 57, 61, ...]
df	DataFrame	(768, 9)	Column names: Pregnancies, Glucose, BloodPressure, SkinThicknes…
finding_percentile	float	1	576.75
x	Series	(768,)	Series object of pandas.core.series module
y	Series	(768,)	Series object of pandas.core.series module

```
In [79]: df = pd.read_csv('/home/matrix/Music/data.csv')
    ...:
    ...: y = df['Glucose']
    ...: x = df['BloodPressure']
    ...:
    ...: plt.xlabel('BloodPressure'); plt.ylabel('Glucose')
    ...: plt.bar(x,y)
Out[79]: <BarContainer object of 768 artists>
```

```
In [80]:
```

Permissions: RW End-of-lines: LF Encoding: UTF-8 Line: 21 Column: 48 Memory: 50 %

Question6: Find the area of 500 circle.



```python
#!/usr/bin/env python3
# -*- coding: utf-8 -import pandas as pd

new_dataset = pd.read_csv('/home/matrix/Music/circle1.csv')
new_dataset.head() #It has 5 rows and 9 columns
new_dataset.columns #looking at all the columns in the dataset
#new_dataset[['Glucose','BloodPressure']]#boht columns can be accessed

type(new_dataset['Circle'])
#since we know the data type is series I would like to convert it to list because easy to manipulate

# now we are converting the series object to list
mewvalue = (new_dataset['Circle'].tolist())


##Now we have radius of circle in a list now we will calculate Area of cirlce





def area(mewvalue):
    pi = 3.1415
    my_list = [pi*i * i for i in mewvalue]
    print(my_list)
area(mewvalue)
```

Name	Type	Size	Value
mewvalue	list	500	[6, 1, 8, 1, 0, 5, 3, 10, 2, 8, ...]
new_dataset	DataFrame	(500, 1)	Column names: Circle

```
[113.094, 3.1415, 201.056, 3.1415, 0.0, 78.53750000000001, 28.2735, 314.15000000000003, 12.566,
201.056, 50.264, 314.15000000000003, 314.15000000000003, 3.1415, 78.53750000000001, 153.9335, 0.0,
153.9335, 3.1415, 3.1415, 28.2735, 201.056, 153.9335, 254.46150000000003, 380.12149999999997,
314.15000000000003, 153.9335, 3.1415, 530.9135, 78.53750000000001, 78.53750000000001, 28.2735, 28.2735,
113.094, 314.15000000000003, 50.264, 380.12149999999997, 254.46150000000003, 12.566, 50.264, 28.2735,
153.9335, 153.9335, 254.46150000000003, 153.9335, 0.0, 3.1415, 12.566, 153.9335, 153.9335, 3.1415,
3.1415, 78.53750000000001, 201.056, 153.9335, 3.1415, 153.9335, 0.0, 0.0, 0.0, 12.566, 201.056,
78.53750000000001, 12.566, 153.9335, 78.53750000000001, 0.0, 12.566, 3.1415, 50.264, 12.566,
78.53750000000001, 530.9135, 50.264, 3.1415, 3.1415, 153.9335, 78.53750000000001, 0.0, 12.566, 28.2735,
12.566, 153.9335, 0.0, 78.53750000000001, 12.566, 530.9135, 12.566, 706.8375000000001, 3.1415, 3.1415,
50.264, 153.9335, 50.264, 12.566, 113.094, 12.566, 3.1415, 113.094, 3.1415, 3.1415, 3.1415, 0.0,
3.1415, 12.566, 3.1415, 3.1415, 50.264, 28.2735, 0.0, 28.2735, 201.056, 3.1415, 50.264, 153.9335,
50.264, 78.53750000000001, 78.53750000000001, 50.264, 50.264, 0.0, 113.094, 12.566, 78.53750000000001,
0.0, 3.1415, 28.2735, 3.1415, 3.1415, 0.0, 50.264, 254.46150000000003, 28.2735, 201.056, 12.566,
12.566, 0.0, 0.0, 0.0, 78.53750000000001, 28.2735, 78.53750000000001, 12.566, 314.15000000000003,
50.264, 0.0, 254.46150000000003, 12.566, 78.53750000000001, 12.566, 3.1415, 50.264, 254.46150000000003,
3.1415, 201.056, 153.9335, 12.566, 3.1415, 12.566, 907.8935, 50.264, 153.9335, 0.0, 12.566, 0.0,
113.094, 28.2735, 50.264, 50.264, 28.2735, 113.094, 113.094, 12.566, 3.1415, 12.566, 201.056, 113.094,
0.0, 78.53750000000001, 78.53750000000001, 113.094, 0.0, 3.1415, 78.53750000000001, 50.264, 153.9335,
201.056, 3.1415, 201.056, 78.53750000000001, 28.2735, 254.46150000000003, 153.9335, 380.12149999999997,
201.056, 78.53750000000001, 3.1415, 28.2735, 50.264, 50.264, 0.0, 3.1415, 0.0, 12.566, 113.094,
78.53750000000001, 201.056, 78.53750000000001, 3.1415, 153.9335, 12.566, 0.0, 153.9335, 0.0,
254.46150000000003, 452.376, 78.53750000000001, 113.094, 78.53750000000001, 78.53750000000001, 0.0,
12.566, 153.9335, 153.9335, 3.1415, 3.1415, 0.0, 28.2735, 50.264, 0.0, 50.264, 113.094, 3.1415, 50.264,
28.2735, 50.264, 153.9335, 0.0, 254.46150000000003, 0.0, 3.1415, 50.264, 28.2735, 113.094, 12.566,
254.46150000000003, 314.15000000000003, 0.0, 254.46150000000003, 3.1415, 254.46150000000003, 12.566,
12.566, 0.0, 452.376, 3.1415, 28.2735, 12.566, 3.1415, 380.12149999999997, 28.2735, 28.2735, 50.264,
28.2735, 50.264, 78.53750000000001, 0.0, 12.566, 0.0, 12.566, 314.15000000000003, 12.566, 28.2735,
3.1415, 530.9135, 12.566, 153.9335, 0.0, 78.53750000000001, 12.566, 0.0, 314.15000000000003, 153.9335,
153.9335, 12.566, 153.9335, 78.53750000000001, 3.1415, 50.264, 78.53750000000001, 0.0, 0.0, 12.566,
3.1415, 0.0, 113.094, 12.566, 0.0, 615.734, 201.056, 0.0, 12.566, 78.53750000000001, 78.53750000000001,
28.2735, 12.566, 314.15000000000003, 0.0, 0.0, 12.566, 113.094, 0.0, 12.566, 28.2735, 153.9335, 12.566,
28.2735, 28.2735, 28.2735, 113.094, 50.264, 28.2735, 0.0, 530.9135, 12.566, 3.1415, 3.1415
```

Permissions: **RW** End-of-lines: **LF** Encoding: **UTF-8** Line: **26** Column: **15** Memory: **59 %**

Here, I have imported a csv file called circle csv which has a column which has radius of 500 circle. I have stored it in a variable called mewvalue.