

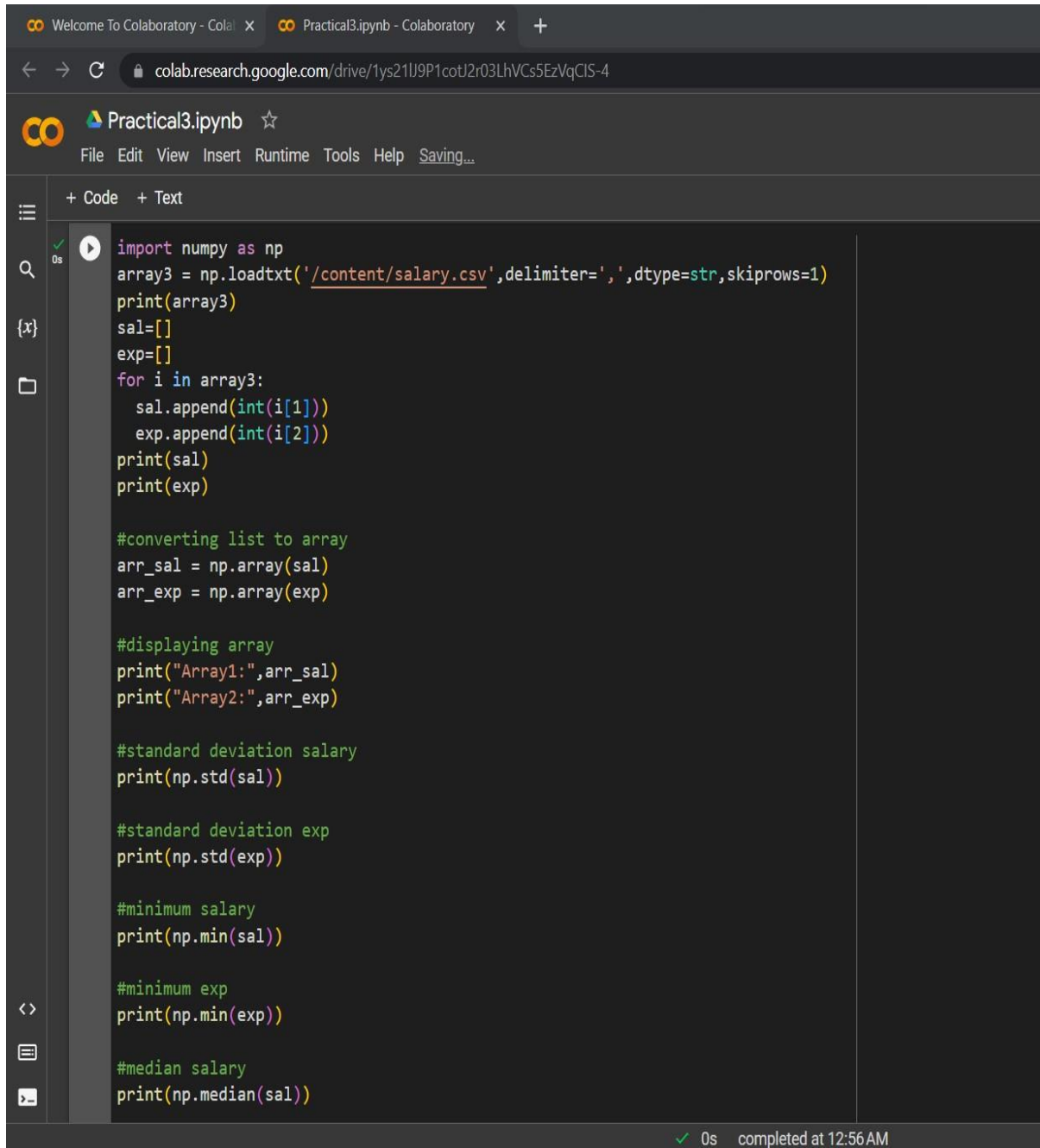
NAME : VISHWANATH ASHOK LAIDWAR

ROLL NO. : 636

PRN : 202201040097

DIV : F-2

CODE :

The image is a screenshot of a Google Colaboratory notebook interface. At the top, there are two browser tabs: 'Welcome To Colaboratory - Colab' and 'Practical3.ipynb - Colaboratory'. The address bar shows the URL 'colab.research.google.com/drive/1ys21U9P1cotJ2r03LhVCs5EzVqCIS-4'. The notebook title is 'Practical3.ipynb'. Below the title is a menu bar with 'File', 'Edit', 'View', 'Insert', 'Runtime', 'Tools', 'Help', and 'Saving...'. The main area is a code editor with a dark background and light-colored text. The code is written in Python and uses the NumPy library. It starts with 'import numpy as np'. Then, it loads a CSV file located at '/content/salary.csv' using 'np.loadtxt', specifying a comma as the delimiter and skipping the first row. The loaded data is printed. Next, two empty lists, 'sal' and 'exp', are created. A 'for' loop iterates over each row in 'array3', appending the values from the second and third columns to 'sal' and 'exp' respectively. After the loop, the contents of 'sal' and 'exp' are printed. Then, 'sal' and 'exp' are converted into NumPy arrays. The arrays are printed with labels 'Array1:' and 'Array2:'. Finally, statistical calculations are performed: standard deviation (np.std), minimum (np.min), and median (np.median) for both 'sal' and 'exp' arrays, with the results printed. On the left side of the code editor, there is a sidebar with icons for file management and a search bar. At the bottom right of the code editor, a status bar indicates that the code was executed successfully ('✓ 0s') and completed at 12:56 AM.

```
import numpy as np
array3 = np.loadtxt('/content/salary.csv',delimiter=',',dtype=str,skiprows=1)
print(array3)
sal=[]
exp=[]
for i in array3:
    sal.append(int(i[1]))
    exp.append(int(i[2]))
print(sal)
print(exp)

#converting list to array
arr_sal = np.array(sal)
arr_exp = np.array(exp)

#displaying array
print("Array1:",arr_sal)
print("Array2:",arr_exp)

#standard deviation salary
print(np.std(sal))

#standard deviation exp
print(np.std(exp))

#minimum salary
print(np.min(sal))

#minimum exp
print(np.min(exp))

#median salary
print(np.median(sal))
```

Welcome To Colaboratory - Colab Practical3.ipynb - Colaboratory +

colab.research.google.com/drive/1ys21U9P1cotJ2r03LhVCs5EzVqCIS-4

Practical3.ipynb ☆

File Edit View Insert Runtime Tools Help Saving...

+ Code + Text

0s

```
#median exp
print(np.median(exp))

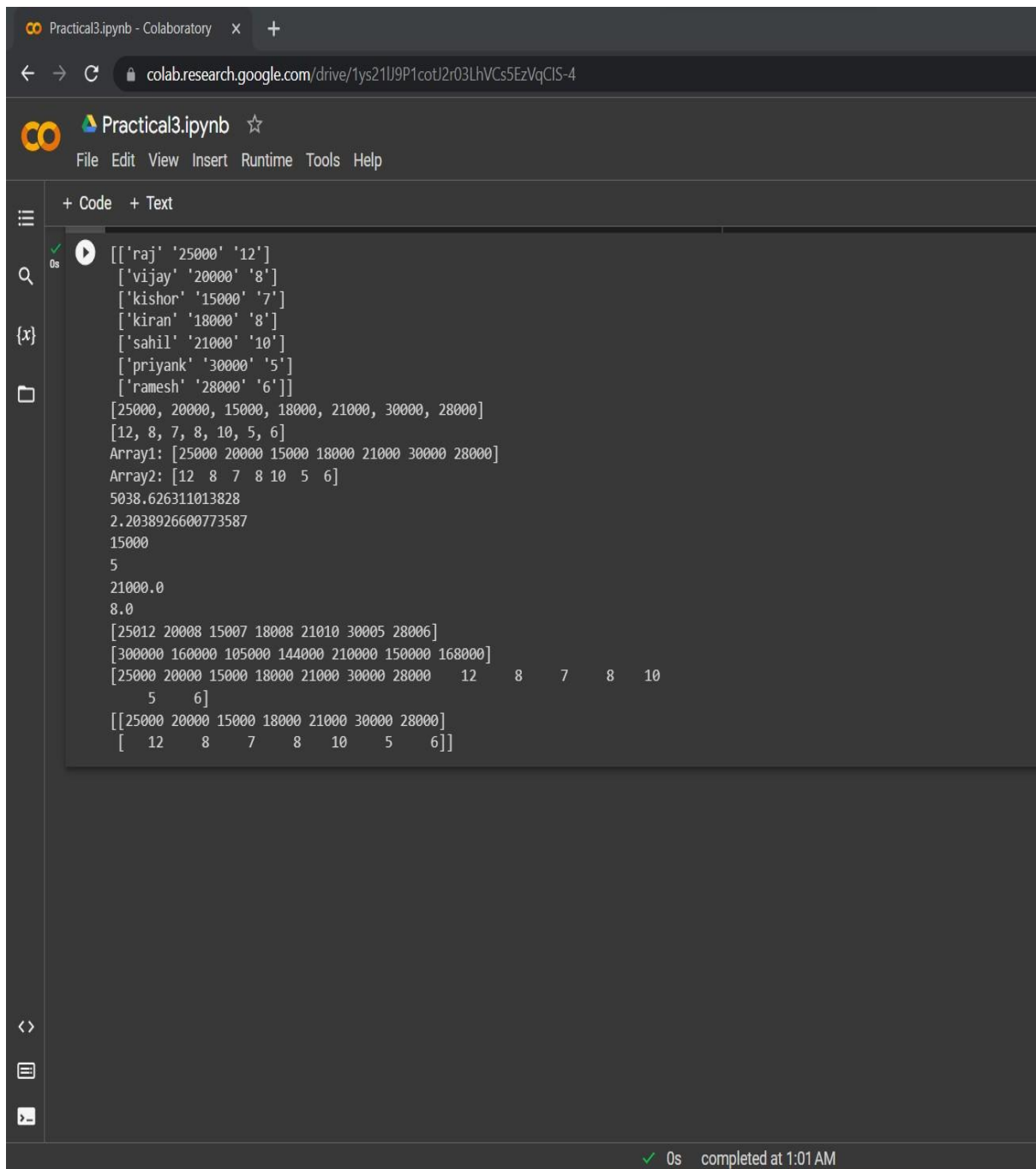
#addition of salary and exp
array1 = np.array(sal)
array2 = np.array(exp)
print(array1+array2)

#multiplication of salary and exp
array1 = np.array(sal)
array2 = np.array(exp)
print(array1*array2)

# horizontal stacking in numpy
array1 = np.array(sal)
array2 = np.array(exp)
output_array = np.hstack((array1,array2))
print(output_array)

#vertical stacking in numpy
array1 = np.array(sal)
array2 = np.array(exp)
output_array = np.vstack((array1,array2))
print(output_array)
```

OUTPUT :



The screenshot shows a Google Colaboratory notebook interface. The browser address bar displays the URL: `colab.research.google.com/drive/1ys21U9P1cotJ2r03LhVCs5EzVqCIS-4`. The notebook title is "Practical3.ipynb". The left sidebar contains icons for file explorer, search, and other notebook functions. The main code cell is titled "+ Code" and contains the following Python code and its output:

```
[[['raj' '25000' '12']  
  ['vijay' '20000' '8']  
  ['kishor' '15000' '7']  
  ['kiran' '18000' '8']  
  ['sahil' '21000' '10']  
  ['priyank' '30000' '5']  
  ['ramesh' '28000' '6']]  
[25000, 20000, 15000, 18000, 21000, 30000, 28000]  
[12, 8, 7, 8, 10, 5, 6]  
Array1: [25000 20000 15000 18000 21000 30000 28000]  
Array2: [12  8  7  8 10  5  6]  
5038.626311013828  
2.2038926600773587  
15000  
5  
21000.0  
8.0  
[25012 20008 15007 18008 21010 30005 28006]  
[300000 160000 105000 144000 210000 150000 168000]  
[25000 20000 15000 18000 21000 30000 28000    12    8    7    8    10  
   5    6]  
[[25000 20000 15000 18000 21000 30000 28000]  
 [ 12    8    7    8    10    5    6]]
```

The output at the bottom of the notebook indicates that the code was executed successfully: `✓ 0s completed at 1:01 AM`.

