Code:

import csv

def get\_median(lis, pos):

if len(lis) % 2 == 0:

return (float(lis[len(lis) // 2 - 1][pos]) + float(lis[len(lis) // 2][pos])) / 2

else:

return float(lis[(len(lis) + 1) / 2][pos])

def printer(lis):

print("{:<30}{:<30}{:<30}".format("China", "Brazil", "USA"))

for i in range(len(lis)):

print("{:<30}".format(lis[i]), end="")

print(end='\n\n')

with open('income\_growth.csv') as csv\_file:

growth = list(csv.reader(csv\_file, delimiter=','))

mean\_values = [0, 0, 0]

median\_values = [0, 0, 0]

standard\_deviation = [0, 0, 0]

for i in growth:

if growth.index(i) != 0:

for j in range(1, len(i)):

mean\_values[j - 1] += float(i[j]) / (len(growth) - 1)

for i in growth:

if growth.index(i) != 0:

for j in range(1, len(i)):

standard\_deviation[j - 1] += (float(i[j]) - mean\_values[j - 1])\*\*2 / (len(growth) - 2)

standard\_deviation[0] = standard\_deviation[0] \*\* 0.5

standard\_deviation[1] = standard\_deviation[1] \*\* 0.5

standard\_deviation[2] = standard\_deviation[2] \*\* 0.5

growth = growth[1:]

growth = sorted(growth, key=lambda x: float(x[1]))

median\_values[0] = get\_median(growth, 1)

growth = sorted(growth, key=lambda x: float(x[2]))

median\_values[1] = get\_median(growth, 2)

growth = sorted(growth, key=lambda x: float(x[3]))

median\_values[2] = get\_median(growth, 3)

print("Mean Values:")

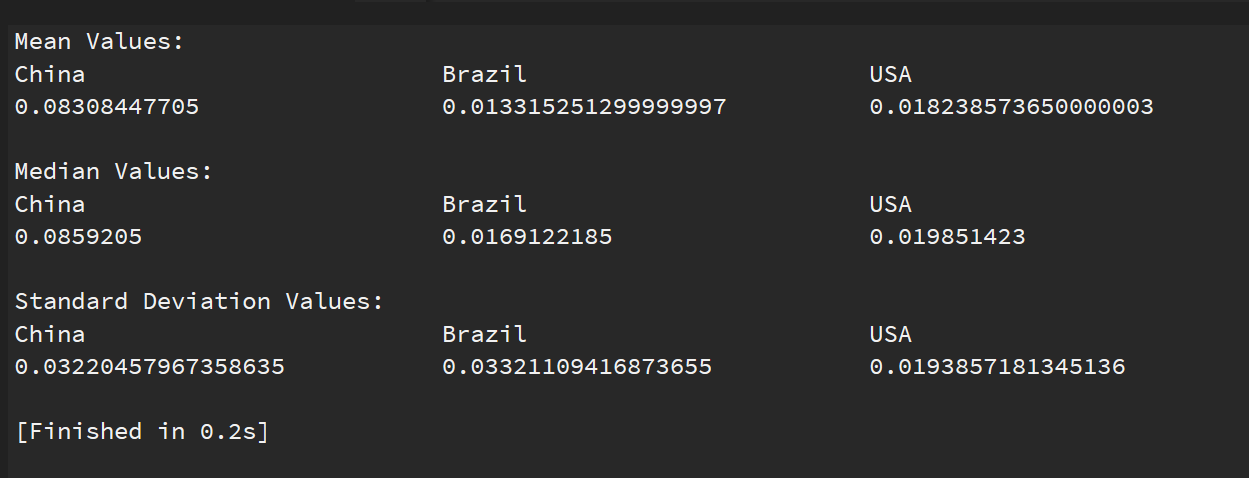
printer(mean\_values)

print("Median Values:")

printer(median\_values)

print("Standard Deviation Values:")

printer(standard\_deviation)

Output Screenshot:

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