Code

def get\_pdf\_probability(dataset,startrange,endrange):

This is the function definition.

Code

from matplotlib import pyplot

from scipy.stats import norm

import seaborn as sns

These lines import the necessary libraries.

Code

ax = sns.distplot(dataset,kde=True,kde\_kws={'color':'blue'},color='Green')

This line creates a distribution plot of the dataset. The kde=True argument tells Seaborn to use a kernel density estimate to create the plot. The kde\_kws={'color':'blue'} argument tells Seaborn to use a blue color for the kernel density estimate. The color='Green' argument tells Seaborn to use a green color for the bars of the distribution plot.

Code

pyplot.axvline(startrange,color='Red')

pyplot.axvline(endrange,color='Red')

These lines draw two vertical lines on the distribution plot, one at the startrange and one at the endrange.

Code

# generate a sample

sample = dataset

This line creates a sample from the dataset.

Code

# calculate parameters

sample\_mean =sample.mean()

sample\_std = sample.std()

print('Mean=%.3f, Standard Deviation=%.3f' % (sample\_mean, sample\_std))

These lines calculate the mean and standard

Code

# define the distribution

dist = norm(sample\_mean, sample\_std)

This line defines a normal distribution with the mean and standard deviation of the sample.

Code

# sample probabilities for a range of outcomes

values = [value for value in range(startrange, endrange)]

probabilities = [dist.pdf(value) for value in values]

These lines calculate the probabilities of the values in the range startrange to endrange. The dist.pdf() function returns the probability density function of the distribution. The probability density function is a function that gives the probability of a value occurring.

Code

prob=sum(probabilities)

print("The area between range({},{}):{}".format(startrange,endrange,sum(probabilities)))

These lines calculate the area under the probability density function between the startrange and endrange. The sum() function adds up all the probabilities in the list probabilities. The print() function prints the area.

Code

return prob

This line returns the area.