

Data Manipulation with Python 2/15 [Report Issue](#)

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You have collected data on the `age` for each of 100 shoppers in your store. Calculate the mean `age` and the standard deviation for the shoppers. The `age` is stored as a `numpy` array.

Complete the code to return the output

```
import numpy as np

average_age = write code here (age)
spread_age = write code here (age)

print(average_age)
print(spread_age.round(2))
```

Expected Output

```
40.1
14.77
```

Question: You have collected data on the age for each of 100 shoppers in your store. Calculate the mean age and the standard deviation for the shoppers. The age is stored as a numpy array.

Answer:

```
import numpy as np
```

```
# Example age data for 100 shoppers
```

```
age = np.array([34, 56, 23, 45, 65, 29, 31, 48, 59, 37, 42, 51, 64, 39, 33, 50,
41, 44, 38, 30,
                32, 55, 46, 60, 49, 35, 53, 40, 47, 43, 62, 58, 57, 54, 36, 52, 63, 25,
26, 24,
                61, 27, 28, 22, 21, 20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7,
6, 5, 4,
                3, 2, 1, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85,
86, 87, 88, 89])
```

```
# Calculate mean age
```

```
average_age = np.mean(age)
```

```
# Calculate standard deviation of age
```

```
spread_age = np.std(age)
```

```
# Print the results
```

```
print(average_age)
```

```
print(round(spread_age, 2))
```

Explanation:

1. The numpy library is imported for numerical calculations.
2. A numpy array 'age' is defined to simulate the age data for 100 shoppers.
3. The mean of the age array is calculated using `np.mean()` and stored in 'average\_age'.
4. The standard deviation of the age array is calculated using `np.std()` and stored in 'spread\_age'.
5. The results are printed. 'spread\_age' is rounded to two decimal places.