matplotlib_pie_charts_workbook_answers

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1 MATPLOTLIB PIE CHARTS WORKBOOK ANSWERS

Remember, there are different ways to write code to get the same answer, so your answer can be correct and different to the answer example!

If you feel stuck and want some in person help, then have a look at the events page to join in a workshop https://swamphen.co.uk/events.

In [ ]:
```
# read in the Fingers data set
from google.colab import files
uploaded = files.upload()
```

In [ ]:
```
import csv
with open('Fingers.csv') as data:
    reader = csv.reader(data, delimiter = ',')
    for i in reader:
        my_list = list(reader)

print(my_list)
```

In [ ]:
```
# import matplotlib
import matplotlib.pyplot as plt
```

In [ ]:
```
# for subject I create a pie chart of the different speeds of finger taps with the dif
# and label the stimulus
subject = []
drug = []
tap = []

for i in range(len(my_list)):
    subject.append(my_list[i][0])
    drug.append(my_list[i][1])
    tap.append(int(my_list[i][2]))

stimulus = [drug[0], drug[4], drug[8]]
values = [tap[0], tap[4], tap[8]]
plt.pie(values, labels = stimulus)
```

```
In [ ]: # explode the largest section
        explode = [0, 0.1, 0]
        plt.pie(values, labels = stimulus, explode = explode)

In [ ]: # calculate the average of the taps for the different subjects and plot this as a pie
        placebo_average = sum(tap[0:4]) / len(tap[0:4])
        coffee_average = sum(tap[4:8]) / len(tap[4:8])
        choc_average = sum(tap[8:12]) / len(tap[8:12])

        average = (placebo_average, coffee_average, choc_average)

        print(average)

        plt.pie(average, labels = stimulus)

In [ ]: # these graphs look very similar, re-plot them with the percentages to see the differe
        plt.pie(values, labels = stimulus, autopct='%1.1f%%')

In [ ]: plt.pie(average, labels = stimulus, autopct='%1.1f%%')

In [ ]: # are pie charts good for comparing data sets?

        # no difficult to see differences at that level

In [ ]: # what would be a better graph to show the differences in these values?

        plt.plot(values, '.-')
        plt.plot(average, '.-')
```