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Part 1

```
load count.dat;
load Zamora_Xander_male.mat;
waketime = (diary.wakeTimes - floor(diary.wakeTimes))*24;
bedtime = (diary.bedTimes - floor(diary.wakeTimes))*24;
hoursSleep = waketime - bedtime;
totalDailySleep = hoursSleep + (diary.minutesNap/60) - (diary.toSleepMinutes/60);
```

Part 2

```
waketimeAver = mean(waketime(:));
fprintf('Average wake-up time-hours: %g\n',waketimeAver);
fprintf('waketime: median = %g [max = %g and min = %g]\n', ...
median(waketime(:)), max(waketime(:)), min(waketime(:)));

bedtimeAver = mean(bedtime(:));
fprintf('Average bed time-hours: %g\n',bedtimeAver);
fprintf('bedtime: median = %g [max = %g and min = %g]\n', ...
median(bedtime(:)), max(bedtime(:)), min(bedtime(:)));

hoursSleepAver = mean(hoursSleep(:));
fprintf('Average hours of sleep: %g\n',hoursSleepAver);
fprintf('hoursSleep: median = %g [max = %g and min = %g]\n', ...
median(hoursSleep(:)), max(hoursSleep(:)), min(hoursSleep(:)));

toSleepMinutesAver = mean(diary.toSleepMinutes(:));
fprintf('Average minutes to sleep: %g\n',toSleepMinutesAver);
fprintf('diary.toSleepMinutes: median = %g [max = %g and min = %g]\n', ...
median(diary.toSleepMinutes(:)), max(diary.toSleepMinutes(:)),
min(diary.toSleepMinutes(:)));

minutesNapAver = mean(diary.minutesNap(:));
fprintf('Average minutes napping: %g\n',minutesNapAver);
fprintf('diary.minutesNap: median = %g [max = %g and min = %g]\n', ...
median(diary.minutesNap(:)), max(diary.minutesNap(:)),
min(diary.minutesNap(:)));

minsAwakeAver = mean(diary.minsAwake(:));
fprintf('Average minutes awake during the night: %g\n',minsAwakeAver);
fprintf('diary.minsAwake: median = %g [max = %g and min = %g]\n', ...
median(diary.minsAwake(:)), max(diary.minsAwake(:)), min(diary.minsAwake(:)));
```

```

totalDailySleepAver = mean(totalDailySleep(:));
fprintf('Average total daily sleep: %g\n',totalDailySleepAver);
fprintf('totalDailySleep: median = %g [max = %g and min = %g]\n', ...
median(totalDailySleep(:)), max(totalDailySleep(:)), min(totalDailySleep(:)));

SSIAver = mean(diary.SSI(:));
fprintf('Average Stanford Sleepiness Scale (SSI): %g\n',SSIAver);
fprintf('diary.SSI: median = %g [max = %g and min = %g]\n', ...
median(diary.SSI(:)), max(diary.SSI(:)), min(diary.SSI(:)));

fprintf('waketime      bedtime      hoursSleep  toSleepMinutes  minutesNap
minsAwake totalDailySleep SSI\n');
fprintf('Mean: %6.2f %6.2f %6.2f %6.2f %6.2f %6.2f %6.2f %6.2f\n', ...
mean(waketime(:)), mean(bedtime(:)), mean(hoursSleep(:)),
mean(diary.toSleepMinutes(:)), mean(diary.minutesNap(:)),
mean(diary.minsAwake(:)), mean(totalDailySleep(:)), mean(diary.SSI(:)));
fprintf('Median: %6.2f %6.2f %6.2f %6.2f %6.2f %6.2f %6.2f %6.2f\n', ...
median(waketime(:)), median(bedtime(:)), median(hoursSleep(:)),
median(diary.toSleepMinutes(:)), median(diary.minutesNap(:)),
median(diary.minsAwake(:)), median(totalDailySleep(:)), median(diary.SSI(:)));
fprintf('Max: %6.2f %6.2f %6.2f %6.2f %6.2f %6.2f %6.2f %6.2f\n', ...
max(waketime(:)), max(bedtime(:)), max(hoursSleep(:)),
max(diary.toSleepMinutes(:)), max(diary.minutesNap(:)),
max(diary.minsAwake(:)), max(totalDailySleep(:)), max(diary.SSI(:)));
fprintf('Min: %6.2f %6.2f %6.2f %6.2f %6.2f %6.2f %6.2f %6.2f\n', ...
min(waketime(:)), min(bedtime(:)), min(hoursSleep(:)),
min(diary.toSleepMinutes(:)), min(diary.minutesNap(:)),
min(diary.minsAwake(:)), min(totalDailySleep(:)), min(diary.SSI(:)));

Average wake-up time-hours: 8.83016
waketime: median = 8.15 [max = 15.5167 and min = 4.4]
Average bed time-hours: 1.76508
bedtime: median = 1.33333 [max = 5.66667 and min = -1.33333]
Average hours of sleep: 7.06508
hoursSleep: median = 7.33333 [max = 14.6167 and min = 2.9]
Average minutes to sleep: 12.2381
diary.toSleepMinutes: median = 8 [max = 60 and min = 2]
Average minutes napping: 20.0952
diary.minutesNap: median = 0 [max = 282 and min = 0]
Average minutes awake during the night: 5.28571
diary.minsAwake: median = 0 [max = 56 and min = 0]
Average total daily sleep: 7.19603
totalDailySleep: median = 7.06667 [max = 14.5667 and min = 2.86667]
Average Stanford Sleepiness Scale (SSI): 2.85714
diary.SSI: median = 3 [max = 5 and min = 2]
waketime      bedtime      hoursSleep  toSleepMinutes  minutesNap  minsAwake
totalDailySleep SSI
Mean:      8.83      1.77      7.07      12.24      20.10      5.29      7.20      2.86
Median:    8.15      1.33      7.33      8.00      0.00      0.00      7.07      3.00
Max:     15.52      5.67     14.62     60.00    282.00     56.00     14.57      5.00
Min:       4.40     -1.33      2.90      2.00      0.00      0.00      2.87      2.00

```

Part 3

```
useAlarm = sum(diary.useAlarm([1,2,3,4,5,6,7,8,13,15,17,20,21],1));
AlarmTot = sum(diary.useAlarm(:, :));
PrctuseAlarm = 100*(useAlarm/AlarmTot);

usedayCaf =
sum(diary.dayCaffeine([2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21],1)
);
dayCafTot = sum(diary.dayCaffeine(:, :));
PrctusedayCaf = 100*(usedayCaf/dayCafTot);

usenightCaf = sum(diary.nightCaffeine([3,7,10,11,12,13,21],1));
nightCafTot = sum(diary.nightCaffeine(:, :));
PrctusenightCaf = 100*(usenightCaf/nightCafTot);

useCaf = usedayCaf + usenightCaf;
CafTot = dayCafTot + nightCafTot;
PrctuseCaf = 100*(useCaf/CafTot);

dayNap = 2;
NapTot = 21;
PrctdayNap = 100*(dayNap/NapTot);
```

Part 4

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