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PROJET 1: Gaston and Prunelle

```
from random import randint, seed
s = int(input("Entrez la seed: "))
seed(s)
def clock(mins):        # clock(mins): function that converts raw minutes into
                        hours and minutes expressed in the form hh:mm
    h = mins//60
    m = mins%60
    return ("{0:02d}:{1:02d}".format(h,m))
now = 540               # now: current time (minutes)
nb_pause = 0            # nb_pause: number of pauses Gaston has made so far
nb_nap = 0              # nb_nap: number of naps Gaston has taken so far

print(clock(now), "Gaston arrive au bureau.")
print(clock(now), "OK, pause !")  # The day starts with a pause
now += 50
nb_pause += 1

while now < 1080:       # Gaston keeps working/taking/making pauses until it
                        is 6pm (1080 minutes)
    email = randint(0,2)     # There is 1 in 3 chances that he receives
                             an email from Prunelle during his pause/nap
    if email <= 1:
        print(clock(now), "OK, pause !")
        now += 50
        nb_pause += 1
    elif email == 2:
        arrival = now + 10 + randint(0, 50)  # arrival: time at which
                                             Prunelle will arrive to
                                             the office (minutes)
        time_left = arrival - now            # time_left: time left
                                             before Prunelle comes
                                             into the office (minutes)
        print(clock(now),"Attention, Prunelle arrive à ", clock(arrival),
"!")
```

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```
        if time_left >= 50:       # If Gaston has got more than 50 minutes
                                  before Prunelle's arrival

            print(clock(now), "OK, pause !") # he makes a pause
            now = now + 50
            nb_pause += 1
        elif time_left >= 40:     # If he has got 40-50 minutes
            print(clock(now), "C'est bon, encore le temps de faire une
sieste. Zzz")                             # he takes one nap
            now += 20
            print(clock(now), "C'est bon, encore le temps de faire une autre
sieste. Zzz")                             # then a second nap
            now += 20
            nb_nap += 2
        elif time_left >= 20:     # If he has got 20-30 minutes
            print(clock(now), "C'est bon, encore le temps de faire une
sieste. Zzz")                             # he takes a nap
            now += 20
            nb_nap += 1

        if now <1080:  # and only if it is earlier than 6pm
            print(clock(now), "Il faut travailler. M'enfin.") # he starts
                                                              working
            now = arrival + 90
            if now < 1080: # if 1h30min later it is still earlier than 6pm
                print(clock(now), "Prunelle est parti. \\0/") # Prunelle
                                                              leaves the
                                                              office
time_excess = now - 1080    # time_excess: timespan from 6pm until the end of
                            the last event

# worktime: amount of time Gaston has been working during the day (minutes)
worktime = 540 - (nb_pause*50 + nb_nap*20) + time_excess
now = 1080
print(clock(now), "Fin du service, dure journée")
# worktime (hours, minutes)
print("Temps total travaillé: ", worktime//60, "h", worktime%60, "min")
```