

nuclear

jenni

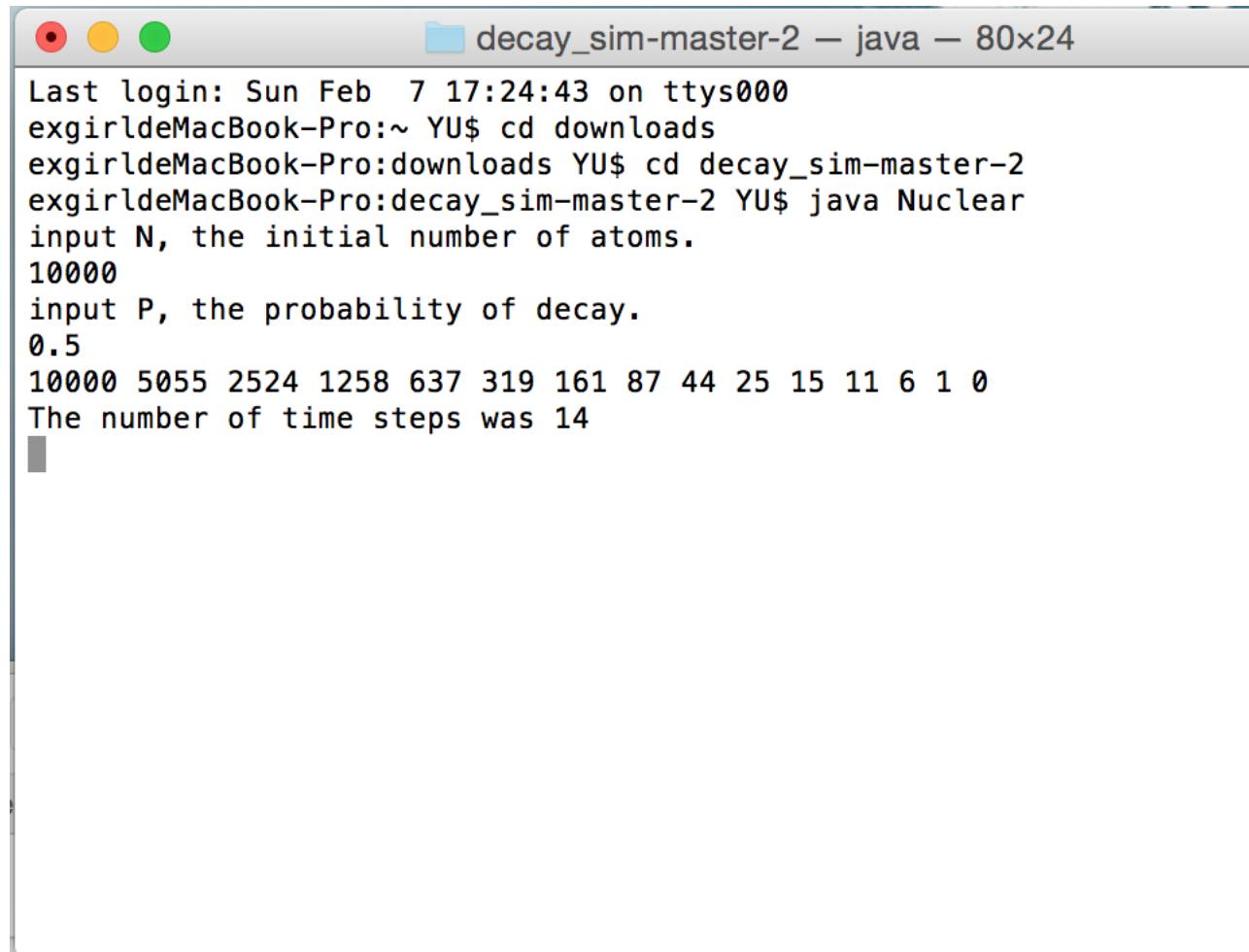
February 2016

1 Introduction

Nuclear half life tell us how long it takes for Nuclear processes to occur, so nuclear processes is where number protons and neutrons an atom's nucleus with a number of those protons and neutrons. Half life is the time that it takes for one hap a certain amount to decay to turn into protactinium to disappear(not real disappear, it becomes to the other thing). Half life that time required for half of a sample to decay.

2 Experiment nuclear

The initial number of atoms:10000 The probability of decay:0.5



```
Last login: Sun Feb  7 17:24:43 on ttys000
exgirldeMacBook-Pro:~ YU$ cd downloads
exgirldeMacBook-Pro:downloads YU$ cd decay_sim-master-2
exgirldeMacBook-Pro:decay_sim-master-2 YU$ java Nuclear
input N, the initial number of atoms.
10000
input P, the probability of decay.
0.5
10000 5055 2524 1258 637 319 161 87 44 25 15 11 6 1 0
The number of time steps was 14
█
```

Figure 1: Nuclear

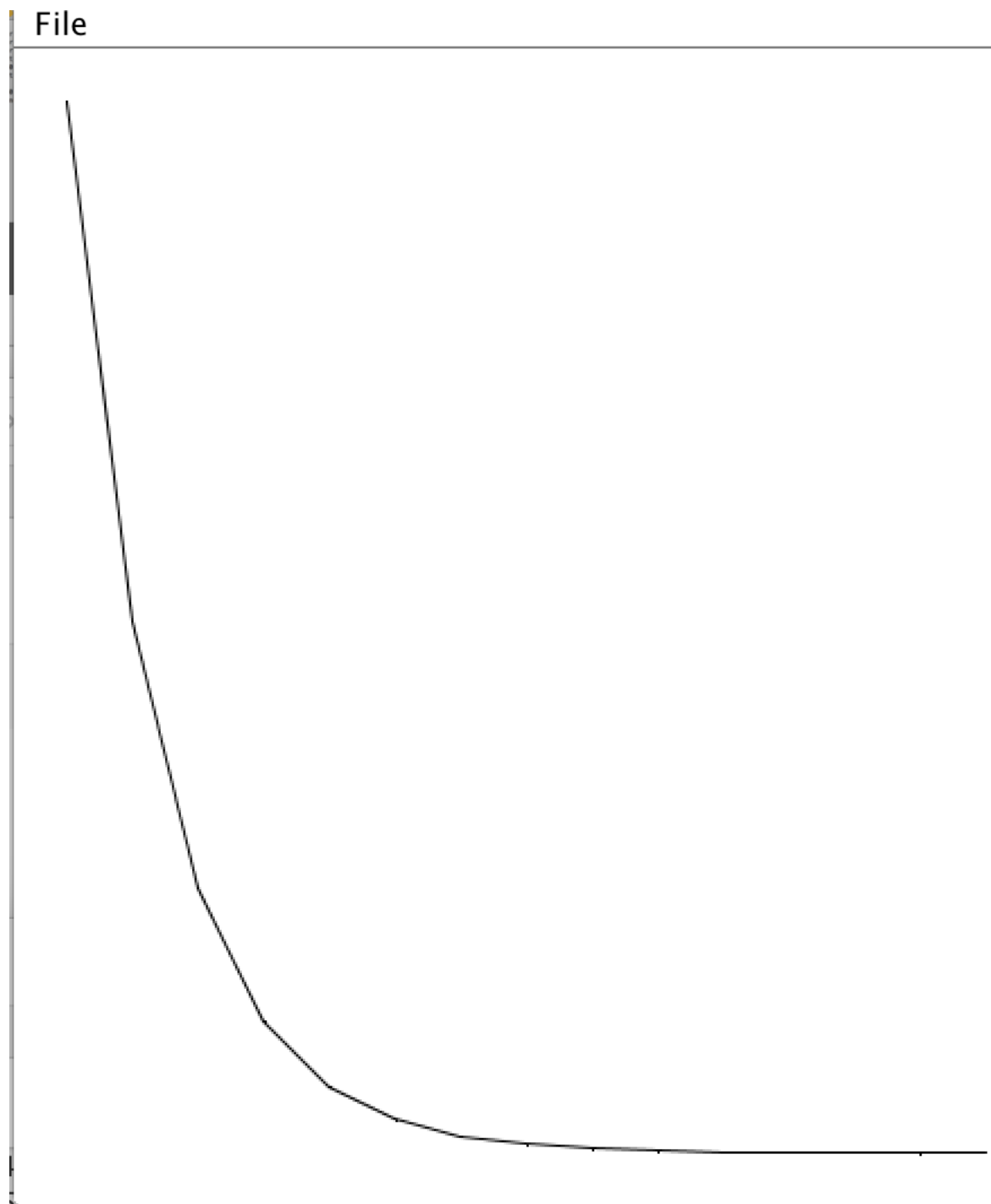
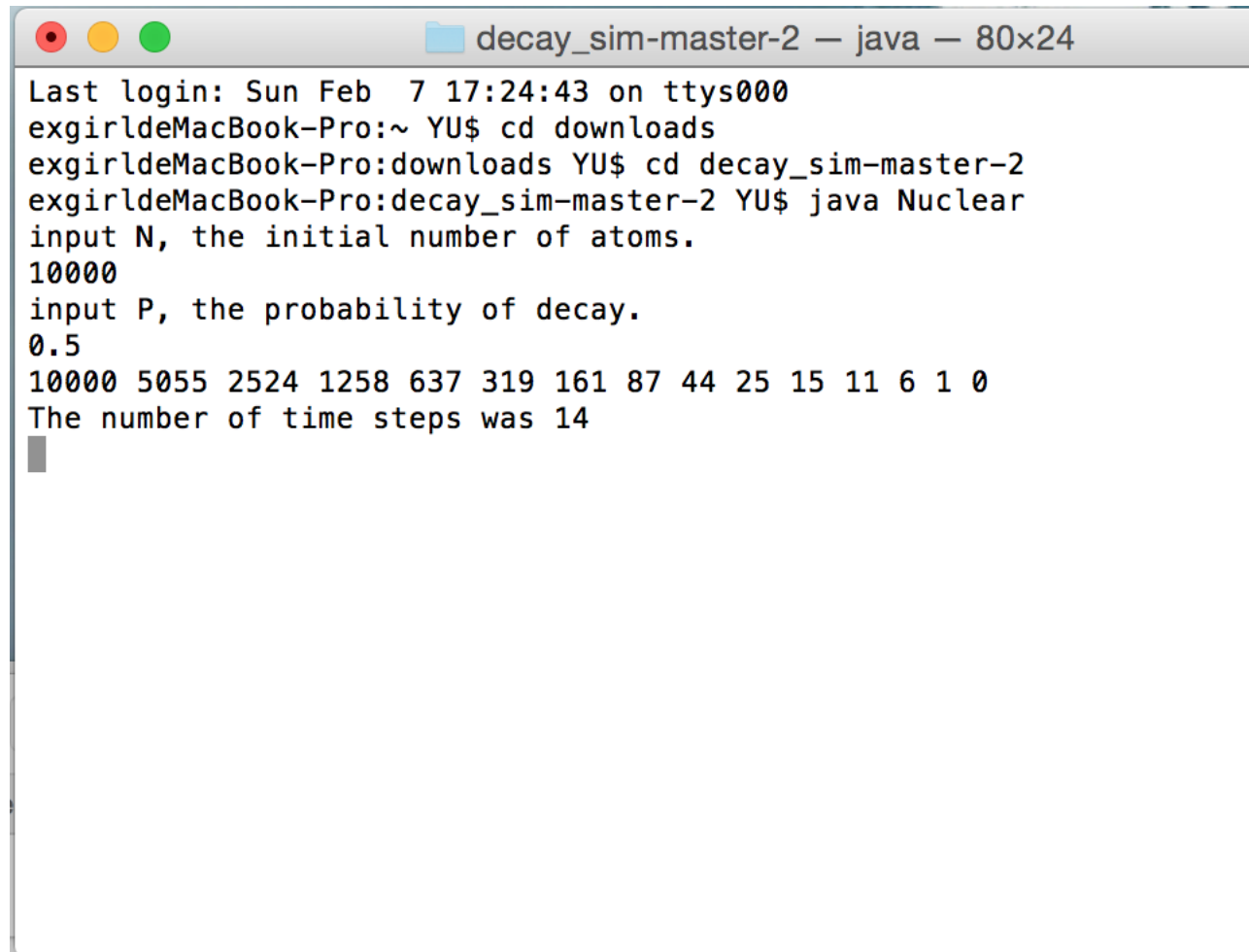


Figure 2: Nuclear



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Figure 3: Nuclear

2	6385	3002	613
3	5120	3364	1516
4	4108	3298	2594
5	3331	3102	3567
6	2658	2852	4490
7	2147	2522	5331
8	1734	2217	6049
9	1394	1914	6692
10	1130	1630	7240
11	897	1384	7719
12	711	1113	8176
13	574	935	8491
14	463	756	8781
15	349	646	9005
16	262	551	9187
17	214	407	9379
18	174	338	9488
19	130	295	9575
20	104	241	9655
21	85	190	9725
22	71	148	9781
23	54	131	9815
24	40	103	9857
25	32	84	9884

Figure 4: Nuclear

25	32	84	9884
26	27	71	9902
27	21	46	9933
28	16	42	9942
29	13	33	9954
30	12	23	9965
31	8	23	9969
32	6	19	9975
33	6	12	9982
34	5	9	9986
35	4	8	9988
36	2	8	9990
37	2	4	9994
38	1	4	9995
39	0	4	9996
40	0	3	9997
41	0	3	9997
42	0	3	9997
43	0	3	9997
44	0	3	9997
45	0	2	9998
46	0	1	9999

The number of time steps was 47

Figure 5: Nuclear

File

