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EE 381
Project 1 Documentations

Exercises:

Exercise 1 Seed 0

M	A	N	S ₀	S _{i+1} = (M * S _i + A) % N	S _i	S _{i+1}
6	5	11	0	5 = (6 * 0 + 5) % 11	0	5
				2 = (6 * 5 + 5) % 11	5	2
				6 = (6 * 2 + 5) % 11	2	6
				8 = (6 * 6 + 5) % 11	6	8
				9 = (6 * 8 + 5) % 11	8	9
				4 = (6 * 9 + 5) % 11	9	4
				7 = (6 * 4 + 5) % 11	4	7
				3 = (6 * 7 + 5) % 11	7	3
				1 = (6 * 3 + 5) % 11	3	1
				0 = (6 * 1 + 5) % 11	1	0
				5 = (6 * 0 + 5) % 11	0	5
				2 = (6 * 5 + 5) % 11	5	2
				6 = (6 * 2 + 5) % 11	2	6
				8 = (6 * 6 + 5) % 11	6	8
				9 = (6 * 8 + 5) % 11	8	9
				4 = (6 * 9 + 5) % 11	9	4
				7 = (6 * 4 + 5) % 11	4	7
				3 = (6 * 7 + 5) % 11	7	3
				1 = (6 * 3 + 5) % 11	3	1
				0 = (6 * 1 + 5) % 11	1	0
				5 = (6 * 0 + 5) % 11	0	5

Exercise 1 Seed 4

M	A	N	S ₀	S _{i+1} = (M * S _i + A) % N	S _i	S _{i+1}
6	5	11	4	7 = (6 * 4 + 5) % 11	4	7
				3 = (6 * 7 + 5) % 11	7	3
				1 = (6 * 3 + 5) % 11	3	1
				0 = (6 * 1 + 5) % 11	1	0
				5 = (6 * 0 + 5) % 11	0	5
				2 = (6 * 5 + 5) % 11	5	2
				6 = (6 * 2 + 5) % 11	2	6
				8 = (6 * 6 + 5) % 11	6	8
				9 = (6 * 8 + 5) % 11	8	9
				4 = (6 * 9 + 5) % 11	9	4
				7 = (6 * 4 + 5) % 11	4	7
				3 = (6 * 7 + 5) % 11	7	3
				1 = (6 * 3 + 5) % 11	3	1
				0 = (6 * 1 + 5) % 11	1	0
				5 = (6 * 0 + 5) % 11	0	5
				2 = (6 * 5 + 5) % 11	5	2
				6 = (6 * 2 + 5) % 11	2	6
				8 = (6 * 6 + 5) % 11	6	8
				9 = (6 * 8 + 5) % 11	8	9
				4 = (6 * 9 + 5) % 11	9	4
				7 = (6 * 4 + 5) % 11	4	7

Exercise 2 Seed 0

[illegible]

Exercise 2 Seed 1

[illegible]

Exercise 2 Seed 4

[illegible]

Exercise 2 Seed 5

[illegible]

CODE:

```
# The norm N is 10,000
N = 10000

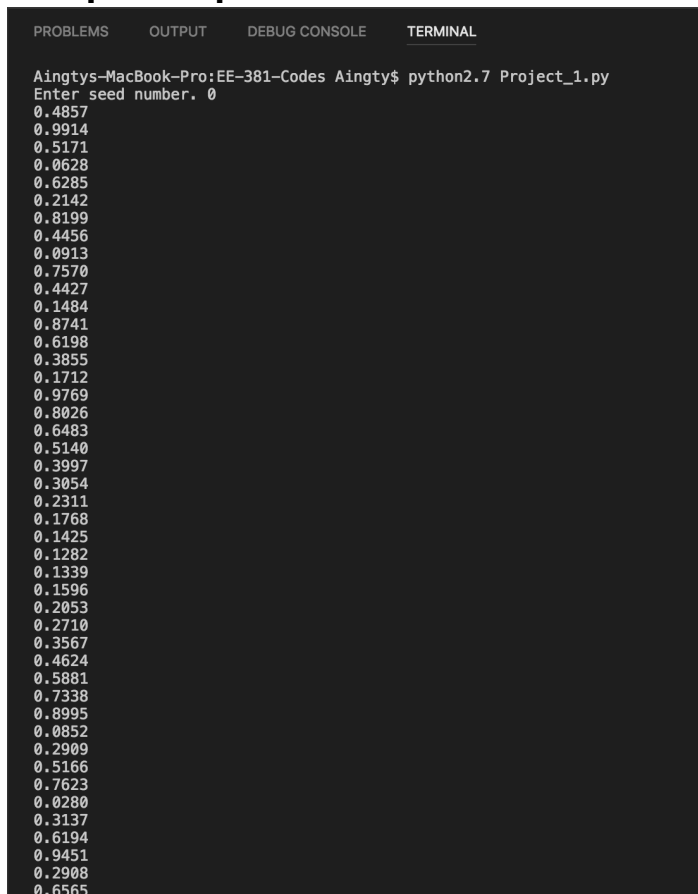
# The adder A is 4,857
A = 4857

# The multiplier is 8,601
M = 8601

S = input("Enter seed number. ")

for i in range(100):
    S = (M*S + A)%N
    R = S/float(N) # Float division is used to obtain the number
on (0,1)
    print(format(R, '.4f')) # Print number to 4 decimal places
```

Sample Output:



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Aingtys-MacBook-Pro:EE-381-Codes Aingty$ python2.7 Project_1.py
Enter seed number. 0
0.4857
0.9914
0.5171
0.0628
0.6285
0.2142
0.8199
0.4456
0.0913
0.7570
0.4427
0.1484
0.8741
0.6198
0.3855
0.1712
0.0769
0.8026
0.6483
0.5140
0.3997
0.3054
0.2311
0.1768
0.1425
0.1282
0.1339
0.1596
0.2053
0.2710
0.3567
0.4624
0.5881
0.7338
0.8995
0.0852
0.2909
0.5166
0.7623
0.0280
0.3137
0.6194
0.9451
0.2908
0.6565
```