

Practice From Last Time

Write a program that starts off asking the user how much money they have in their bank account. Next, add a menu to let the user add money, subtract money, or quit the ATM program. Let the user keep using the ATM as long as they want (until they choose to quit). Prevent the user from withdrawing more money than they have in their account. Use input validation to prevent the user from typing in a negative amount of money.





Nested Loops Examples

- Input from file
 - Keep inputting next line and take average of numbers on the line until the line == "
- Want to create a 'clock' object that needs to go through every second of every minute of every day
- Iterate through every box in a 2-D grid





Nested L	oops
 Definition - A loop that is inside a An inner loop goes through all of iteration of an outer loop. Inner loops complete their iteration. To get the total number of iteration multiply the number of iterations. 	nother loop. its iterations for every single ons faster than outer loops. ons of a nested loop, of all the loops
<pre>for i in range(4): for j in range(5): print('*', end='') print() Bhodes Colleat</pre>	Outer loop iterates 4 times. Inner loop iterates 5 times. Total iterations = 20.



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	1 2 3 4 5 6 7	2 4 6 8 10 12 14	3 6 9 12 15 18 21	4 8 12 16 20 24 28	5 10 15 20 25 30 35	6 12 18 24 30 36 42	7 14 21 28 35 42 49	8 16 24 32 40 48 56	9 18 27 36 45 54 63	10 20 30 40 50 60 70	-			
for i	8 9 10	16 18 20	24 27 30	32 36 40	40 45 50	48 54 60	56 63 70	64 72 80	72 81 90	80 90 100				
fo	r =	j i ori	in in	r t(an (i	ge *j	(1	•, •	11 end	L): d='		')		
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Example 2 – Dependent Loops	
<pre>for i in range(1, 8, 3): for j in range(8, i, -2): print(j, end='')</pre>	
8 6 4 2 8 6 8	
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Example 3 – Prime	e Numbers
<pre>i = 2 while i < 100: prime = True for j in range(2, i): if i % j == 0: prime = False break if prime: print(i, "is prime") i = i + 1</pre>	2 is prime 3 is prime 5 is prime 13 is prime 13 is prime 13 is prime 14 is prime 29 is prime 29 is prime 29 is prime 29 is prime 31 is prime 43 is prime 43 is prime 53 is prime 53 is prime 53 is prime 54 is prime 55 is prime 51 is prime 51 is prime 52 is prime 53 is prime 53 is prime 54 is prime 55 is prime 56 is prime 57 is prime 57 is prime
Rhodes College	79 is prime 83 is prime 89 is prime 97 is prime 11

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Desigr	is by Turtle	
	<pre>bgcolor("black") shape("triangle") f = 0.83282 phi = 6.89637 for i in range(5): s = 20 c = 1 for i in range(20): shapesize(s) fillcolor(c, 0.5, stamp() s *= f c *= f right(phi) right(360/5)</pre>	1-c;
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