Chapter 7 - Loops in Python Sometimes we want to repeat a set of statements in our program. For instance: Print 1 to 1000 Loops make it easy for a programmer to tell the computer, which set of instructions to repeat and how! Types of loops in Python Primarily there are two types of loops in Python 1- While loop 2, for bop We will look into these one by one! The syntax of a while box looks like this: While Condition: => The block Reeps executing until the condition is true In while loops, the condition is checked first If it evaluates to true, the Body of the loop is executed, otherwise not! If the loop is entered, the process of [Condition Check & execution] is continued until the condition becomes false. Quick aug: Write a program to print 1 to 50 using a while loop.

while i < 5: print ("Harry") i=i+1 Note: If the condition never becomes false, the loop Reeps getting executed. Quick Quiz: Write a program to print the control of a list using while loops.		An Example
Note: If the condition never becomes false, the loop Reeps getting executed Druck aug: Write a program to print the control of a list using while loops For loop is used to iterate through a sequence list, tuple or string [Herables] The syntax of a for loop looks like this: L= [1, 7, 8] For item in l: print (item)	M 1	i = 0 while i < 5: print ("Harry") i = i + 1
For loop For loop A for loop is used to iterate through a sequence list, tuple or string [Herables] The syntax of a for loop looks like this: \[\begin{align*} & & & & & & & & & & & & & & & & & & &	a disc	Note: If the condition never becomes false, the
The syntax of a for loop looks like this: l = [1, 7, 8] for item in l: print (item)		Quick Quiz: Write a program to print the content of a list using while loops.
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Range function in Python The range function in python is used to generate a sequence of numbers. We can also specify the Start, Stop and Step-5ize		The syntax of a for loop looks like this:
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Range function in Python The range function in python is used to generate a sequence of numbers We can also specify the Start, Stop and Step-Size as follows: range (Start, Stop, Step Size is usually not used with range)	41	print (item) -> print 1, 7 and 8
as follows: range (Start, Stop, 5kth-Size) used with range()	lad's	Range function in Python The range function in python is used to generate a sequence of numbers. We saw also should the Start stab and step-513c
used with range()	71	as follows: range (Start, Stop, Step size)
		used with range()

	An Example demonstrating range () function
	Cor i in vamor (a 2): -> range (2) can also be used
	for i in range (0,7): → range (7) can also be used print (i) → prints 0 to 6
-	
	For loop with else from be used with a for loop if the code is to be executed when the loop exhausts Example:
	An obtional else can be used with a for loop
	if the code is to be executed when the loop exhausts
-	L ACTIVIA. 0
	V = 1 1 7 8 1
	for item in l: print (item) else:
	print (item)
-	else:
	print ("Done") -> This is printed when the
-	
_	Output:
	7 10 11 11 1
	R minutional and
	Done
	No and the second of the secon
	The break statement
10-1	'break' is used to come out of the loop when encountered
	'break' is used to come out of the loop when encountered It instructs the program to - Exit the loop now
	Example:
	for i in range (0, 80):
	for i in range $(0, 80)$: $\begin{array}{ccccccccccccccccccccccccccccccccccc$
	if $i==3$: and 3 break
	break

The continue Statement 'Continue' is used to stop the current iteration of the loop and continue with the next one It instructs the program to "skip this iteration" Example: for i in range (4):

print ("printing")

if i = = 2: => if i is 2, the iteration

(antinue is skipped

print (i) pass stakment
pass is a null stakement in python
It instructs to "Do nothing" Example: l = [1, 7, 8]for item in l:
pass -> Without pass, the program

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1	Write a program to print multiplication table of a given number using for loop.
2	Write a program to greet all the person names Stored in a list l1 and which starts with 5 l, = ["Harry", "Sohan", "Sachin", "Rahul"]
3	Attempt problem 1 using while loop.
4	Write a program to find whether a given number is prime or not
5	Write a program to find the Sum of first n natural numbers using while loop.
6	Write a program to calculate the factorial of a given number using for loop.
7 =	Write a program to print the following star pattern
	*** *** *** *** **** **** **** ****
8	Write a program to print the following star pattern:
	* * * * for n = 3

9	Write a program to print the following star pattern
0/01	* * for n = 3
	* $*$ for $n=3$
10 10	a Water a program to south all the beside con
10	Write a program to print multiplication table of n using for loop in reversed order.
	Lie L'adery "Solvier Darlen" Boles
	3 Attente broblem 1 using while loop.
150	e little a program to find whether a guera rua
	Despite 68 and
	S With a tragenom to find the Sourn of fired
	good stides gride stratuming large as
in in	I work a program to calculate the factorial
	dod the bush by by the bob
esaltel	I like a program to prot the following store
	4 5 1
	E= 1 10 + 1 1 2 1
24	with a program to proof the fallowing the fallow
	ESAM AND
1	