	Date Page
	Ch 7: Loops in Python
	sometimes we need to repeat a set of instructions
	in our program.
	eg-print 1 to 100
	eg-10wite.
	print(1)
	orint(2)
	→ This is a dumb way.
	OET I MEDIT TO THE PROPERTY OF
	print(100)
	we use <u>loops</u> to make this easier.
	las lask
→ →	for loop while loop
	while <andition>: - Syntax</andition>
	# Cocle #
	(i) deine
	The code inside while loop will only be executed if the condition is True. The loop terminates once the
	the condition is True. The loop terminates once the
	condition is table.
	while (4>3):
	print ("loop") → "loop" will be pointed infinite
	False
	while (7 == 8):
	print ("loop") → "loop" will not be printed as the condition gets False
	condition gets False
	0

classmate



i = 0	
while (i<10):
A special transfer of the second seco	= i+1 $= i+1$ $= i+$
pr	int("this is good", i) → this is good 1 this is good 2

this is good 10

As soon as the condition becomes False [i=10 & 10\$10] the loop stops executing.

- a > Write a program to print first n natural numbers in reverse order.
 - break keyword This instructs a loop to stop a

 i = 0

while (i < 10):

print(i)

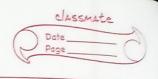
if (i = = 6):

_

1,

5

0



o continue keyword - Helps you to skip the current instruction

$$\dot{i} = 0$$
while ($i < 10$):

$$if(i = = 6)$$
:

continue print (i) -> 1

pass keyword - This instructs a program to do nothing

Good" will be printed



_		1		1
F	re	10	20	h
1		10	70	-

for loops can be used in lists, tuples, sets.

li = ['Python', 10, Truse] for i in li

i in li print (i) → Python 10

range () function

This is used to generate a sequence of numbers.

range (starting integer, stop)

range (100) → [0,1,2,3,4,----99]

> start is by default 0 > last number not included

range (1,101) → [1,2,3,4,5---- 98,99,100]

· for loop with else

for i in [2,4,9,6]: print(i,

print (" Task completed!")

> The else is executed only when for loop completes it's process.

If the for loop breaks, else won't be executed.

range
$$(1,101,4) \rightarrow [1,5,9,13,17,----,93,97]$$

step size