## Pseudo to Python example

- 2 Adder Program
- Select a line of pseudo code
- Using the pseudo code to python cross reference table determine the target python code
  - Pseudo code Lesson 2 Notebook
- Add that line to the program
  - May have to change variable name(s)
  - May have to add some suitable python syntax
- Worked example follows

Pseudocode Python total AS INTEGER x AS INTEGER x = 0 $x \leftarrow 0$ total ← 0 x = 4x ← 4 **OUTPUT** "How many number y = x \* 7 $y \leftarrow x * 7$ INPUT nums as INTEGER **OUTPUT** x print(x) FOR x = 1 TO numsINPUT x x = input()INPUT num AS INTEGER IF x = 4 THEN if x == 4: y = 8y = 8total ← total + num ELSE else: **END FOR** y = 6y = 6**END IF OUTPUT** total SELECT x if x == 1: CASE 1: print(a) **OUTPUT** a elif x == 2: CASE 2: print(b) **OUTPUT** b elif x == 3: CASE 3: print(c) OUTPUT c else: CASE ELSE: print(d) **OUTPUT** d **END SELECT** WHILE x > 4 DO while x > 4: x = x - 1 $x \leftarrow x - 1$ **END WHILE** for x in range(1,5): FOR x = 1 TO 5y = y + x $y \leftarrow y + x$ **END FOR** PROCEDURE square (x AS INTEGER) def square(x): x = x \* x $x \leftarrow x * x$ print(x) **OUTPUT** x END PROCEDURE

\*Python 3.4.1: Untitled\*

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# 2. Adder

total=0

**OUTPUT** total

total AS INTEGER

total ← 0

OUTPUT "How many numbers to add?"

INPUT nums as INTEGER

FOR x = 1 TO nums

INPUT num AS INTEGER

total ← total + num

END FOR

Pseudocode	Python							
x AS INTEGER x ← 0	x = 0							
x ← 4	x = 4							
y ← x * 7	y = x * 7							
OUTPUT x	print(x)							
INPUT x	x = input()							
IF x = 4 THEN y = 8 ELSE y = 6 END IF	y = 8 # 2. else: tota	CONTRACTOR ESTATES	*	Nindows Help	to	add	?	")
SELECT x CASE 1: OUTPUT a CASE 2: OUTPUT b CASE 3: OUTPUT c CASE ELSE: OUTPUT d END SELECT	<pre>if x == 1:     print(a) elif x == 2:     print(b) elif x == 3:     print(c) else:     print(d)</pre>							
WHILE x > 4 DO x ← x - 1 END WHILE	while x > 4: x = x -1							
FOR x = 1 TO 5 y ← y + x END FOR	for x in range(1,5): y = y + x							
PROCEDURE square (x AS INTEGER) x ← x * x OUTPUT x END PROCEDURE	<pre>def square(x):     x = x * x     print(x)</pre>							
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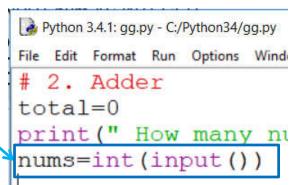
total AS INTEGER

total ← 0
OUTPUT "How many numbers to a
INPUT nums as INTEGER

FOR x = 1 TO nums
INPUT num AS INTEGER

total ← total + num
END FOR
OUTPUT total

Pseudocode	Python
x AS INTEGER x ← 0	x = 0
x ← 4	x = 4
y ← x * 7	y = x * 7
OUTPUT x	print(x)
INPUT x	x = input()
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WHILE x > 4 DO x ← x - 1 END WHILE	while x > 4: x = x -1
FOR x = 1 TO 5 y ← y + x END FOR	for x in range(1,5): y = y + x
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	Pseudocode	Python
	x AS INTEGER x ← 0	x = 0
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	y ← x * 7	y = x * 7
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	WHILE x > 4 DO x ← x - 1 END WHILE	while x > 4: x = x -1
7	FOR x = 1 TO 5 y ← y + x END FOR	for x in range(1,5): y = y + x
	PROCEDURE square (x AS INTEGER) x ← x * x OUTPUT x END PROCEDURE	def square(x): x = x * x print(x)

total AS INTEGER

total ← 0

OUTPUT "How many numbers to

INPUT nums as INTEGER

FOR x = 1 TO nums

INPUT num AS INTEGER

total ← total + num

END FOR

**OUTPUT** total

#2. Adder
total=0
print(" How many numbers
nums=int(input())
for x in range (0, nums):
 num=int(input())
 total = total + num

**OUTPUT** total

total AS INTEGER

total ← 0

OUTPUT "How many numbers to
INPUT nums as INTEGER

FOR x = 1 TO nums

INPUT num AS INTEGER

total ← total + num

END FOR

Pseudocode		Python		
	x AS INTEGER x ← 0	x = 0		
	x ← 4	x = 4		
	y ← x * 7	y = x * 7		
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	WHILE x > 4 DO x ← x - 1 END WHILE	while x > 4: x = x -1		
	FOR x = 1 TO 5 y ← y + x END FOR	for x in range(1,5): y = y + x		
	PROCEDURE square (x AS INTEGER) x ← x * x OUTPUT x END PROCEDURE	<pre>def square(x):     x = x * x     print(x)</pre>		

```
#2. Adder
total=0
print(" How many numbers
nums=int(input())
for x in range (0, nums):
    num=int(input())
    total = total + num
```

total AS INTEGER

total ← 0

OUTPUT "How many numbers to INPUT nums as INTEGER

FOR x = 1 TO nums

INPUT num AS INTEGER

total ← total + num

END FOR

OUTPUT total

Pseudocode		Python		
x AS INTEGER x ← 0		x = 0		
	x ← 4	x = 4		
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	OUTPUT x	print(x)		
	INPUT X	x = input()		
	IF x = 4 THEN y = 8 ELSE y = 6 END IF	if x == 4: y = 8 else: y = 6		
	SELECT x CASE 1: OUTPUT a CASE 2: OUTPUT b CASE 3: OUTPUT c CASE ELSE: OUTPUT d END SELECT	<pre>if x == 1:     print(a) elif x == 2:     print(b) elif x == 3:     print(c) else:     print(d)</pre>		
	WHILE x > 4 DO x ← x - 1 END WHILE	while x > 4: x = x -1		
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	PROCEDURE square (x AS INTEGER) x ← x * x OUTPUT x END PROCEDURE	<pre>def square(x):     x = x * x     print(x)</pre>		

```
File Edit Format Run Options Windows Help
#2. Adder
total=0
print(" How many numbers
nums=int(input())
for x in range (0, nums):
    num=int(input())
    total = total + num
print("total :"total)
```

# Completed Adder Program

Python Program

```
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#2. Adder
total=0
print(" How many numbers to add ? ")
nums=int(input())
for x in range (0, nums):
    num=int(input())
    total = total + num
print("total :", total)
```

 Example running the program for adding 3 numbers

```
How many numbers to add ?

How many numbers to add ?

total : 18
```