def chorus():
    """ prints chorus """
    print ""
    ...and they all go marching
down-
to the ground-
to get out-
of the rain.
    Boom boom boom boom boom boom boom
""

def verse1():
    """ prints first verse """
    print ""
    The ants go marching 1 by 1 hurrah, hurrah!
The ants go marching 1 by 1 hurrah, hurrah!
The ants go marching 1 by 1,
The little one stops to suck his thumb
""

def verse2():
    """ prints second verse """
    print ""
    The ants go marching 2 by 2 hurrah, hurrah!
The ants go marching 2 by 2 hurrah, hurrah!
The ants go marching 2 by 2,
The little one stops to tie his shoe
""

verse1()
chorus()
verse2()
chorus()
def chorus():
    output = ""
    ...and they all go marching
down-
to the ground-
to get out-
of the rain.
Boom boom boom boom boom boom boom
""
    return output

def verse(verseNum):
    if verseNum == 1:
        distraction = "suck his thumb"
    elif verseNum == 2:
        distraction = "tie his shoe"
    else:
        distraction = "I have no idea"

    output = ""
The ants go marching %(verseNum)d by %(verseNum)d hurrah, hurrah!
The ants go marching %(verseNum)d by %(verseNum)d hurrah, hurrah!
The ants go marching %(verseNum)d by %(verseNum)d,
The little one stops to %(distraction)s
""
    return output

print verse(1)
print chorus()
print verse(2)
print chorus()
''' ants3.py
   classic counting song
   further improvement with a list
   '''

distraction = [  
    '',
    "suck his thumb",
    "tie his shoe",
    "climb a tree"
  ]

def chorus():
    output = ""
    ...and they all go marching
down-
to the ground-
to get out-
of the rain.
   Boom boom boom boom boom boom boom
   ""
    return output

def verse(verseNum):

    problem = distraction[verseNum]
    output = ""
    The ants go marching %(verseNum)d by %(verseNum)d hurrah, hurrah!
The ants go marching %(verseNum)d by %(verseNum)d hurrah, hurrah!
The ants go marching %(verseNum)d by %(verseNum)d,
The little one stops to %(problem)s
   "" % vars()
    return output

for verseNum in range(1, len(distraction)):
    print verse(verseNum)
    print chorus()
```python
""" scope.py
    illustrates scope and functions
"""

varOutside = "I was created outside the function"
print "outside the function, varOutside is: %s" % varOutside

def theFunction():
    varInside = "I was made inside the function"

    print "inside the function, varOutside is: %s" % varOutside
    print "inside the function, varInside is: %s" % varInside

theFunction()

print "back outside the function, varOutside is: %s" % varOutside
# if I uncomment the next line, the program will crash
# print "back outside the function, varInside is: %s" % varInside
```