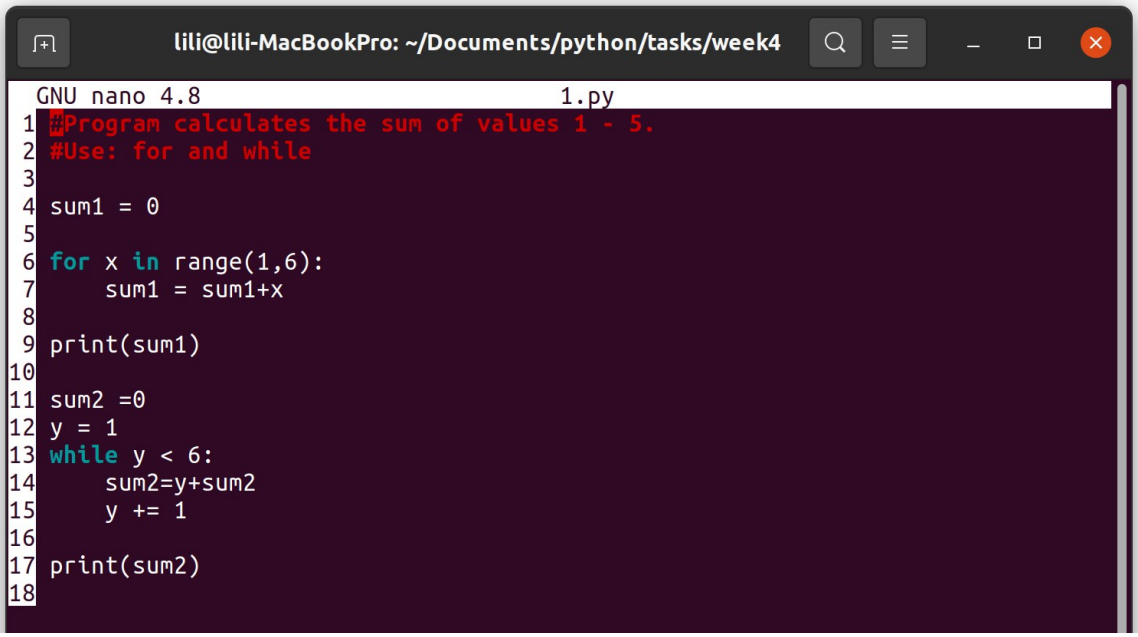
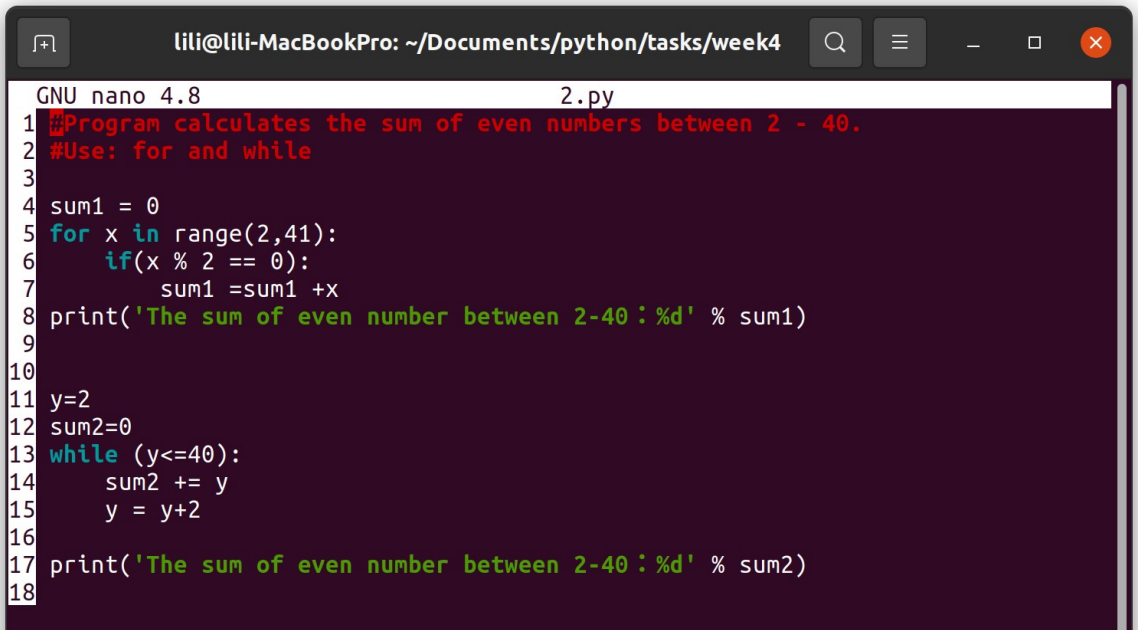
Week 4

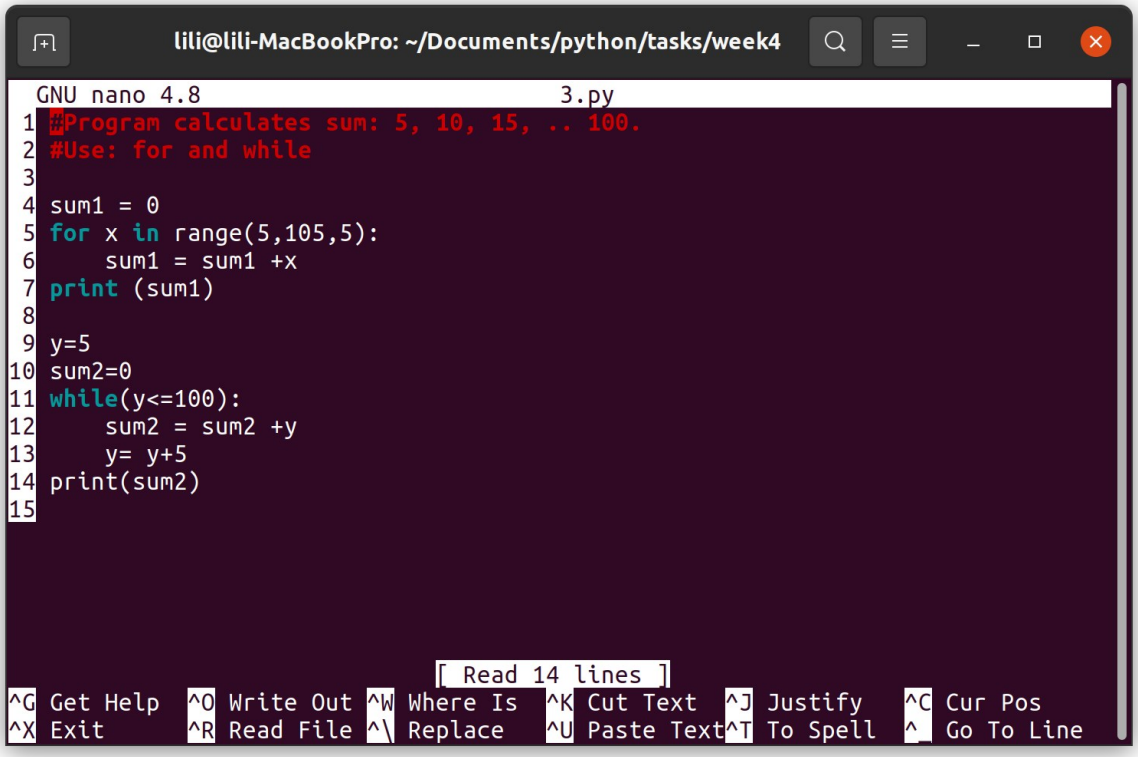
1. Program calculates the sum of values 1 - 5.
Use: for and while



2. Program calculates the sum of **even** numbers between 2 - 40.
Use: for and while



3. Program calculates sum: 5, 10, 15, .. 100.
Use: for and while



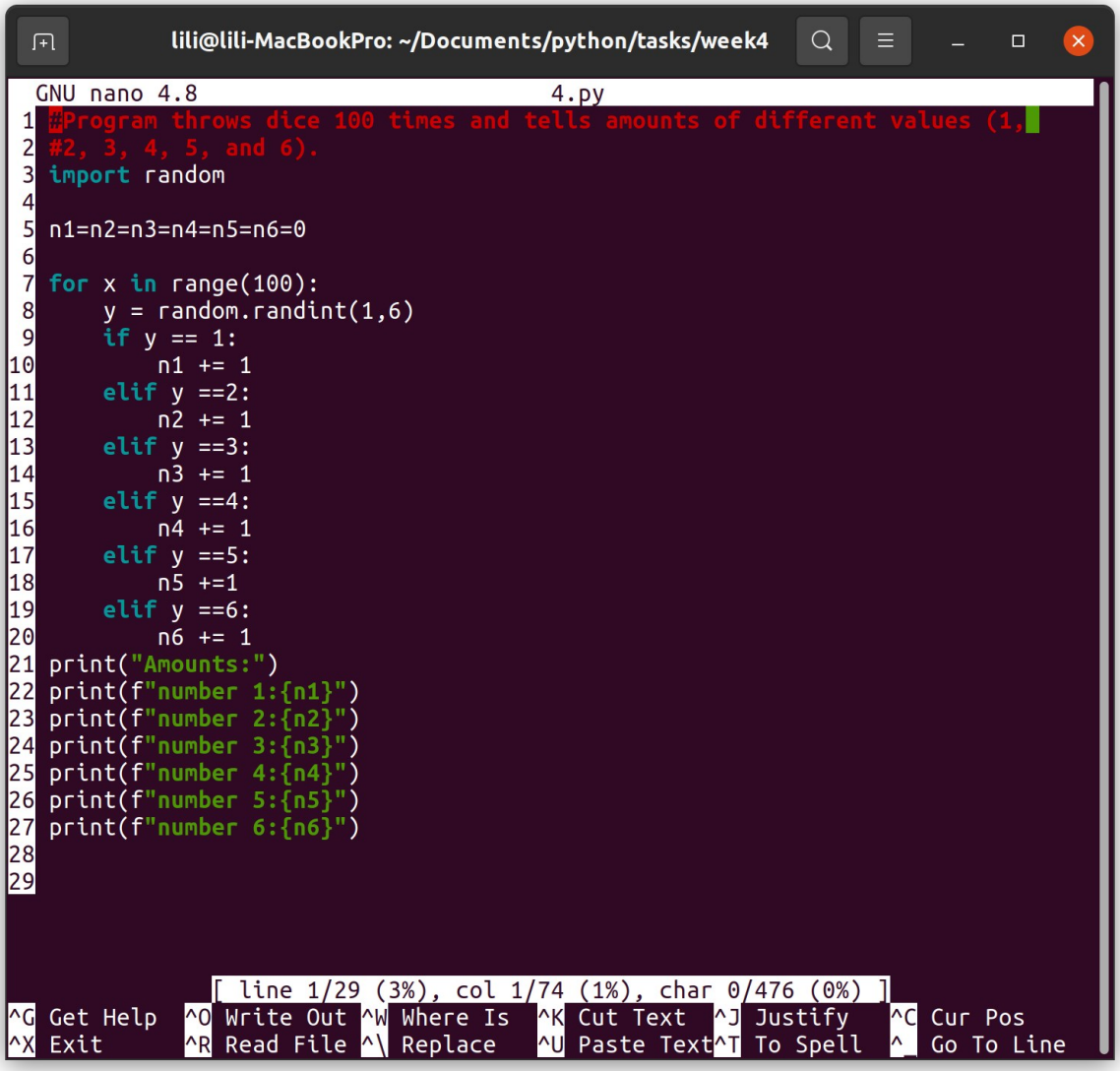
4. Program throws dice 100 times and tells amounts of different values (1, 2, 3, 4, 5, and 6).

Hints:

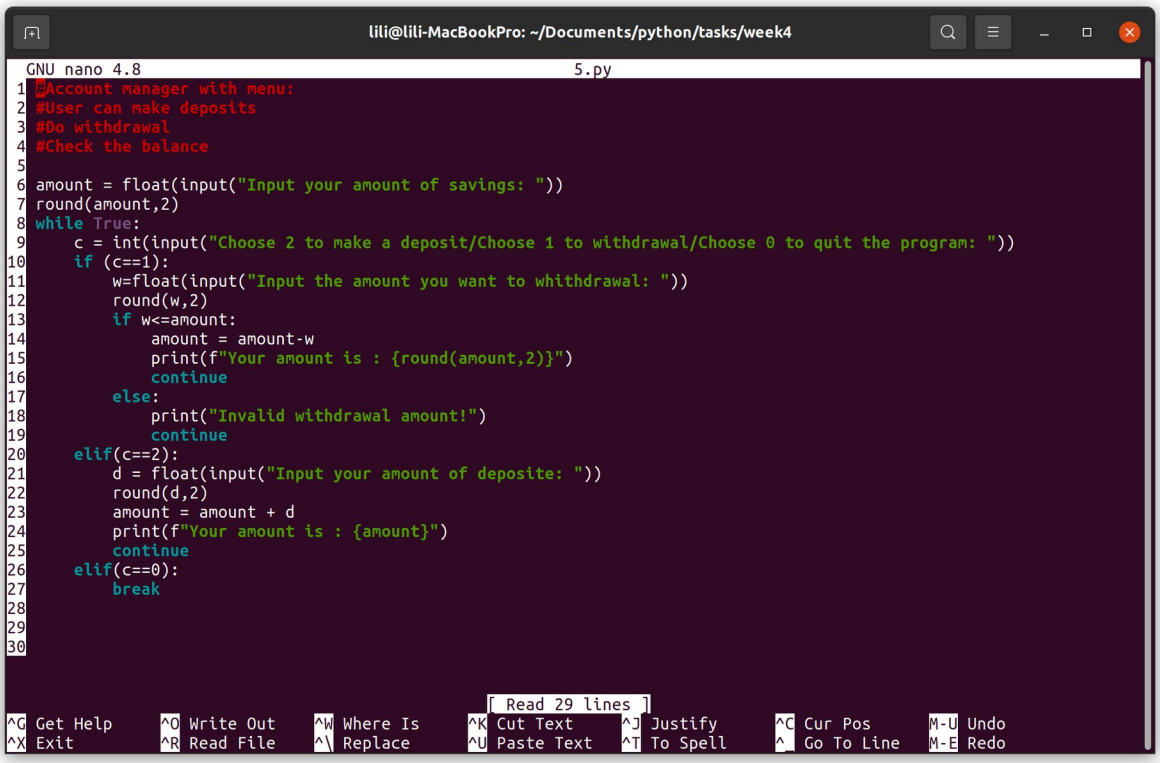
from random import randint

scaling example [0,10]

value = randint(0, 10)



5
Account manager with menu:
User can make deposits
Do withdrawal
Check the balance

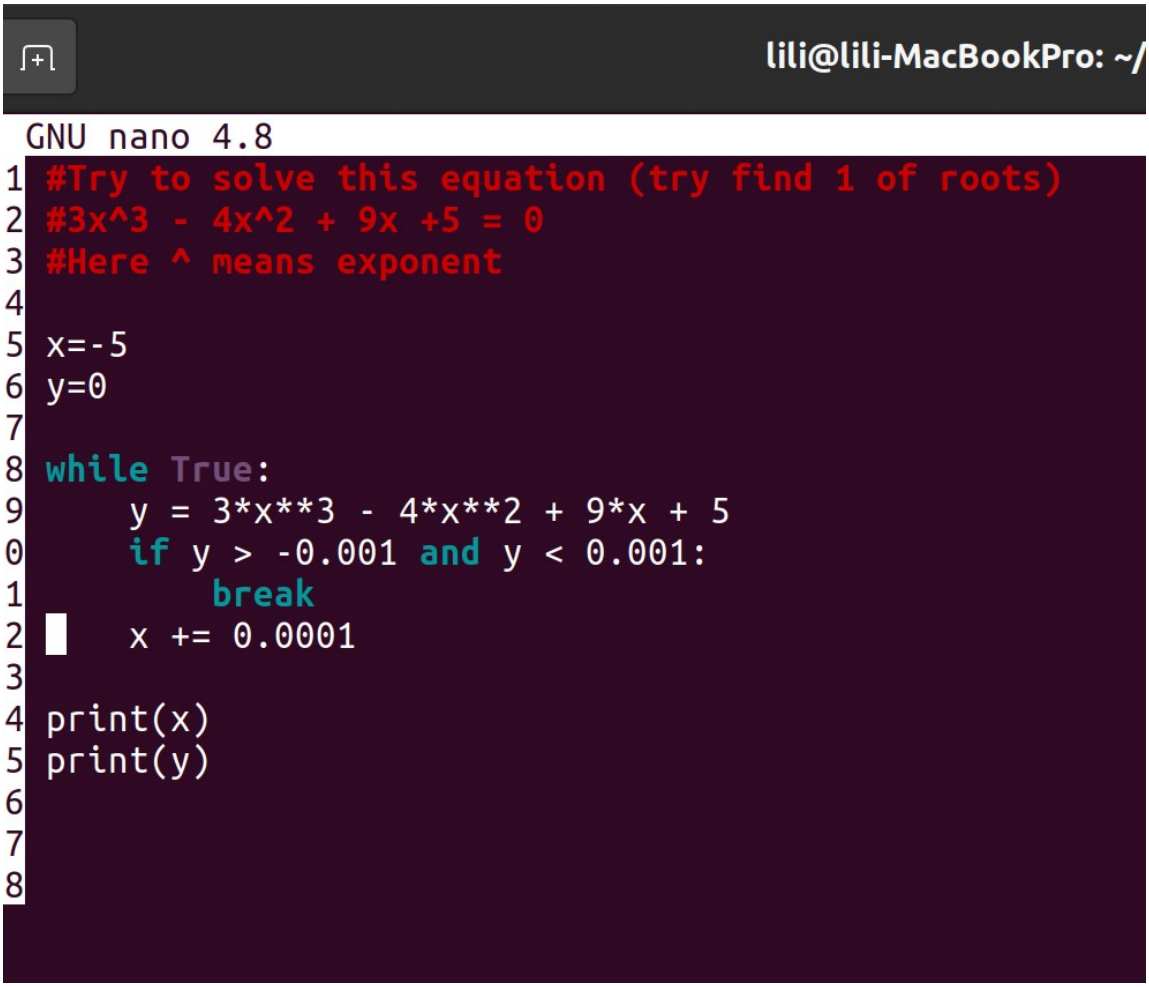


the run

```
lili@lili-MacBookPro:~/Documents/python/tasks/week4$ python3 5.py
Input your amount of savings: 1000
Choose 2 to make a deposit/Choose 1 to withdrawal/Choose 0 to quit the program: 1
Input the amount you want to whithdrawal: 90.98
Your amount is : 909.02
Choose 2 to make a deposit/Choose 1 to withdrawal/Choose 0 to quit the program: 2
Input your amount of deposite: 19965.98
Your amount is : 20875.0
Choose 2 to make a deposit/Choose 1 to withdrawal/Choose 0 to quit the program: 0
lili@lili-MacBookPro:~/Documents/python/tasks/week4$ python3 5.py
Input your amount of savings: 987.8765
Choose 2 to make a deposit/Choose 1 to withdrawal/Choose 0 to quit the program: 1
Input the amount you want to whithdrawal: 1000.87
Invalid withdrawal amount!
Choose 2 to make a deposit/Choose 1 to withdrawal/Choose 0 to quit the program: 1
Input the amount you want to whithdrawal: 9
Your amount is : 978.88
Choose 2 to make a deposit/Choose 1 to withdrawal/Choose 0 to quit the program: 0
```

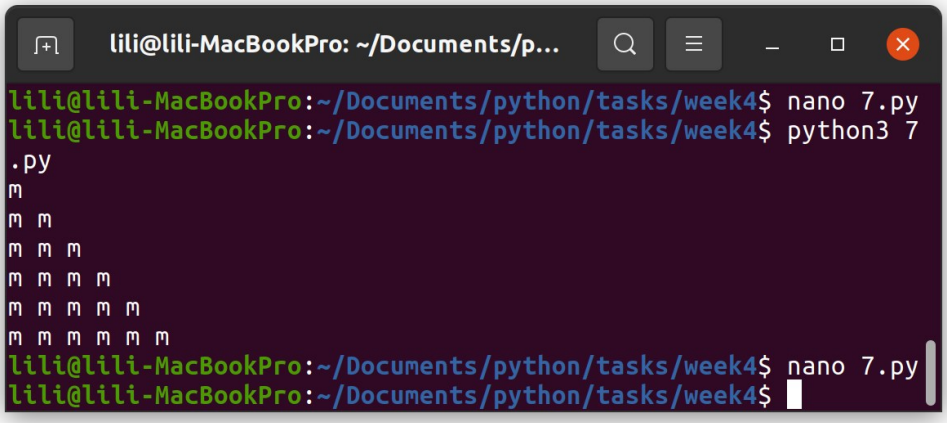
6
Try to solve this equation (try find 1 of roots)
3x^3 - 4x^2 + 9x +5 = 0
Here ^ means exponent

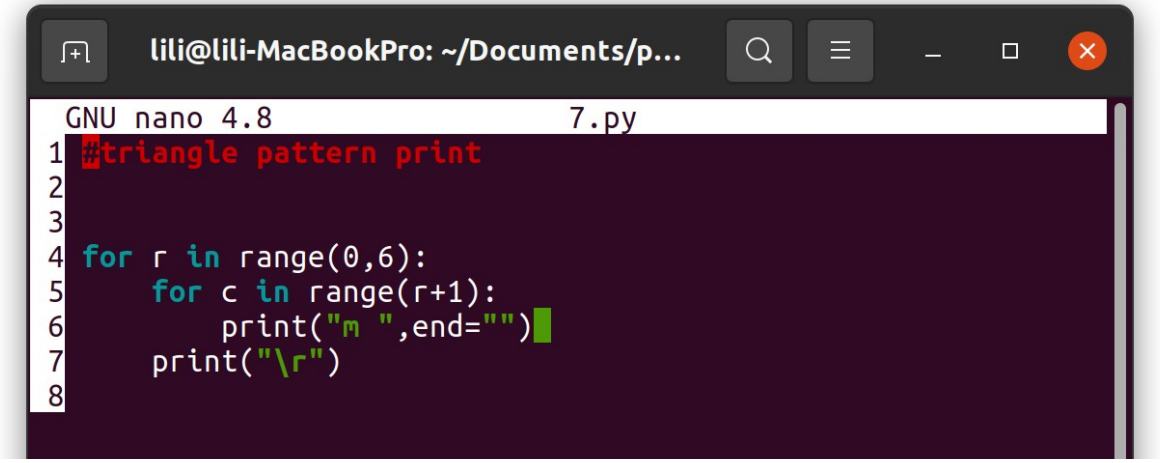
```
lili@lili-MacBookPro:~/Documents/python/tasks/week4$ python3 6.py
-0.4406999999982819
6.041859552308182e-05
```



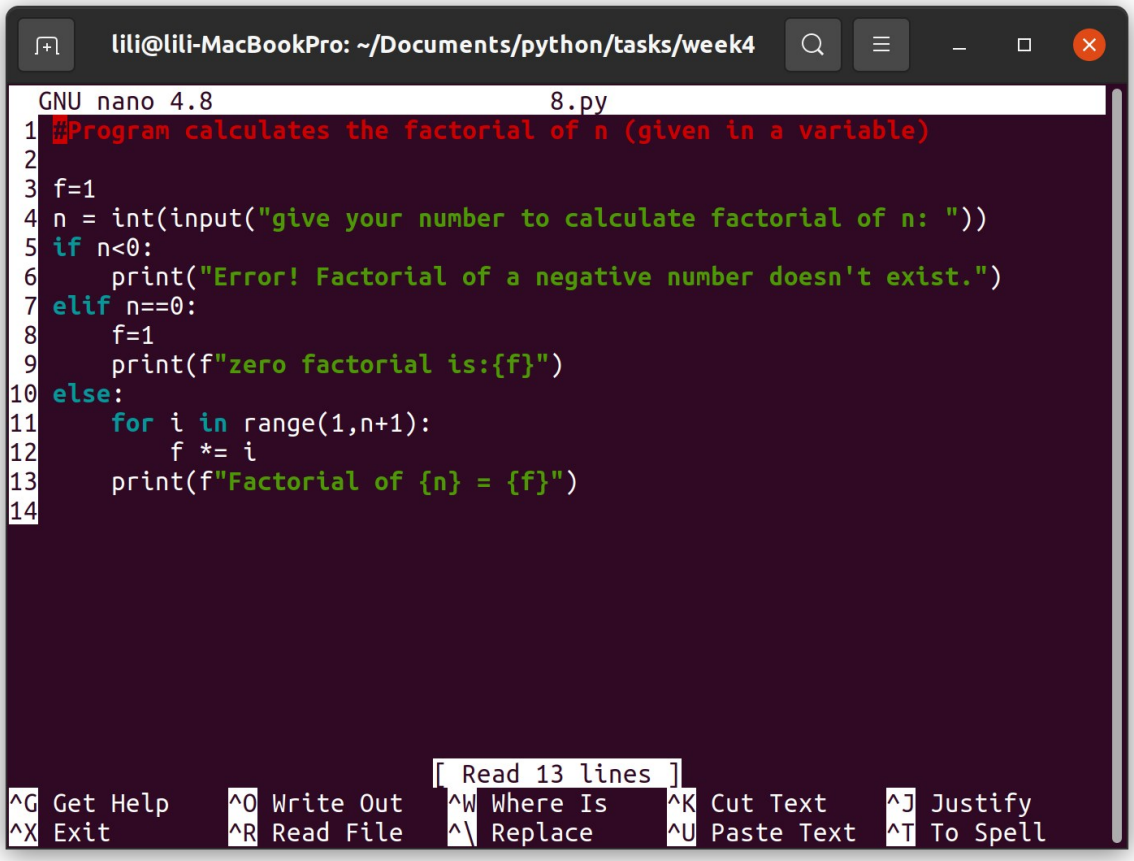
7
Print this kind of semipyramid (character amount of rows is given in a variable):

m
mm
mmm
mmmm
mmmmm

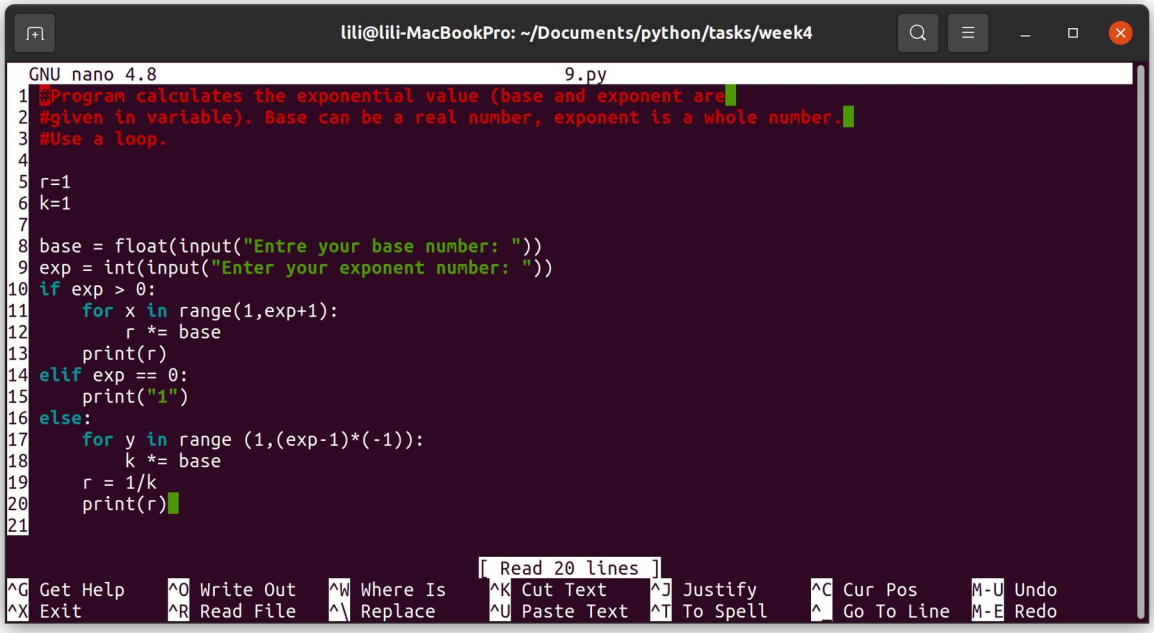




8.
Program calculates the factorial of n (given in a variable)



9.
Program calculates the exponential value (base and exponent are given invariable). Base can be a real number, exponent is a whole number. Use a loop.


lili@lili-MacBookPro: ~/Documents/python/tasks/week4
GNU nano 4.8 9.py
#Program calculates the exponential value (base and exponent are
#given in variable). Base can be a real number, exponent is a whole number.
#Use a loop.
r=1
k=1
base = float(input("Entre your base number: "))
exp = int(input("Enter your exponent number: "))
if exp > 0:
for x in range(1,exp+1):
r *= base
print(r)
elif exp == 0:
print("1")
else:
for y in range (1,(exp-1)*(-1)):
k *= base
r = 1/k
print(r)
[Read 20 lines]
^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos M-U Undo
^X Exit ^R Read File ^\ Replace ^U Paste Text ^T To Spell ^_ Go To Line M-E Redo