

Homework #8 Sample Solution

1) Scratch	Stack	Heap
	main	
	a_list	→ [1, 7 , 3, 4 7]
	b_list	
	temp_list	→ [2 , 4 , 6]
	item = X 23	

Printed Output

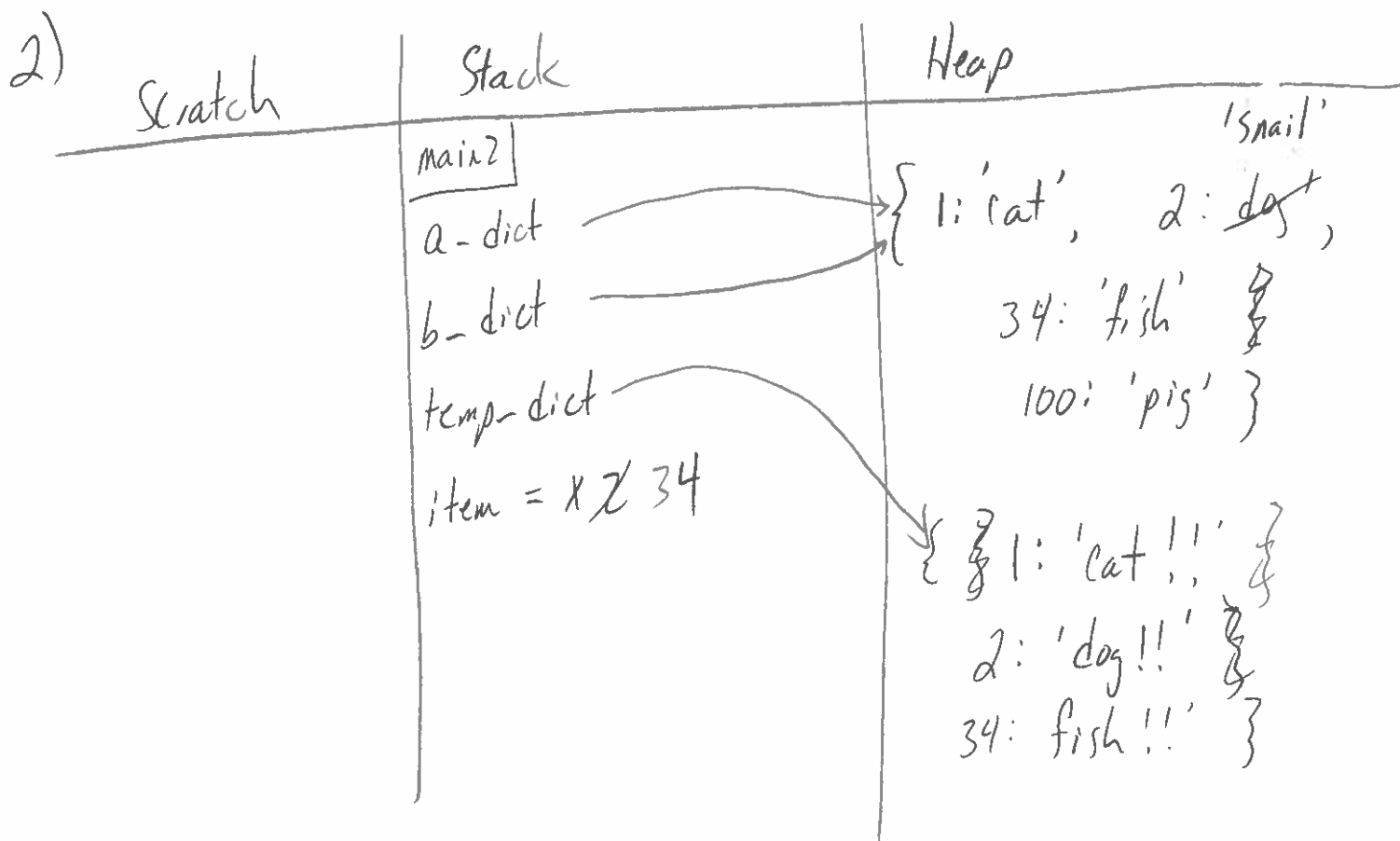
[1, -7, 3, 47]

[1, -7, 3, 47]

[2, 4, 6]

There is no elegant way to indicated changes in the heap. Just make clear what is happen.

You can always rewrite the values/list as needed



{ 1: 'cat', 2: 'snail', 34: 'fish', 100: 'pis' }

{ 1: 'cat', 2: 'snail', 34: 'fish', 100: 'pis' }

{ 1: 'cat!!', 2: 'dog!!', 34: 'fish!!' }

Note: item loops
over the keys
of a-dict

3

Scratch

Stack

Heap

main 3

a-str = 'bye'

b-str = ~~'bye'~~ 'bye z'temp-str = ~~'b!'~~ ~~'y!'~~ 'b!y!c!'item = ~~'b'~~ ~~'y!'~~ 'c'

Since strings
are immutable,
nothing goes in
the heap

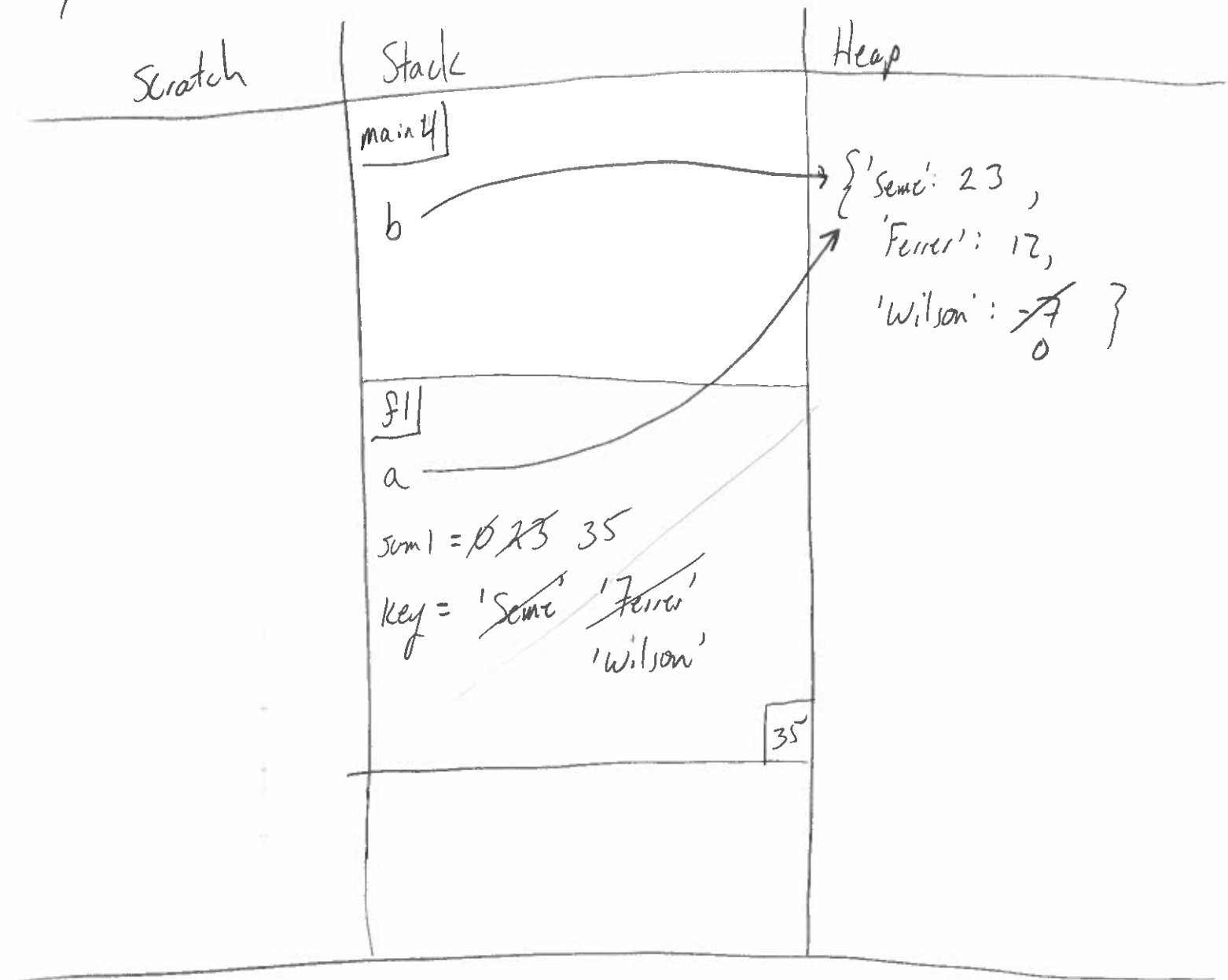
bye

bye z

b!y!c!

It is worth your time
to think carefully about
#1-#3.

4



35
 { 'Seme': 23, 'Ferrer': 12, 'Wilson': 0 }

5

Scratch

Stack

Heap

main 5

a-list

{ 6, 2, 8, 9 }

len(lst) = 4
len(s) = 4

g2

lst

s = 'exam'

i = 0 1 2 3 4

char = 'x' 'x' 'x' 'm'

g1

s = 'e'

g1

s = 'x'

g1

s = 'x' '500'

g1

s = 'm'

Notice that g2 does not print or return anything

[1, 1, 3, 1]