

Solutions to Quick Check Questions

15

Recursive Algorithms

15.1 Basic Elements of Recursion

No Quick Check Questions.

15.2 Directory Listing

No Quick Check Questions.

15.3 Anagram

1. Determine the output of the following calls without actually running the method:

- a. `anagram("", "DOG");`
- b. `anagram("", "CAFE");`

- a. DOG
DG0
OGD

ODG

GDO

GOD

b. CAFE

CAEF

CFEA

CFAE

CEAF

CEFA

AFEC

AFCE

AECF

AEFC

ACFE

ACEF

FECA

FEAC

FCAE

FCEA

FAEC

FACE

ECAF

ECFA

EAFC

EACF

EFCA

EFAC

15.4 Towers of Hanoi

No Quick Check Questions.

15.5 Quicksort

1. Partition the following arrays using the partition method:

a.

0	1	2	3	4	5	6	7	8
18	19	5	77	12	14	13	84	45


b.

0	1	2	3	4	5	6	7	8
98	19	15	86	12	44	13	24	45

Answer


a.

0	1	2	3	4	5	6	7	8
13	14	5	12	18	77	19	84	45


 Pivot

b.

0	1	2	3	4	5	6	7	8
45	19	15	86	12	44	13	24	98


 Pivot

15.6 When Not to Use Recursion

No Quick Check Questions.