File: COSC112/TestJava/mmTestSolutions/stackSol.txt

1. A(n) \_\_\_\_\_ is an abstract data type that stores and retrieves items in a last-in-first-out manner.

A. array

B. queue

C. stack

D. vector

ANSWER:

2. The \_\_\_\_\_\_\_ operation allows an item to be stored on a stack.

A. append

B. add

C. pop

D. push

ANSWER:

3. The queue data structure is commonly applied in connection with:

A. managing the order of print jobs

B. communications software

C. operating systems

D. All of these

ANSWER:

4. A \_\_\_\_\_\_\_\_\_\_ stack or queue is built around the linked-list.

A. dynamic

B. static

C. deque-based

D. floating point

ANSWER:

5. Data structures that can dynamically store elements and can grow and shrink in size are:

A. stacks

B. queues

C. deques

D. All of these

ANSWER:

6. Stacks are useful for algorithms that work \_\_\_ with the \_ saved element in the series.

A. last, first

B. first, last

C. efficiently, first

D. efficiently, last

ANSWER:

7. Stacks have a \_\_\_ size, and are implemented as \_\_\_\_\_\_\_\_\_\_\_.

A. fixed, linked lists

B. variable, arrays

C. flexible, arrays

D. variable, linked lists

ANSWER:

8. A stack has two primary operations:

A. push and pull

B. push and pop

C. concatenate and delete

D. append and delete

ANSWER:

9. The \_\_\_\_\_ operation allows an item to be removed from a stack.

A. push

B. pop

C. delete

D. add

ANSWER:

10. A dynamic stack may be implemented as a(n) \_\_\_\_\_\_, and expand or shrink with each push or pop operation.

A. array

B. structure

C. linked list

D. a and b

ANSWER:

11. A queue is a data structure that stores and retrieves items in this manner.

A. last in, first out (LIFO)

B. first in, first out (FIFO)

C. first in, last out (FILO)

D. random

ANSWER:

12. Customers standing in a line at a grocery check-out are like a \_\_\_\_

A. stack

B. vector

C. queue

D. All of these

ANSWER:

13. When an element is added to a queue, it is added to the \_\_.

A. rear

B. middle

C. front

D. All of these

ANSWER:

14. When an element is removed from a queue, it is removed from the \_\_\_.

A. rear

B. middle

C. front

D. All of these

ANSWER:

15. A dynamic queue can be implemented as a

A. dynamic linked list

B. fixed-length array

C. fixed-length circular array

D. All of these

ANSWER:

16. If data is transmitted faster than it can be processed, it can be held in a\_\_ for processing.

A. stack

B. queue

C. static array

D. static deque

ANSWER:

17. A stack can be adapted to store \_\_\_\_\_\_\_\_\_ data types.

A. all

B. only the built-in

C. only abstract

D. deque-like

ANSWER:

18. A practical application of the stack data type in a computer system is:

A. storage of local variables

B. tracking nested loops

C. tracking nested function calls

D. All of these

ANSWER:

19. S is a stack of integers. What is the value of x after we run:

S.push(0); S.push(1); S.push(2); S.pop(x);

A. 0

B. 1

C. 2

D. None of these

ANSWER:

20. S is a stack of integers. What is the value of x after we run:

S.push(0); S.push(1); S.push(2); S.pop(x);

A. 0

B. 1

C. 2

D. None of these

ANSWER: