Dashboard / My courses / CS102_2024_1 / General / LinkedlistQuiz

Started on	Friday, 2 February 2024, 11:30 AM
State	Finished
Completed on	Friday, 2 February 2024, 11:44 AM
Time taken	13 mins 57 secs
Grade	**9.00** out of 17.00 (**53**%)

Question **1**
Correct
Mark 1.00 out of 1.00

What are the attributes of a node in the doubly linked list data structure?

○ a. Data Value

○ b. Pointer to next node

○ c. Pointer to previous node

● d. All of these ✓

○ e. None of these

Your answer is correct.

The correct answer is:
All of these

Question **2**
Correct
Mark 1.00 out of 1.00

A variant of linked list in which the last node does not contain next address as NULL is:

● a. Circular linked list ✓

○ b. Doubly linked list

○ c. All of these

○ d. Singly linked list

○ e. Multi linked list

Your answer is correct.

The correct answer is:
Circular linked list

Question **3**

Incorrect

Mark 0.00 out of 1.00

Which of the following statements is/are not correct?

□ a. Linked List uses Doubly Linked List to store its elements.

☑ b. If a running time is Ω(f(n^1)), then for large enough n, the running time is at least c*f(n^1) for some constant c. ✗

□ c. ADT gives an implementation dependent view.

□ d. Implementing Queue using ArrayList is more efficient than implementing Queue using LinkedList.

Your answer is incorrect.

The correct answers are:
Implementing Queue using ArrayList is more efficient than implementing Queue using LinkedList.,

ADT gives an implementation dependent view.

Question **4**

Correct

Mark 1.00 out of 1.00

What is the disadvantage of linked list (LL) over arrays?

○ a. LL is dynamic in nature

● b. LL cannot access element randomly ✓

○ c. Both (a) and (b)

○ d. None of the above

Your answer is correct.

The correct answer is:
LL cannot access element randomly

Question **5**

Incorrect

Mark 0.00 out of 1.00

How many pointer(s) needed to traverse a given linked list of size n?

○ a. 0

● b. 1 ✗

○ c. n-1

○ d. n+1

○ e. n

Your answer is incorrect.

The correct answer is:
n+1

Question **6**

Correct

Mark 1.00 out of 1.00

In a singly linked list, if the next reference of a node is null then that node is ______.

○ a. Head node

○ b. Either head node or tail node.

● c. Tail node ✓

○ d. Neither head node nor tail node.

Your answer is correct.

The correct answer is:
Tail node

Question **7**

Correct

Mark 1.00 out of 1.00

What would be the time complexity if we wish to delete an element from rear end in single linked list?

○ a. *O(log n)*

○ b. None of these

○ c. *O(1)*

○ d. *$O(n^2)$*

● e. *O*👎 ✓

Your answer is correct.

The correct answer is:
O👎

Question **8**

Correct

Mark 1.00 out of 1.00

A circular doubly linked list with prev and next represents forward and backward pointers to adjacent elements of the list. Which among the following segments of code deletes the element pointed to by X from the circular double linked list, if it is assumed that X points to neither the first nor last element of the list?

Select one:

○ 1. X -> prev -> prev = X -> next; X -> next -> next = X -> prev;

● 2. X -> prev -> next = X -> next; X -> next -> prev = X -> prev; ✓ Correct

○ 3. X -> prev -> next = X -> prev; X -> next -> prev = X -> next;

○ 4. X -> prev -> prev = X -> prev; X -> next -> next = X -> next;

Correct

The correct answer is: X -> prev -> next = X -> next; X -> next -> prev = X -> prev;

Question **9**

Incorrect

Mark 0.00 out of 1.00

A single linked list is declared as follows: struct SLlist { struct SLlist *next; int data; }; Which among the following segments of code deletes the element pointed to by X from the single linked list? If it is assumed that X points to neither the first nor last element of the list and prev pointer points to previous element of X.

Select one:

○ 1. prev -> next = X -> next; free(prev);

● 2. X -> next = prev -> next; free(X); ✖ Incorrect

○ 3. prev -> next = X -> next; free(X);

○ 4. X -> next = prev -> next; free(prev);

Incorrect

The correct answer is: prev -> next = X -> next; free(X);

Question **10**

Incorrect

Mark 0.00 out of 1.00

Consider an implementation of unsorted circular doubly linked list. Suppose it has its representation with a head pointer only. Given the representation, which of the following operation can be implemented in O(1) time? i) Insertion at the front of the linked list ii) insertion at the end of the linked list iii) Deletion of the front node of the linked list iv) Deletion of the end node of the linked list

Select one:

○ 1. I, II and III

○ 2. I and III

○ 3. I,II,III and IV

● 4. I and II ✖ Incorrect

Incorrect

The correct answer is: I,II,III and IV

Question **11**

Incorrect

Mark 0.00 out of 1.00

Consider an implementation of unsorted single linked list. Suppose it has its representation with a head and a tail pointer (i.e. pointers to the first and last nodes of the linked list). Given the representation, which of the following operation can not be implemented in O(1) time ?

Select one:

○ 1. Deletion of the last node of the linked list.

● 2. Insertion at the end of the linked list. ✖ Incorrect

○ 3. Deletion of the front node of the linked list.

○ 4. Insertion at the front of the linked list.

Incorrect

The correct answer is: Deletion of the last node of the linked list.

Question **12**

Correct

Mark 1.00 out of 1.00

Consider the following two statements and choose the correct option: I. According to Access strategies Linked List is a linear one. II. According to Storage Linked List is a Non-linear one.

Select one:

○ 1. Both (I) and (II) are false

○ 2. (I) is true but (II) is false

○ 3. (I) is false but (II) is true

● 4. Both (I) and (II) are true ✓ Correct

Correct

The correct answer is: Both (I) and (II) are true

Question **13**

Correct

Mark 1.00 out of 1.00

How many null pointer(s) exist in a circular doubly linked list?

Select one:

○ 1. 2

○ 2. 3

● 3. 0 ✓ Correct

○ 4. 1

Correct

The correct answer is: 0

Question **14**

Incorrect

Mark 0.00 out of 1.00

How would you make the middle node of a doubly linked list to the first node of the list? Let assume "x" is the middle node. Assume pointer 'prev' store the address of previous node, and 'next' pointer store next node's address and head points to first node.

Select one:

○ 1. None of these

● 2. x->next = head head->prev=x ✗ Incorrect

○ 3. x->next->prev = x->prev x->prev->next = x->next x->next = head head->prev=x

○ 4. x->next->prev=x->next x->prev->next = x->prev x->next = head head->prev=x

Incorrect

The correct answer is: x->next->prev = x->prev x->prev->next = x->next x->next = head head->prev=x

Question **15**

Incorrect

Mark 0.00 out of 1.00

Which among the following segment of code inserts a new node pointed by X to be inserted at the beginning of the doubly linked list? The start pointer points to beginning of the list, prev and next represents backward and forward pointers respectively to adjacent elements of the list.

Select one:

○ 1. X -> next = start; start -> prev=X; start=X;

● 2. X -> prev = X -> next; X -> next = X -> prev; start=X; ✖ Incorrect

○ 3. X -> prev = X -> next; X -> next = X -> prev;

○ 4. X -> prev -> prev = X -> prev; X -> next -> next= X -> next;

Incorrect

The correct answer is: X -> next = start; start -> prev=X; start=X;

Question **16**

Incorrect

Mark 0.00 out of 1.00

Which of the following statements about linked list data structure is TRUE?

Select one:

○ 1. Linked list pointers always maintain the list in ascending order

● 2. Addition and deletion of an item to/ from the linked list require modification of the existing pointers ✗ Incorrect

○ 3. The linked list data structure provides an efficient way to find kth element in the list

○ 4. The linked list pointers do not provide an efficient way to search an item in the linked list

Incorrect

The correct answer is: The linked list pointers do not provide an efficient way to search an item in the linked list

Question **17**

Correct

Mark 1.00 out of 1.00

An organization XYZ is out of their storage for keeping the record of its employees and their family. Assuming it has used a linear array of objects, where objects are the instances of the class representing attributes and behavior of the employees', should they switch to linked list data structure. This problem has occurred once in around 10 years, and it is expected to not occur in at least 5 more years. They also need to fetch the data repeatedly for carrying out their tasks.

Select one:

○ True

● False ✓

The correct answer is 'False'.

◄ BasicQuiz

Jump to...

StackQuiz ►