DS UNIT4 Questions on doubly linked list _ circular linked list - DIBA SHAIKH

Questions on Doubly linked list & Circular linked list

Sr No	Question1	Blooms taxonomy level
1	Differentiate Between Singly linked list & doubly linked list.	Level II Understanding
2	Create a doubly linked list with number, write node structure & algorithms.	Level VI Creating
3	Explain doubly linked list with example.	Level II Understanding
4	Explain circular linked list with example.	Level II Understanding
5	Create ADT for doubly linked list & circular linked list.	Level II Understanding
6	Write short notes on i)Doubly linked list ii)Circular Linked List	Level II Understanding

Questions on the following topics from Unit-IV:

Linked list as ADT, Representation and manipulations of polynomials using linked list

Sr. No.	Question	Bloom's Taxonomy Level
1	Represent Linked list as ADT.	Understand
2	Illustrate polynomial using linked organization.	Apply
3	Design algorithm for 'Creating polynomial using linked list'	Create
4	Design algorithm for 'Addition of polynomial using linked list'	Create
5	Demonstrate Addition of polynomial using linked list (Diagrammatic representation)	Apply
6	Give real world application where developer could use linked list to store and process data.	Evaluate

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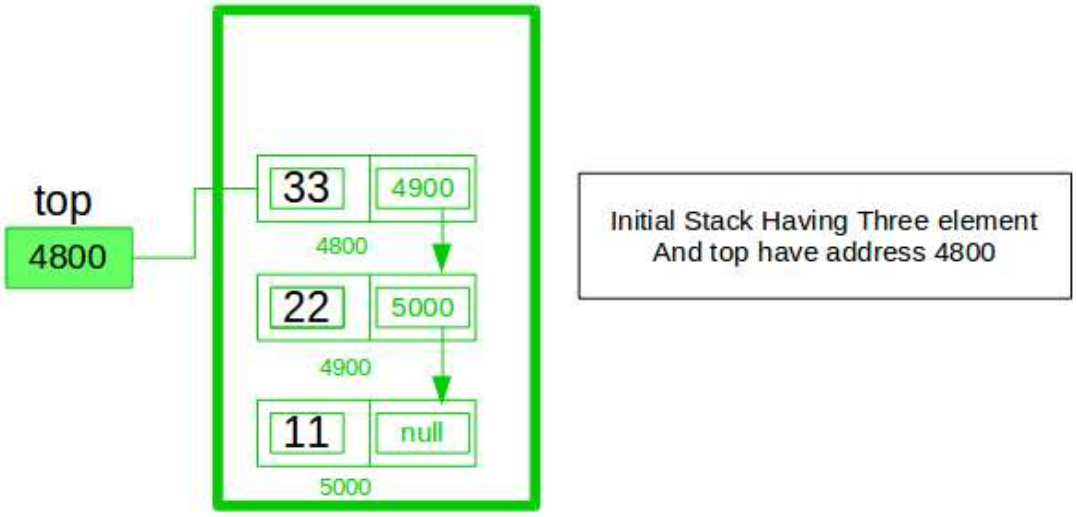

Figure 1

Q.1 Analyse the above figure 1 and Explain the PUSH and POP operation of *STACK (*Using Linked List*)*. Write a pseudo code for PUSH and POP operation.

Q.2. Implement the PUSH and POP operation of *STACK* Data structure using Singly Linked List

Q.3. Explain following the operations of *STACK* data structure using liked list with suitable example

- PUSH
- POP
- Stack Full
- Stack Empty

Q.4. Why we are implementation *STACK* using singly linked list give suitable example

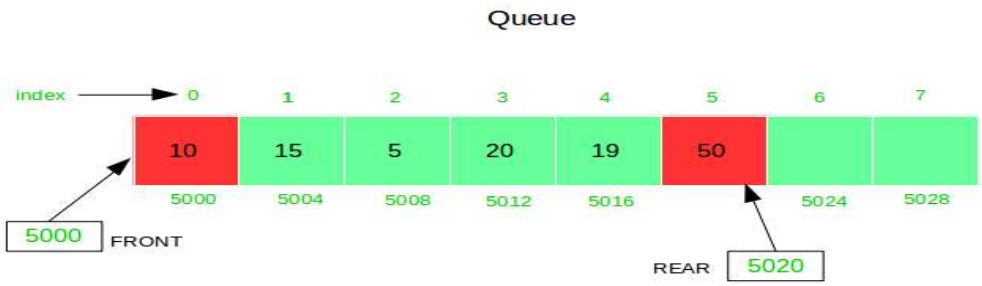

Figure 2

Q.4 Analyse the above figure 2 and Explain the ENQUEUE and DEQUEUE operations of *QUEUE* (Using Linked List). Write a pseudo code for ENQUEUE and DEQUEUE operation.

Q.5. Implement the ENQUEUE and DEQUEUE operation of Stack Data structure using Singly Linked List.

Q.6. Explain following the operations of *Queue* data structure using liked list with suitable example

- ENQUEUE
- DEQUEUE
- Queue Full
- Queue Empty

Q.8 Why we are implementation *QUEUE* using singly linked list give suitable example

Polynomial Using LL - Nikita Chaudhari-Shinde

1. How a linked list can be used to represent a polynomial of type (BT 5)

$$9x^2\,y^2 - 8x\,y^2 + 10xy + 9y^2$$

2. What is ADt of Linked list ?(BT 2)
3. How much the Time complexity of following operations
4. Give any three applications of Linked List(BT 3)
5. How to declare the structure for polynomial having single variables using Linked list(BT 3)
6. How a polynomial equation can be represented through link list? Explain the method to add two given polynomial equations using link list.
7. List the merit and demerits of Polynomial addition using Array and Link list.(BT 3)
8. How a linked list can be used to represent a polynomial of type (BT 5)

$$3x^4 + 8x^2 + 6x + 8$$

Questions on Double Link List and Circular Linked List - Ajinkya Rasal

Q1) Write a C program to create and display Doubly Linked List with 5 nodes

Q2) Define structure of Doubly Linked List node and illustrate insert at first with suitable function in Doubly Linked list

Q3) Search a particular node from Doubly Linked List linked list and discuss the complexity of the algorithm

Q4) Define node structure of Circular Linked List and list out applications of it.

Q5) Write a program to delete all even nodes from Circular Linked List

Q6) Distinguish Doubly Linked List and Circular Linked List.

Questions on Double Link List and Circular Linked List - Nilesh Shirude

Q-1) Given a Doubly Linked list and circular linked list containing N nodes, the task is to remove all the nodes from each list which contains elements whose parity is even .
Example
Input -> CLL = 9->11->34->6->13->21
Output-> 11->13->21

Input: *DLL = 18 <=> 15 <=> 8 <=> 9 <=> 14*
Output: *8 <=> 14*

Q-2) Given a circular singly linked list containing **N** nodes, the task is to remove all the nodes from the list which contains Fibonacci data values.
Examle.
Input: CLL = 9 -> 11 -> 34 -> 6 -> 13 -> 20
Output: 9 -> 11 -> 6 -> 20

Q-3) Given a circular singly linked list containing N nodes. The task is to delete all nodes from the list which are prime.
Example
Input : 9->11->32->6->13->20
Output : Given List : 9 11 32 6 13 20
List After delete prime node : 9 32 6 20

Input : 6->11->16->21->17->10
Output : Given List : 6 11 16 21 17 10
List After delete prime node : 10 21 16 6

Q-4) Write down the function for insert the node at the end of the circular link list.

Q-5) Convert the single link list into circular link list using C Programming with the help of suitable example.

Q-6) Write a C Program to reverse the double link list with the help of suitable example.

Questions on Concept of linked organization, Singly Linked List, comparison of sequential and linked organization - Shilpa Jagtap

Q. 1 Compare Arrays and Linked list.

Q.2 Develop a C program to construct singly linked list and addition of a node in first position.

Q.3 Develop a C program to construct singly linked list and delete a node from last position.

Q.4 Develop a C program for traversal operation in singly linked list.

Q.5 Develop a pseudo code to reverse singly linked list.

Q6. Develop a C program to construct singly linked list and delete an intermediate node.

QUESTIONS ON STACK USING LINKED LIST AND QUEUE USING LINKED LIST

- Sachin Anap

1) Write a function PUSH and POP in 'C language' for stack using Linked list.

2) What is a linked stack?

3) Write difference between Static implementation of stack (Stack using Array) and Dynamic implementation of stack (Stack using Linked list).

4) Write advantages of Stack and Queue using Linked list (Dynamic implementation of Stack and Queue).

5) Write menu driven program for dynamic implementation of stack.

6) Write a function INSERT and DELETE in 'C language' for queue using Linked list.

7) Write difference between Static implementation of Queue (Queue using Array) and Dynamic implementation of Queue (Queue using Linked list).

8) What is Linked Queue?

9) Write a menu driven program for dynamic implementation of queue.

10) Write a program to reverse dynamic stack.

11) Write a program to delete middle element of linked stack.

12) Write a program to reverse dynamic queue.

13) Accept one integer no and print its reverse using linked stack.

14) Describe why it is a bad idea to implement a linked list version a queue which uses the head of the list as the rear of the queue.

15) Write a program to reverse a string using linked stack.

Unit 4 QB - Aparna Badave

Q 1. Differentiate Singly Linked list and Doubly Link List.

Q.2 Write an Algorithm to insert a new node at the beginning of Singly Linked list.

Q3.Write an Algorithm to insert a new node at the beginning of DLL

Q4.Write algorithm to display data from circular linked List

Q5 . Write algorithm to multiply Polynomials using linked list.

UNIT 4 Questions

Topic: Stack using link list and Queue using link list

- sarika patil

Q.1 Write a function PUSH and POP in C for stack using linked list

Q.2. Define Queue. Explain its implementation using linked list.

Q.3 What are advantages if Stack is implemented using linked List.(Dynamic implementation of stack)

Q.4 write C code for enqueue and dequeue operations in implementation using linked list.

Q.5 List advantages of implementation of queue using link list .

Q.6 write Menu Driven program for queue implementation using link list with following Menu

**** Menu ****

- Insert
- Delete
- Display
- Exit

Unit- 4: Descriptive Questions on stack and queue using SLL.

Q.1. Write an algorithm to create stack using linked list?

Q.2. Draw and explain push and pop operation on stack using SLL?

Q.3. Write a function for queue creation using SLL?

Q.4.Compare queue and stack operations for the following points

i. structure and its elements with proper datatype

ii. No. of pointers required

iii. Condition on initialization of pointer/s

iv. Status of pointer after creating one node

Q.5.Write a pseudo code to display top of the stack already created?

Q.6.Write a pseudo code to display queue status having 5 records already created?

Q.7. List applications of stack and queue?

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