PANIMALAR INSTITUTE OF TECHNOLOGY

Department of Computer Science and Engineering

Academic Year: 2019- 2020 (Odd Semester)

Date: 09.07.2019

Degree, Semester & Branch: III Semester B.E. Computer Science and Engineering

Course Code & Title: CS8391 Data Structures

Innovative practice: Crossword

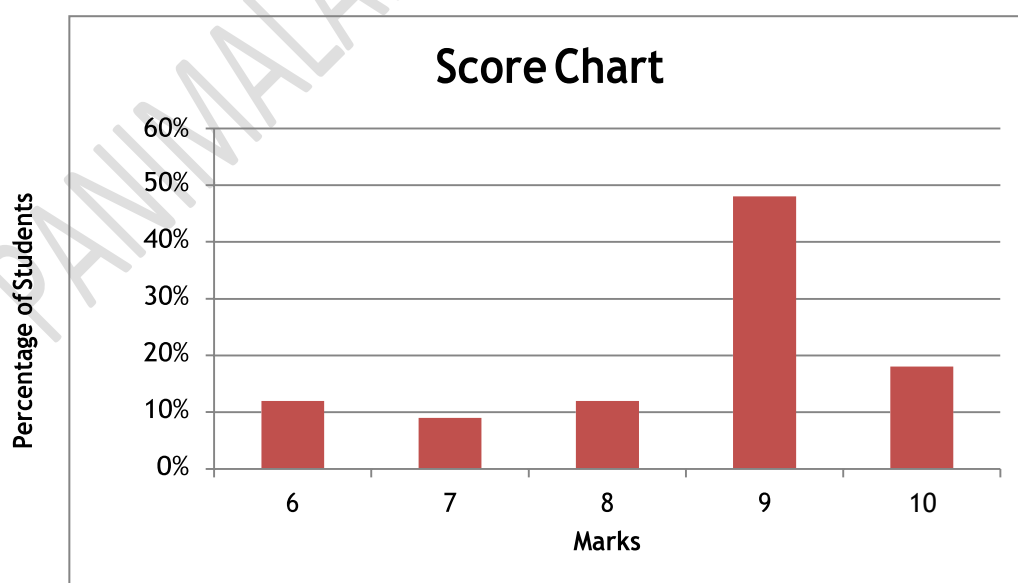### Topic: Linear Data Structures- List

A crossword is an interesting word puzzle activity which helps the students to recollect the concept and try to find out the answer individually. It is one type of game, so this an enjoyable activity rather than regular multiple choice questions test.

The students will be given with a crossword puzzle of 10 questions which was displayed to them individually. They have to think and provide the answers in a paper. The activity was conducted in CC III for duration of 15 minutes.

In the Unit I- revision hour the topics in the unit were revised with the help of this crossword puzzle. The students answered the questions in the starting 15 minutes of the class after that the answers were corrected by me, students and other faculties within 10 minutes. The answers for the wrong questions were discussed at the end of the class to make them to know the answer of all the questions.

Based on the answers provided by the students, analysis was performed. From that we can find out that, most of the students had familiarity with the basic concepts of List ADT. Through this activity the students should be able to recall information easily and think individually and improve their problem solving skills.

Score Chart

"Linear Data Structure"
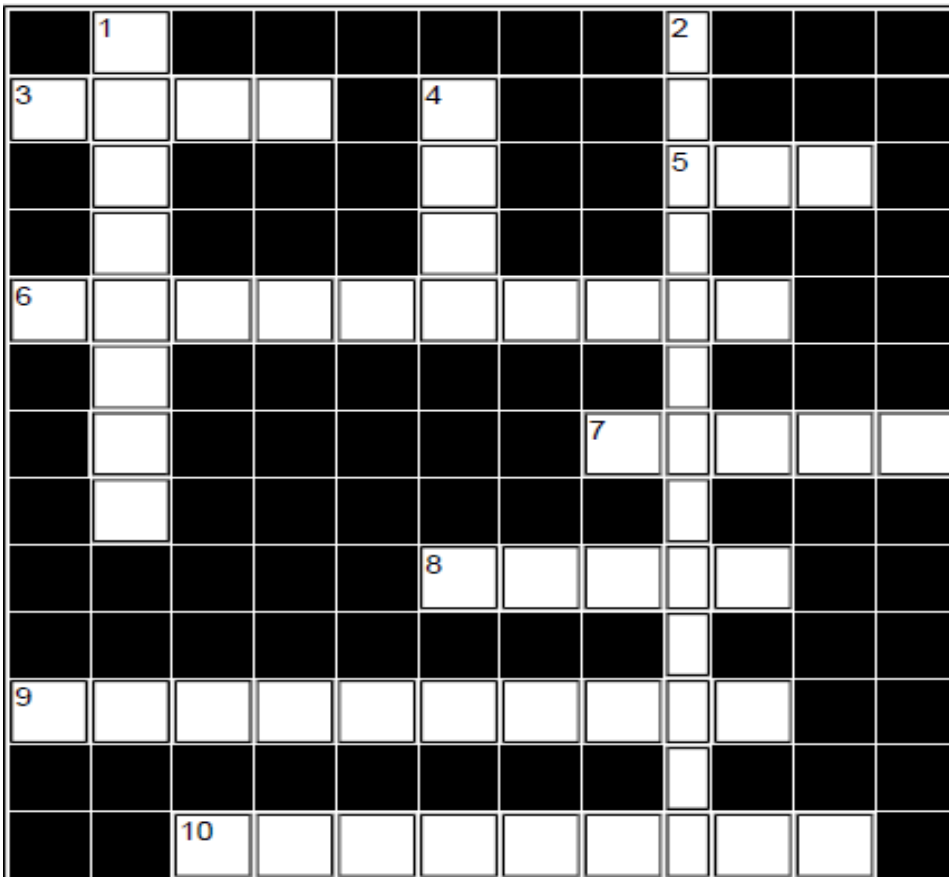
ACROSS

3. The Next pointer of last node in a circular linked list contains the address of_____node. (0,4)

5. Double linked list contains_____number of pointers in a node. (0,3)

6. Polynomial Operation can be implemented using (0,6,4)

7. What kind of list is best to answer questions such as "What is the item at position n?" (0,5)

8. Example of Linear Data structure (0,5)

9. In a linked list the elements need not be stored in ----------- memory. (0,10)

10. Tree Belongs to which type of Data structure (0,3,6)

DOWN

1. _____node contains address of first node. (0,8)

2. _____defines a particular way of storing and organizing data in a computer. (0,4,9)

4. What pointer type is used to implement the heterogeneous linked list in C? (0,4)

Answer:

1.Sentinel

2.Data Structure

3.Head

4.Void

5.Two

6.Linked List

7.Array

8.Stack

9.Contiguous

10.Non Linear

Sample Students Answers

3. head   CSE - II yr
5. two
6. linked list
7. Array
8. Array / stack / Queue
9. Continuous
10. Non - Linear

Down
1. head node
2. Data structure
3. void

1. Previous
2. Data Structure
3. Head
4. void
5. Two
6. Linked List
7. Array
8. Stack
9. Continuous
10. Non-Linear
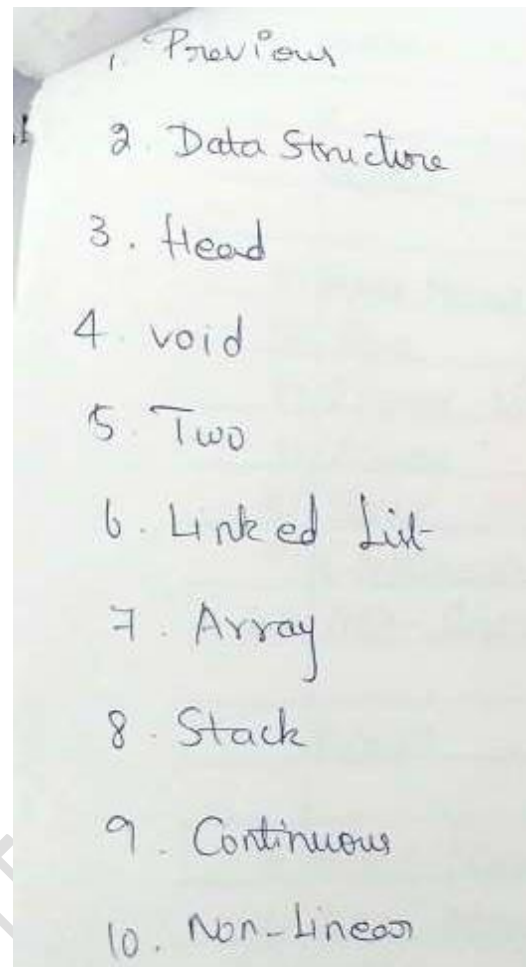
Data Struct

Crossword Puzzle.

ACROSS:

3. Head

5. Two

6. Linked list

7. Array

8. Stack

9. continuous

10. Non-linear

DOWN:

1. Last node sentinal

2. Data Structure.

4. Void

1) HEAD Node

3) HEAD

5) TWO

4) Void

7) ARRAY

2) DATA Structure

9) Continuous

10) Non linear

6) linked list

8) ARRAY

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ACROSS:

3) Head

5) Two

6) Linked List

7) Array

8) Stack

9) Continuous

10) Non Linear

DOWN:

1. Sentinal

2. Data structure

4. Void

Innovative practice: Model

Topic: Linear Data Structures – STACK and QUEUE

In teaching through demonstration, students are set up to visualize the conceptual part of the topic easily. Demonstrations often occur when students have a hard time connecting theories to actual practice or when students are unable to understand application of theories.

In the unit II, The students are show with a model representing the stack and queue. This really made them to understand the concept very clearly. The activity was conducted in class room.

Innovative practice: Animation

Animation is the process of designing, drawing, making layouts and preparation of photographic sequences which are integrated in the multimedia and gaming products. Animation involves the exploitation and management of still images to generate the illusion of movement. Animation uses various computer technologies to capture the still images and then to animate these in desired sequence.

In the unit III, The students are displayed animation of various concepts of tree. This really made them to understand the concept very clearly. The activity was conducted in AV hall.

The below link helped us to make concept easily understandable.

https://www.cs.usfca.edu/~galles/visualization/Algorithms.html