	PUNE INSTITUTE OF COMPUTER TECHNOLOGY PUNE - 411043	
	Department of Electronics & Telecommunication	
	ASSESMENT YEAR: 2020-2021	CLASS: SE 5
	SUBJECT: DATA STRUCTURES	
EXPT No:2	LAB Ref: SE/2020-21/	Starting date:
	Roll No:22119	Submission date: 10/11/2020
Title:	Database management	

Prerequisites:	• DEVC++ IDE • Knowledge about structures. • Array operations such as searching, sorting.
Objectives:	• Learn to create a database using array of structure • Implement various operation on data base to understand its effect on database. • Verify operation with and without pointer

Theory:

Arrays allow us to define types of variables that can hold several data items of same kind. Similarly, structure is another user defined data type available in c that allows to combine data items of different kinds

Structures are used to represent a record. Suppose you want to keep a track of cars in your showroom. You might want to track the following attributes about each book-

1) Car id
2) Car name
3) Car colour
4) Price
5) Rating

Syntax for structure:

```
Struct structurename
{
        datatype member1;
        datatype member2;
        …
};
```

Here the structure tag is optional and each member definition is a normal variable definition, such as int or float or any other valid variable definition. At the end of the structure definition, before the final semicolon, you can specify one or more structure variables but it is optional. Here is the way you can declare the car structure:

```
struct car{
char name[20];
float price;
char color[10];
int id;
int rating;
};
```

TO CREATE AND DISPLAY-

Car ID	Car Name	Car Colour	Car Price	Rating
4596	swift	Red	996352	4
4486	Amaze	blue	869953	5

TO APPEND-
To add or delete any entry from the database. The element in this database to be deleted is done according to its position

TO SORT-
To sort any columns of the database in ascending or descending order of attributes

TO SEARCH-
To find if any value exists in the database

Algorithm

CREATE AND DISPLAY:

1) Start
2) Define the structure with elements such as car id, car name, car, price, color, and rating
3) Create and display database with the help of array
4) Print the database

INSERTION:

1) Enter elements to be inserted in the database
2) Enter the position of the elements to be inserted
3) Search the position while arr[i]=pos
4) Set arr[i]=arr[i+1]
5) Element is inserted
6) Print the database

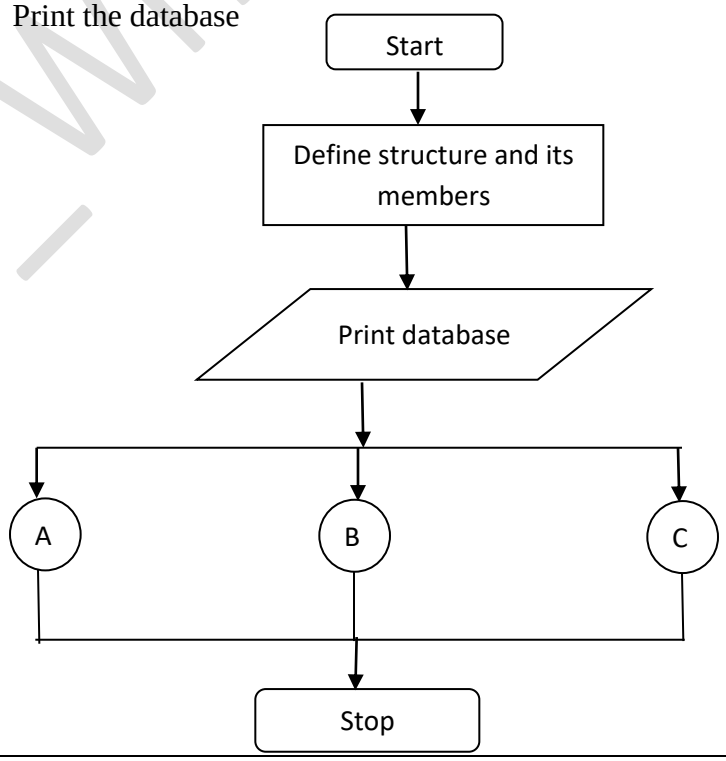
DELETION:

1) Enter elements to be deleted in the database
2) Enter car id of the element to be deleted
3) Search its pos while arr[i]=pos
4) Set arr[i]=arr[i+1]
5) Element is deleted
6) Print the database

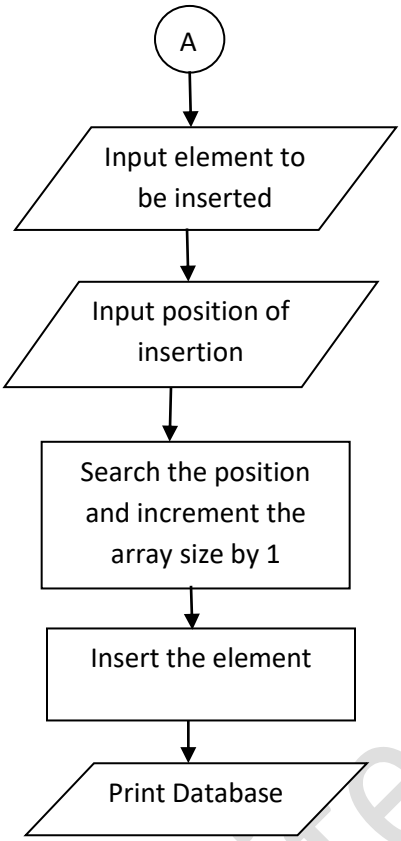
SEARCH:

1) Enter element to be searched in database
2) Enter position of element to be searched
3) Search the pos while arr[i]=pos
4) Element is found
5) Print the position and element
6) Print the database

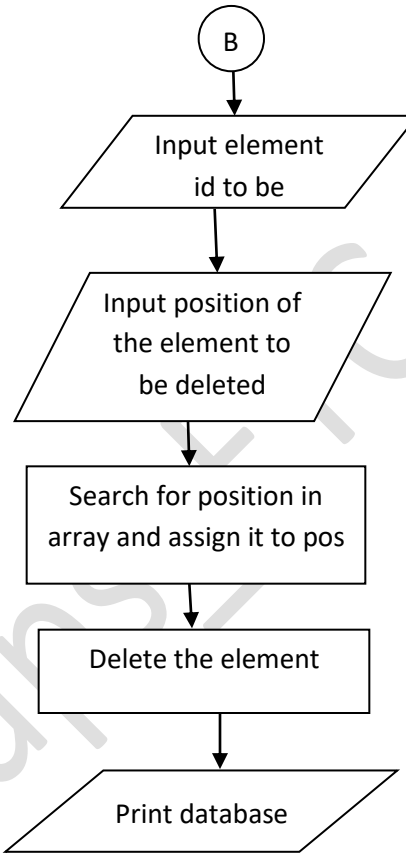
Flow-chart



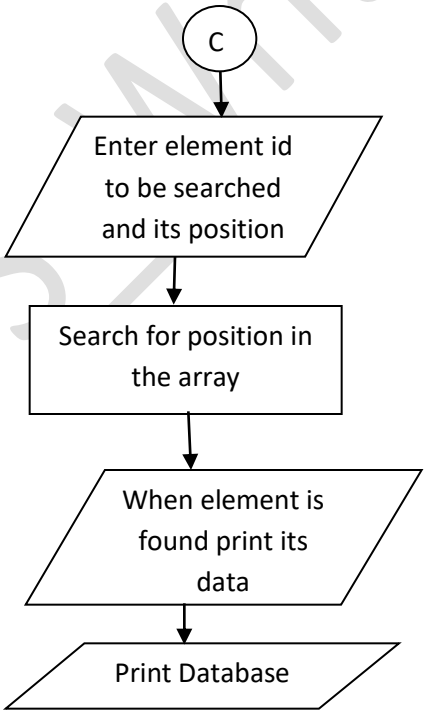
A=Insertion function



B=Deletion function



C= search function



ERROR	No errors occurred while performing the given
Remedy	No remedies were required
CONCLUSION:	
	1) In this way we perform the program for implementing database management using structure. 2) We have performed searching, inserting and deleting the data from an existing database 3) We learn implementation of struct and user defined functions
REFERENCES:	
	1. Seymour Lipschutz, Data Structure with C, Schaum's Outlines, Tata McGrawHill 2. E Balgurusamy - Programming in ANSI C, Tata McGraw-Hill (Third Edition) 3. Yashavant Kanetkar- Let Us C, BPB Publication, 8th Edition

Continuous Assessment			**Assessed By**
RPP (5)	**ARR (5)**	**Total (10)**	**Signature:**
			Date: