**Chapter 7: Tables**

**Ref book: Programming Practices & Techniques (6th edition)**

1. **What is table?**

**Ans:** A collection of **homogenous data** items that facilitates processing.

- A collection of items of the same types (Numeric, Alphabetic, records) and

size (length).

- Table can be used to **hold information**

- To **store the results** of processing.

1. **What is array?**

**Ans:** The table known as an **array** in some language.

1. **Define 80-20 rule.** (page no-136)

**Ans:** It indicates that 80 percent of our searches will be satisfied by 20 percent of

our table arguments.

1. **What is paired table?**

**Ans: -** Two tables with the same number of elements and some logical

relationship are called **paired table.**

- Argument table and function table are used together. When the proper

entry in the argument table is found, the corresponding element of

the function table is retrieved**.**

1. **What is table lookup?** (page no-136)

**Ans:** Searching a table is referred to as doing a table look up.

1. **What is search argument?** (page no-130)

**Ans:** The value that is compared with argument table entries.

1. **What is Multidimensional Tables?** (page no-147)

**Ans: -** A table that can be visualized as containing more than a single column.

- A two dimensional table contains rows and columns.

- A three dimensional table is a stack of two dimensional tables.

1. **Define function and argument table?**

**Ans:**

**Function tables:** (page no-130)

A table that contains values those are to be retrieved for use in processing.

**Argument table:** (page no-136)

A table that is searched is called argument tables.

1. **Write Drawback of sequence checking.**

**Ans:** The search argument is **first compared** with **the last table argument** to

identify erroneous search arguments that would otherwise cause the search to

**extend beyond that last valid argument entry.**

1. **Express sequential and binary search.** (Page no-136,139)

**Ans:**

**Sequential search:** (page no-136)

A method for searching an argument table that examines the entries in the order in which they appear in the table, starting with the first entry.

**More information>>>**

* The sequential search is the most commonly used **algorithm** for searching **an argument table**.
* The starts with the **first table argument** and takes each succeeding argument in turn until a match is found.
* The search argument is **first compared** with **the last table argument** to identify erroneous search arguments.
* If **table argument** **<** **search argument**.we must check the **next table argument.**
* If **table argument >= search argument.** The search is over.
* If **table argument = search argument.** The match was found.

**Binary search:** (page no-139)

A technique for searching an ordered argument table that is efficient for a large

table.

**More information>>>**

-the binary search is more efficient searching technique for **large tables**.

-the argument table must be in either **ascending** or **descending** order.

-binary searches are used mostly with **discrete tables**.

1. **What is meant by direct table addressing?**

**Ans:** A technique for accessing a function table (without searching an argument table) by deriving the position in the function table directly from the argument.

1. **How many ways to get table data into memory?**

**Ans:** We can get data into memory at two ways….

* Referencing table entries.
* Getting the tables into memory:

1. Defining table data as constants.
2. Reading a Table from a file.
3. **What do you mean by Discrete and Segmented table?**

**Ans:**

**Discrete table:** (page no-136)

**-** An argument table

- each table represents a particular value that will be compared with a

search argument in an attempt to find an exact match.

**Segmented table:** (page no-130)

* An argument table
* The argument entry is the upper (for ascending table) or lower (for descending table) limit of a range of values.
* Segmented table consisting of a series of ranges for each of which there is a corresponding function value.

1. **Which table has most used in business applications?**

**Ans:** Segmented table has most used in business application because….

**-** Segmented table consisting of a series of ranges for each of which there is a

corresponding function value.

1. **How many types of search can be apply in a discrete table?**

**Ans:** Twotypes of search can be apply in a discrete table

I) Sequential search

II) Binary search

1. **Which is the more efficient technique of searching a large table?**

**Ans:** The **binary search** is more efficient searching technique for **large tables**.

1. **Write the formula to access into two-dimensional one-dimensionally.**(page no-152)

**Ans:**

j=n (i-1) +K

Where, j =Index of desired elements in one dimensional table

n = Number of elements in each module

I = Index of desired subtable

K = Index of desired element in subtable

1. **What is the difference between one-dimensional and two-dimensional tables?**

**Ans:**

**One-dimensional table:**

A table that can be visualized as containing a single column.

**Two-dimensional table:**

A two dimensional table contains rows and columns than one-dimensional table.