# BASIC 7

## WEEKLY LESSON PLAN – WEEK 11

| Learning Indicator(s) | B7.4.2.1 | | |
|---|---|---|---|
| **Performance Indicator** | **B7.4.2.1.2 Perform a linear search** | | |
| **Week Ending** | 26-11-2022 | | |
| **FORM** | B.S.7 | | |
| **Subject** | Computing | | |
| **Reference** | Teacher Resource Pack, Learners Resource Pack, Curriculum | | |
| **Teaching / Learning Resources** | Personal Computer, Smart Phone, Word Chart | | |
| **CORE COMPETENCIES** | **Core Competencies:**<br><br>CI, CC, CL, CI 6.1, CC 7.4 | | |
| **DAYS** | **PHASE 1 : STARTER** | **PHASE 2:    MAIN** | **PHASE 3: REFECTION** |
| **MONDAY**<br><br>**22-11-2022** | Review Learners knowledge on the previous lesson. | 1.  Discuss the meaning of Linear search with the Learners.<br>2.  Learners brainstorm to identify 5 examples of Linear search.<br><br>**Meaning of Linear Search;**<br><br>Linear search is **a sequential searching algorithm where we start from one end and check every element of the list until the desired element is found**. It is the simplest searching algorithm.<br><br>One of the most straightforward and elementary searches is the sequential search, also known as a linear search. | **Core Competencies;**<br><br>Ability to effectively define goals towards solving a problem. |
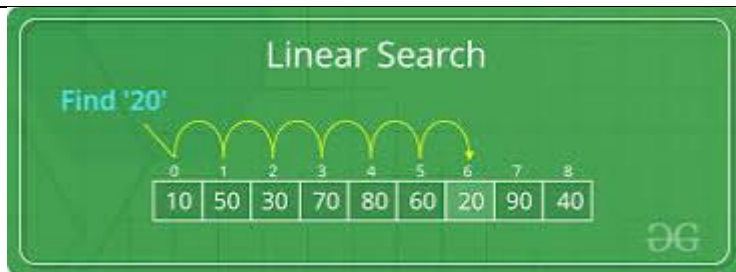
**Examples of Linear Search;**

```
LINEAR_SEARCH(A, N, VAL)

Step 1: [INITIALIZE] SET POS = -1

Step 2: [INITIALIZE] SET I = 1

Step 3: Repeat Step 4 while I<=N

Step 4: IF A[I] = VAL

            SET POS = I

            PRINT POS

            Go to Step 6

        [END OF IF]

        SET I = I + 1

        [END OF LOOP]

Step 5: IF POS = -1

        PRINT VALUE IS NOT PRESENT IN THE ARRAY

        [END OF IF]
```
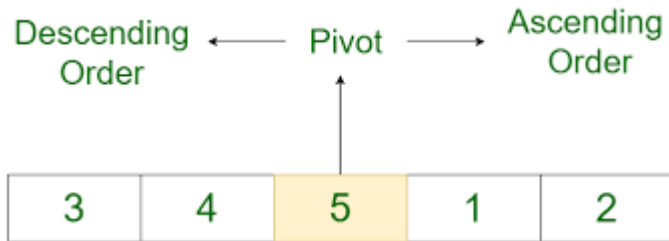
| | | Step 6: EXIT | |
|---|---|---|---|
| **THURSDAY** **25-11-2022** | Through questions and answers, introduce the lesson. | 1. Assist Learners to locate a given value position out of listed values. 2. Learners in small groups to arrange some given values or data in increasing and decreasing order. **How to arrange values or data in increasing and decreasing order;** For example, if k=2, the input array consists of two subarrays, one increasing, the other decreasing. Reversing the second subarray yields two sorted arrays and the result is then merged which can be done in O(n) time. Generalizing, we could first reverse the order of each of the decreasing subarrays.  | **Core Competencies;** Ability to effectively define goals towards solving a problem. |