**Question No: 1: Data structure is a specialized format for organizing and storing data. Any data structure is designed to organize data to suit a specific purpose so that it can be accessed and worked with in appropriate ways. You are required propose a solution to the real-life problem by using appropriate data structure. Also validate your answer by comparing your solution with another data structure considering time and space as matrices of your evaluation criteria.**

* **Introduction:**

Our project is based on comparison of two data structures i-e Suffix Arrays and Suffix Trees. **A suffix array is a sorted array of all suffixes of a given string while a suffix tree is simply a compressed suffix trie. These are often used in text-editing, free-text search, computational biology, sometimes used in data compression, bio informatics and pattern searching in DNA in real life.**

* **Real Life Problem:**

We are focusing on **Text Indexing** using both these data structures and we will try to figure out which one is better to use.

* **Data Structure:**

We will compare two data structures which are Suffix Trees and Suffix Arrays.

* **Algorithm:**

 Ukkonen's algorithm

* **Tool & Language:**

We will be using C++ language in Dev C++

* **Objectives:**

Our objective is to find a better and efficient data structure that will definitely be faster. Our aim is to compare these two data structures on the basis of the criterion (running time and memory utilized), that which one will be better to solve the real life problem of text indexing.