**PA1 – PROGRAMMING FOR GRAD**

**Searching for Linked Lists and Arrays**

**Array**: Arrays are versatile data structures designed to store multiple values within a single variable. They are unique in their ability to contain multiple elements simultaneously, allowing for efficient data management. By associating each value with an index number, you can easily access specific elements within the array. This property makes arrays an essential tool for organizing and manipulating data efficiently.

Output for Array program:

**A screen shot of a computer

Description automatically generated**

**Linked List:**

A linked list is a linear data structure that shares similarities with arrays. It consists of interconnected nodes, each comprising two essential components: data and a reference or link connecting it to another node. In the example provided, we have a linked list consisting of four nodes, with each node containing character data and a reference to the subsequent node. The first node, to which the head points, serves as the entry point for accessing all elements within the linked list.

**Output for Linked List:**

A black background with white numbers

Description automatically generated