SNS COLLEGE OF TECHNOLOGY

Coimbatore-35
An Autonomous Institution

Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A+' Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

DEPARTMENT OF AIML

23ITT101-PROGRAMMING IN C AND DATA STRUCTURES
I YEAR - II SEM

UNIT 3 – ARRAYS AND INTRODUCTION TO DATA STRUCTURES

TOPIC 5 – Introduction to Data Structures

INTRODUCTION

➢ Data Structure can be defined as the group of data elements which provides an efficient way of storing and organizing data in the computer so that it can be used efficiently.

➢ Some examples of Data Structures are arrays, Linked List, Stack, Queue, etc.

➢ Data Structures are widely used in almost every aspect of Computer Science i.e. Operating System, Compiler Design, Artificial intelligence, Graphics and many more.

➢ Data Structures are the main part of many computer science algorithms as they enable the programmers to handle the data in an efficient way.

Data structure
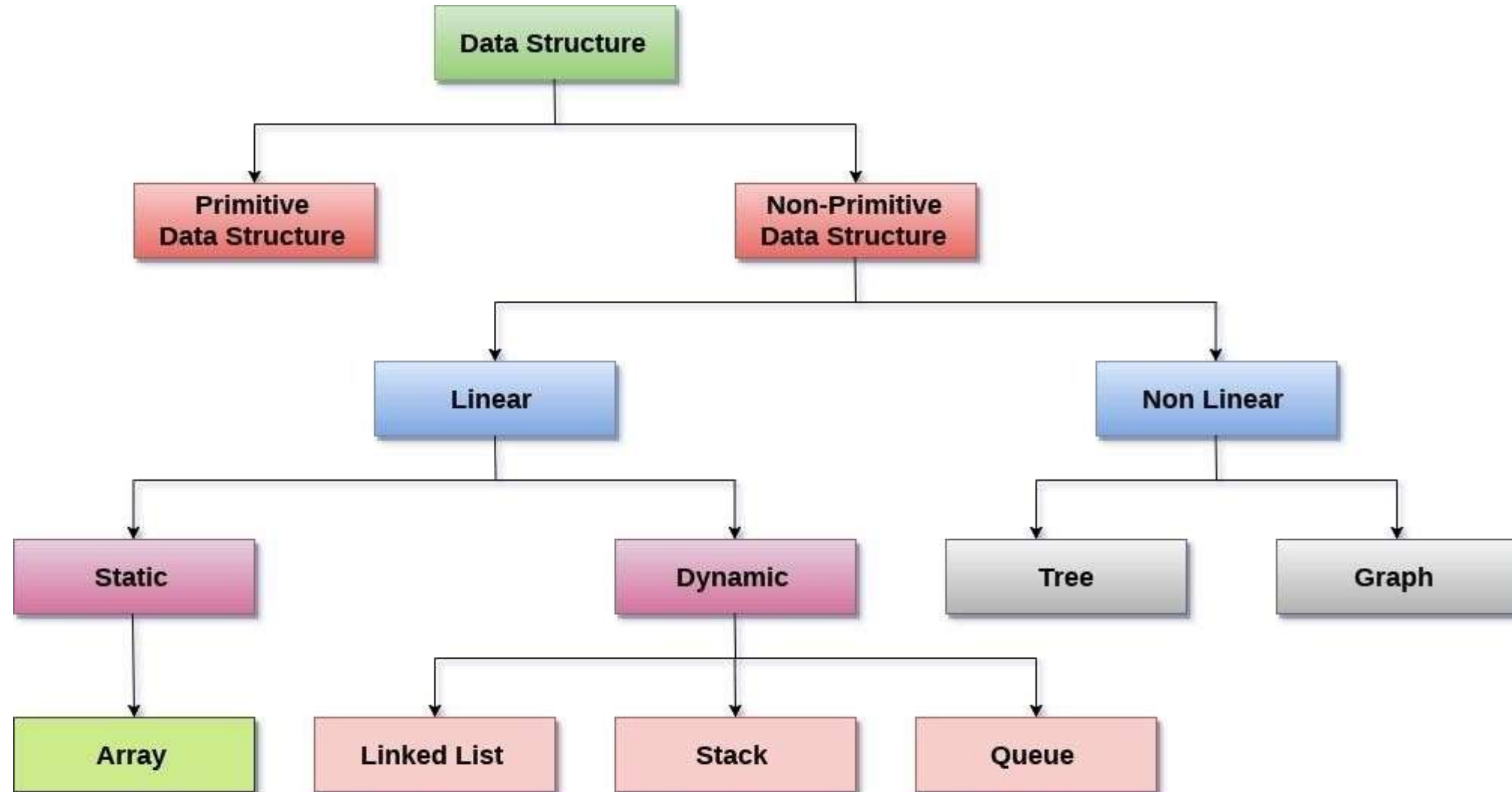
Primitive Data Structure

➢ In simple terms "data type" and "primitive data type" are simply known and used as interchangeable variables.

➢ Primitive data types are predefined types of data, which are supported by the programming language.

➢ integer data types, such as short, int, long.
➢ floating-point data types, such as float, double.
➢ character data type, such as char.

Non Primitive Data structure

➢ A non-primitive data type is something else such as an array structure or class is known as the non-primitive data type.

➢ The data type that is derived from primary data types is known as a non-primitive data type.

➢ The non-primitive data types are used to store the group of values.

➢ Examples of the non-primitive data types are Array, structure, union, link list, stacks, queue etc…