**JFSD: A-Z of Back-end and Database Development**

**Day 6 : 20 Jul. 24**

Collection Framework – Data Structure

Variable

int a=10;

a=20;

array : it is use to store more than one value of same types.

int abc[];

structure : it is use to store more than one value of different types.

class :

class Employee {

int id;

String name

float salary;

}

Employee emp = new Employee();

emp.id=100;

emp.name=”Ravi”;

emp.salary=12000;

emp.id=200;

array objects

syntax

int abc[]=new int[100];

Employee employees[]=new Employee[100];

employees[0]=new Employee();

employees[1]=new Employee();

employees[2]=new Employee();

whenever we display reference of user defined class using prinltln method. by default it will call toString() method of object class. by default every class extends object. that toString() method return string message as [packageName.className@code](mailto:packageName.className@code).

Limitation of array object.

We can store same type of object.

Array doesn’t provide any pre defined method to store, delete, update and retrieve, search, sort etc.

Collection Framework : it contains set of collection of classes and interface which help to store any type of values or objects like int, float, char, double, string as well as user defined objects. It provided lot of pre defined methods which help to store, delete, update, search, sort very easily.

Collection Framework hierarchy

Collection -🡪 interface part of util package.

doesn’t extends to Collection

Set List Queue Map 🡪 interfaces

Set it a type of interface. It allow to store more than one value of same as well as different type. Set doesn’t allow duplicate. In Set few classes maintain the order or unorder or sorted. Set doesn’t provide index concept.

Set classes

1. HashSet
2. LinkedHashSet
3. TreeSet

List : it is a interface. It allow duplicate records. It maintain order using index position. It allow to store same as well as different type of values by nature.

List classes

1. ArrayList
2. LinkedList
3. Vector
4. Stack

Queue : It is a type of data structure. Queue provide features as First In First Out etc.

Map : We can store the information in the form of key-value pairs. Key is unique and value may be duplicate.