Map and Generics

* Assignment Solutions *

Q.1 What is a Map in Java?

Ans.1 A Map is a collection in Java that stores data as key-value pairs, where each key is unique.

Q.2 What are the commonly used implementations of Map in Java?

Ans.2 the commonly used implementations of Map in Java are Hashmap, TreeMap, LinkedHashmap, and ConcurrentHashmap.

Q.3 What is the difference b/w Hashmap and TreeMap?

Ans.3 Hashmap is an unordered collection that uses hashing to store the key-values pairs, while TreeMap is a stored collection that stores the key-value pairs in a sorted order on the natural order of the keys on a custom comparator.

Q.4 How do you check if a key exists in Map in Java?

Ans.4 we can check if a key exists in a Map in Java using the containskey() method on the get() method. the containskey() method return a boolean value indicating whether the Map contains the specified key, while the get() method return the value associated with the specified key, on null if the key is not present in the Map.

Q.5 what are Generics in Java?

Ans.5 Generics in Java are used to provide type safety and reduce code redundancy by allowing the use of generic type. It allows classes, methods and interfaces to be written generically, without specifying the type of data being used.

Q.6 what are the benifits of using Generics in Java?

Ans.6 The benifits of Jav using Generics in Java?

- type safety
- Code Reusability
- Improve Readability
- Reduced Code Redundancy
- Improve performance

Q.7 What is a Generic Class in Java?

Ans.7 A Generic Class in Java is a Class that can work with diff. types of data. It is designed defined using a type parameter enclosed in angle brackets, which represents the type of data being used.

Q.8 What is a type parameter in Java Generics?

Ans.8 A type parameter in Java Generics is a placeholder for the type of data that is used by Generic class or method. It is defined using a single uppercase letter enclosed in angle brackets, such as <T> or <E>.

Q.9 What is generic method in Java?

Ans-9 A Generic method in Java is a method that can work with diff. types of data. It is defined using a type parameter enclosed in angle brackets, which represents the type of data being used.

Q.10 What is the diff. b/w ArrayList and ArrayList<T>?

Ans.10 ArrayList is a non-generic class, while ArrayList<T> is a generic class. ArrayList<T> provides type safety, as it can only store elements of specified type, whereas ArrayList can store any type of element.