**5. Why Collection doesn’t extend the Cloneable and Serializable interfaces?**

The Collection interface in Java specifies a group of objects called elements. The maintainability and ordering of elements is completely dependent on the concrete implementations provided by each of the Collection. Thus, there is no use of extending the Cloneable and Serializable interfaces.

**Q #2) Can you create a Generic Array in Java?**

**Answer:** Arrays are covariant in Java i.e. any subclass array can be assigned to a supertype array. Generics, however, are invariant i.e. you cannot assign subclass type array to superclass type.

Secondly, the generics information is removed from JVM and thus, the array whose memory allocation is done at runtime does not know which type is to be assigned to the array. Thus, arrays and generics do not go well together in Java.

## Conclusion

In Java, the generic array cannot be defined directly i.e. you cannot have a parameterized type assigned to an array reference. However, using object arrays and reflection features, you can simulate the generic array creation.

We have seen these two approaches in this tutorial along with the details of generic array creation error and the possibilities to prevent such error. In a nutshell, in Java, you can say arrays and generics don’t go hand in hand as arrays are covariant while generics are invariant.

**Q #3) What is Type E in Java?**

**Answer:** <E> acts as a placeholder for generics and represents any type of element.

**Q #4) What is Type Erasure in Java?**

**Answer:** A process carried out by Java compiler by which the parameterized types used in generics are removed and mapped to raw types in byte code. As such, the byte code does not contain any information on generics.

Generics are used for tighter type checks at compile time and to provide a generic programming. To implement generic behaviour, java compiler apply type erasure. Type erasure is a process in which compiler replaces a generic parameter with actual class or bridge method. In type erasure, compiler ensures that no extra classes are created and there is no runtime overhead.

## Type Erasure rules

* Replace type parameters in generic type with their bound if bounded type parameters are used.
* Replace type parameters in generic type with Object if unbounded type parameters are used.
* Insert type casts to preserve type safety.
* Generate bridge methods to keep polymorphism in extended generic types.

**Q #5) What is a Raw Type in Java?**

**Answer:** Raw types are generic types without using the type parameter. **E.g.** List is a raw type; whereas List<Integer> is a parameterized type.

### ****7. What is the main benefit of using the Properties file?****

The main advantage of using the properties file in Java is that in case the values in the properties file is changed it will be automatically reflected without having to recompile the java class.  Thus it is mainly used to store information which is liable to change such as username and passwords.

Iterator in Java :

A Java Cursor is an Iterator, which is used to iterate or traverse or retrieve a Collection or Stream object’s elements one by one. There are **three cursors in Java**.

1. Iterator
2. Enumeration
3. ListIterator

