ASSIGNMENT 12

GENERICES AND FILE HANDLING

1. What are Generics in Java?

Ans: Before generics it not possible to store the only one type of data in the array.

For example if we want to store the only String type data in the array then without generics it was not possible means user can store int or other type of data in the array.

So to overcome this problem the Generices concept comes.

If we use concept of Generices and mention the condition then user can store only that of data which is needed.

Syntax...

 ArrayList <DataType> object name=new ArrayList<Datatype>

Generics in Java are used to provide type safety and reduce code redundancy by allowing the use of

generic types. It allows classes, methods, and interfaces to be written generically, without specifying the type of

data being used.

2.What are the benefits of using Generics in Java?

Ans: 1.It provide compile time error safety by enabling the specification of of the data types.

2. Type safety

3.Code reusability

4.Improved readability

5.Reduced code redundancy

6.Improved performance

3. What is a Generic Class in Java?

Ans: A Generic Class in Java is a class that can work with different types of data. It is defined using a type

parameter enclosed in angle brackets, which represents the type of data being used.

4. What is a Type Parameter in Java Generics?

Ans: A Type Parameter in Java Generics is a placeholder for the type of data that is used by a generic class or

method. It is defined using a single uppercase letter enclosed in angle brackets, such as <T> or <E>.

5.What is a Generic Method in Java?

Ans: A Generic Method in Java is a method that can work with different types of data. It is defined using a type

parameter enclosed in angle brackets, which represents the type of data being used.

6. What is the difference between ArrayList and ArrayList<T>?

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 the specified type, whereas ArrayList can store any type of element.

File Handling

1. What is Input and Output Stream in Java?

Ans:1. Stream can be defined as a collection of data.
2.Where input stream are responsible for reading the data from the source and in other hand output stream is used for storing the data into the destination.

2. What are the methods of OutputStream?

Ans:

- Write() – write the specified byte to the output stream.
- write(byte[] array) -write the specified byte array to the outputSteam.
- Flush()- force outputStream to store the content to destination.
- Close()-close the outputStream.

3. What is serialization in Java?

Ans: 1.Serializaation is process of converting the object into a stream of bytes for transferring over the network or storing in the database.
2.When we serialize the object that make data too safe from middleman .
3.Once a data get serialize the it cant be understand by other before deserialize .
4.For serialize the object of class it mandatory for that class that should be implements to the serializable interface.

4. What is the Serializable interface in Java?

Ans: 1.A Serializable interface is a interface that are using for providing security to the data .

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5. What is deserialization in Java?
Ans:1. A deserialization is technique in java that are using for deserialize the data that have already serialize.
2. using the technique we can read the data in human understandable format.
For deserialization there are two stream have that using..
1. FileInputStream .
2. ObjectInputStream.
Syntax for..
FileInputStream fis=new FileInputStrream ("FileName");
ObjectInputStream ois=new ObjectInputStream(fis);

6. How is serialization achieved in Java?

Ans: Serialization is achieved in Java by implementing the Serializable interface. When an object is serialized, its state is converted into a stream of bytes, which can then be transferred over a network or stored in a file or database.

7. How is deserialization achieved in Java?

Ans: Deserialization is achieved in Java by reading a stream of bytes and using them to recreate the original.

object instance. This is done by calling the readobject() method of an objectInputStream instance.

8.How can you avoid certain member variables of class from getting Serialized?

Ans : if we declare the object as **Transient** then that will   not Serialized .

9. What classes are available in the Java IO File Classes API?

Ans: The following classes are available in the Java IM API and are important to work with files in Java

File

RandomAccessFile

FileInputStream

FileReader

FileIutputStream

FileWriter

10. What is Difference between Externalizable and Serialization interface ?

Ans: