# Serailization/DeSerialization

```
import java.io.*;
public class SerializationExample {
    public static void main(String[] args) {
        try {
            // Serialization
            FileOutputStream fileOut = new FileOutputStream("employee.ser");
            ObjectOutputStream out = new ObjectOutputStream(fileOut);
            Employee e = new Employee("John Doe", "Engineering", 101);
            out.writeObject(e);
            out.close();
            fileOut.close();
            System.out.println("Serialized data is saved in employee.ser");

            // Deserialization
            FileInputStream fileIn = new FileInputStream("employee.ser");
            ObjectInputStream in = new ObjectInputStream(fileIn);
            Employee e2 = (Employee) in.readObject();
            in.close();
            fileIn.close();
            System.out.println("Deserialized Employee...");
            System.out.println("Name: " + e2.name);
            System.out.println("Department: " + e2.department);
            System.out.println("ID: " + e2.id);
        } catch (IOException i) {
            i.printStackTrace();
        } catch (ClassNotFoundException c) {
            System.out.println("Employee class not found");
```

```
            c.printStackTrace();
        }
    }
}

import java.io.Serializable;

public class Employee implements Serializable {
    // It's a good practice to include serialVersionUID for Serializable classes
    private static final long serialVersionUID = 1L;

    // Attributes of the employee
    private String name;
    private String department;
    private int id;

    // Constructor to initialize Employee objects
    public Employee(String name, String department, int id) {
        this.name = name;
        this.department = department;
        this.id = id;
    }

    // Getters and Setters for the fields
    public String getName() {
        return name;
    }

    public void setName(String name) {
```

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        this.name = name;
    }

    public String getDepartment() {
        return department;
    }

    public void setDepartment(String department) {
        this.department = department;
    }

    public int getId() {
        return id;
    }

    public void setId(int id) {
        this.id = id;
    }

    // Optional: Overriding toString() for easy printing of Employee details
    @Override
    public String toString() {
        return "Employee{" +
                "name='" + name + '\'' +
                ", department='" + department + '\'' +
                ", id=" + id +
                '}';
    }
}
```

# RandomAccessFile

```
import java.io.IOException;
import java.io.RandomAccessFile;

public class Random
{
   public static void main(String[] args)
   {
      String filePath="D:\\JJava\\My Exercise\\CSV\\example.txt";
      try(RandomAccessFile raf=new RandomAccessFile(filePath,"rw"))
      {
         raf.seek(0);
         raf.writeBytes("Hello World");

         raf.seek(20);
         raf.writeBytes("Random Access File");

         raf.seek(50);
         raf.writeBytes("Example");

         raf.seek(0);
         System.out.println("Data at position 0: "+raf.readLine());

         raf.seek(20);
         System.out.println("Data at position 20: "+raf.readLine());

         raf.seek(50);
```

```
            System.out.println("Data at position 50: "+raf.readLine());


        } catch (IOException e)
        {
            e.printStackTrace();
        }
    }
}
```

## Output

Data at position 0: Hello World

Data at position 20: Random Access File

Data at position 50: Example