i2i Academy

Training Document

Topic	Apache Kafka
Document Name	KAFKA-EX-03

Document Difficulty Level			
Beginner	**Junior**	**Senior**	**Expert**
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Document History

Date	Author	Ver	Comments
05.03.2025	Mennan Tekbir	1.0	Initial Draft
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Apache Kafka

Exercise KAFKA-EX-03:

Definiton: Create 2 sample java programs; one for Producer one for Consumer. Publish java objects (you can use following class) from Producer app. Read those objects from Consumer app and print them to the console.

Java Classes & Objects: https://www.geeksforgeeks.org/classes-objects-java

Java Program For Class Example:

```
class Student {
  // data member (also instance variable)
  int id;
  // data member (also instance variable)
  String name;
  public static void main(String args[])
  {
   // creating an object of
   // Student
   Student s1 = new Student();
   System.out.println(s1.id);
   System.out.println(s1.name);
 }
}
```

Sample Kafka Producer code: https://github.com/chrissearle/kafka-java-to-scala/blob/master/java-starter/producer/src/main/java/net/chrissearle/kafka/BasicProducer.java

Sample Kafka Consumer code: https://github.com/chrissearle/kafka-java-to-scala/blob/master/java-starter/consumer/src/main/java/net/chrissearle/kafka/BasicConsumer.java

Please provide screenshots to show your work.

KAFKA-EX-03 Solution:

```java
import java.io.Serializable;

public class Student implements Serializable {  4 usages
    private static final long serialVersionUID = 1L;  no usages

    int id;  2 usages
    String name;  2 usages

    public Student(int id, String name) {  1 usage
        this.id = id;
        this.name = name;
    }
}
```

```java
import java.io.FileInputStream;
import java.io.IOException;
import java.io.ObjectInputStream;

public class Consumer {
    public static void main(String[] args) {
        Student s = null;

        try {
            FileInputStream fileIn = new FileInputStream( name: "student.ser");
            ObjectInputStream in = new ObjectInputStream(fileIn);

            s = (Student) in.readObject();

            in.close();
            fileIn.close();
        } catch (IOException i) {
            i.printStackTrace();
            return;
        } catch (ClassNotFoundException c) {
            System.out.println("Student sınıfı bulunamadı.");
            c.printStackTrace();
            return;
        }

        System.out.println("Student Nesnesi:");
        System.out.println("ID: " + s.id);
        System.out.println("Name: " + s.name);
    }
}
```

```java
import java.io.FileOutputStream;
import java.io.IOException;
import java.io.ObjectOutputStream;

public class Producer {
    public static void main(String[] args) {
        Student s = new Student( id: 1,  name: "Melek Azra Şevik");

        try {
            FileOutputStream fileOut = new FileOutputStream( name: "student.ser");
            ObjectOutputStream out = new ObjectOutputStream(fileOut);

            out.writeObject(s);

            out.close();
            fileOut.close();

            System.out.println("Student nesnesi başarıyla dosyaya yazıldı.");
        } catch (IOException i) {
            i.printStackTrace();
        }
    }
}
```

```
Run    Consumer

C:\Users\asus\.jdks\temurin-21.0.7\bin\java.exe "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2025.1.3\lib\idea_rt.jar=58851" -Dfile.encoding=UTF-8 -Ds
Student Nesnesi:
ID: 1
Name: Melek Azra Şevik

Process finished with exit code 0
```