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JAXB Unmarshalling – Convert Xml Into Java Object Example

Unmarshalling is the process of converting xml into java object. The unmarshal() method of JAXB Unmarshaller is used for unmarshalling process.

Steps:

1. Create a pojo class.
2. create JAXB context instance.
3. Create Unmarshaller instance using JAXB context.
4. Call unmarshal() method for unmarshalling process.
5. Process the pojo object.

Example explanation:

Below example have two pojo classes Student and Subject. A Student can have one or more Subject. Pass Student.xml file (generated from previous example) as a parameter in unmarshal() method and cast the return object to Student. Now we have Student object and can process it.

Example:

Student.java

```java
import java.util.List;
import javax.xml.bind.annotation.XmlAttribute;
import javax.xml.bind.annotation.XmlElement;
import javax.xml.bind.annotation.XmlRootElement;
import javax.xml.bind.annotation.XmlTransient;

/**
 * This class represents a Student.
 * @author javawithease
 */
@XmlRootElement
public class Student {
        private String name;
        private String rollNo;
        private String className;
        private int age;
        private int id;
        private List<Subject> subject;

        //Default constructor
        public Student(){

        }

        //Parameterised constructor
        public Student(String name, String rollNo,
                        String className, int age,
                        int id, List<Subject> subject){
            this.name = name;
            this.rollNo = rollNo;
            this.className = className;
            this.age = age;
            this.id = id;
            this.subject = subject;
        }

        public String getName() {
            return name;
        }

        @XmlElement
        public void setName(String name) {
            this.name = name;
        }

        public String getClassName() {
            return className;
        }

        @XmlElement
        public void setClassName(String className) {
            this.className = className;
        }

        public String getRollNo() {
            return rollNo;
```

```java
        }

        @XmlElement
        public void setRollNo(String rollNo) {
                this.rollNo = rollNo;
        }

        public int getAge() {
                return age;
        }

        @XmlTransient
        public void setAge(int age) {
                this.age = age;
        }

        public int getId() {
                return id;
        }

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

        public List<Subject> getSubject() {
                return subject;
        }

        @XmlElement
        public void setSubject(List<Subject> subject) {
                this.subject = subject;
        }
}
```

Subject.java

```java
/**
 * This class represents Address.
 * @author javawithease
 */
public class Subject {
        private String subjectname;
        private String subjectId;


        //Default constructor
        public Subject(){

        }

        //Parameterised constructor
        public Subject(String subjectname, String subjectId){
                this.subjectname = subjectname;
                this.subjectId = subjectId;
        }

        public String getSubjectname() {
                return subjectname;
        }

        public void setSubjectname(String subjectname) {
                this.subjectname = subjectname;
        }

        public String getSubjectId() {
                return subjectId;
        }

        public void setSubjectId(String subjectId) {
                this.subjectId = subjectId;
        }

}
```

JAXBTest.java

```java
import java.io.File;
import javax.xml.bind.JAXBContext;
import javax.xml.bind.Unmarshaller;

/**
 * This is test class for Unmarshalling.
 * @author javawithease
 */
public class JAXBTest {
  public static void main(String args[]){
    try {
        //create JAXB context
        JAXBContext context = JAXBContext.newInstance(Student.class);
        //Create Unmarshaller using JAXB context
        Unmarshaller unmarshaller  = context.createUnmarshaller();

        Student student = (Student)
                unmarshaller.unmarshal(new File("D:\\Student.xml"));

        //Process the Student object
        System.out.println("Student name: " + student.getName());
        System.out.println("Student rollNo: " + student.getRollNo());

        for(Subject Subject: student.getSubject()){
                System.out.println("Subject Name: "
                                        + Subject.getSubjectname());
                System.out.println("Subject Id: "
                                        + Subject.getSubjectId());
        }
    } catch (Exception e) {
        e.printStackTrace();
    }
  }
}
```

Output:

```
Student name: jai
Student rollNo: MCA/07/06
Subject Name: Java
Subject Id: 1
Subject Name: Oracle
Subject Id: 2
```

Download this example. (http://tutorialspointexamples.com/wp-content/uploads/2014/12/JAXBExample3.rar)

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