DataSet and DAO

- DataSet

- Data Access Object

- DatabaseService

- Examples

DataSet with anotations

```java
@Entity
@Table(name = "users")
public class UserDataSet {
    @Id
    @Column(name = "id")
    @GeneratedValue(strategy = GenerationType.IDENTITY)
    private long id;

    @Column(name = "name")
    private String name;

    //Important for Hibernate
    public UserDataSet() {
    }

    public UserDataSet(long id, String name) {
        this.setId(id);
        this.setName(name);
    }

    //constructor for new dataSets without id
    public UserDataSet(String name) {
        this.setId(-1);
        this.setName(name);
    }

}
```

Data Access Object

DAO is a class which holds requests for a table.

Like DataSet is for data, DAO is for queries and logic.

You need one DAO per table. All queries to DB for the table must be in these classes.

```java
public class UserDataSetDAO {

    private Session session;

    public UserDataSetDAO(Session session) {

        this.session = session;

    }

    public void save(UserDataSet dataSet) {...}

    public UserDataSet read(long id) {...}

    public UserDataSet readByName(String name) {...}

    public List<UserDataSet> readAll() {...}

}
```

DatabaseService

DatabaseService is a class which represents database in your application.

It must contain Connectoin/SessionFactory, creates it, configure it and dispose it.

Methods of DatabaseService is high-level methods for tasks from the rest of the application.

You must be able to change DatabaseService to work with another DB or with file system instead of DB with out changes in the another part of the application.