Projekt
On-line obchod s DVD-čkami. Program obsahuje katalog Dvdečiek. Taktiež rôzne druhy dvdečiek, ktoré obsahuje trieda DVD. Zákazníci si môžu objednať DVDčka. Hodnoty sú načítavané z databázy nove_dvd. Taktiež obsahuje aj evidenciu používateľov. Ich mená a hesla. Evidujú sa objednávky užívateľov. Môžeme do databázy vkladať nové druhy DVDčiek a taktiež vymazať tie, ktoré sa už nepredávajú. Zoznam nových DVD, vymazať z on-line stránky stare DVD, pridávať nové DVD na predaj a upravovať zoznam DVD.
Triedy kde su infomácie o DVD, Používateloch, Katalog

```
package dvd.data;

import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;

import javax.sql.DataSource;

public class DataAccessObject
{

	private static DataSource dataSource;
	private static Object idLock = new Object();

	public static void setDataSource(DataSource dataSource)
	{
		DataAccessObject.dataSource = dataSource;
	}

	protected static Connection getConnection()
	{
		try
		{
			return dataSource.getConnection();
		} catch (SQLException e)
		{
			throw new RuntimeException(e);
		}
	}

	protected static void close(Statement statement, Connection connection)
	{
		close(null, statement, connection);
	}

	protected static void close(ResultSet rs, Statement statement,
			Connection connection)
	{
		try
		{
			if (rs != null)
				rs.close();
			if (statement != null)
				statement.close();
			if (connection != null)
				connection.close();
		} catch (SQLException e)
		{
			throw new RuntimeException(e);
```

```
            }
        }

        protected static Long getUniqueId()
        {
                ResultSet rs = null;
                PreparedStatement statement = null;
                Connection connection = null;
                try
                {
                        connection = getConnection();
                        synchronized (idLock)
                        {
                                statement = connection
                                                .prepareStatement("select next_value from objednanie");
                                rs = statement.executeQuery();
                                rs.first();
                                long id = rs.getLong(1);
                                statement.close();
                                statement = connection
                                                .prepareStatement("update objednanie set next_value = ?");
                                statement.setLong(1, id + 1);
                                statement.executeUpdate();
                                statement.close();
                                return new Long(id);
                        }
                } catch (SQLException e)
                {
                        throw new RuntimeException(e);
                } finally
                {
                        close(rs, statement, connection);
                }
        }
}
```

```
package dvd.data;

public class DVD
        {
        private String itemID;
        private String popis;
        private double cena;

        public DVD(String itemID, String popis,  double cena) {
                setItemID(itemID);
                setPopis(popis);
                setCena(cena);
        }

        public String getItemID() {
                return (itemID);
        }
        protected void setItemID(String itemID) {
                this.itemID = itemID;}
        public String getPopis()
        {
                return(popis);
        }
```

```
	protected void setPopis(String popis) {
		this.popis = popis; }

	public double getCena() {
		return (cena);}
	protected void setCena(double cena) {
		this.cena = cena;
	}
	}
```

```
package dvd.data;

public class DVDOrder
	{
	private DVD item;
	private int PocetItems;
	 public DVDOrder(DVD item) {
		setItem(item);
		setPocetItems(1);
	 }
	 public DVD getItem() {
		return (item); }
	 protected void setItem(DVD item ) {
		this.item = item;
	 }
	 public String getItemID(){
		return(getItem().getItemID());}
	 public String getPopis() {
		return(getItem().getPopis());
	 }

	 public double getUnitCena(){
		return(getItem().getCena()); }
	 public int getPocetItems() {
		return(PocetItems);}
	 public void setPocetItems(int n){
		this.PocetItems = n;}
	 public void incrementPocetItems() {
		setPocetItems(getPocetItems() + 1); }
	 public void cancelOrder() {
		setPocetItems(0);}
	 public double getTotalCena() {
		return(getPocetItems() * getUnitCena());
	 }
	}
```

```
package dvd.data;

import java.io.IOException;
import java.net.URL;

import javax.servlet.RequestDispatcher;
import javax.servlet.ServletConfig;
import javax.servlet.ServletContext;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

import org.apache.log4j.Logger;
```

```
import com.sun.syndication.feed.synd.SyndFeed;
import com.sun.syndication.io.FeedException;
import com.sun.syndication.io.SyndFeedInput;
import com.sun.syndication.io.XmlReader;

public class HomeServlet extends HttpServlet
{
	private Logger logger = Logger.getLogger(this.getClass());
	private RequestDispatcher homeJsp;

	@Override
	public void init(ServletConfig config) throws ServletException
	{
		ServletContext context = config.getServletContext();
		homeJsp = context.getRequestDispatcher("/web/WEB-INF/home.jsp");
	}

	@Override
	protected void doGet(HttpServletRequest req, HttpServletResponse resp)
			throws ServletException, IOException
	{
		logger.debug("Odpoved");
		URL url = new URL("http://rss.news.yahoo.com/rss/tech");
		SyndFeedInput syndFeedInput = new SyndFeedInput();
		SyndFeed syndFeed = null;
		XmlReader xmlReader = new XmlReader(url);
		try
		{
			syndFeed = syndFeedInput.build(xmlReader);
		} catch (IllegalArgumentException e)
		{
			logger.error("", e);
		} catch (FeedException e)
		{
			logger.error("", e);

		}
		logger.debug("Vratit sa spet na home.jsp");
		req.setAttribute("syndFeed", syndFeed);
		homeJsp.forward(req, resp);
	}

}
```

```
package dvd.data;


public class Katalog
{
	private static DVD[] items;
	public static DVD getItem(String itemID) {
		DVD item;
		if(itemID == null) {
			return(null); }
		for(int i=0; i<items.length; i++){
			item = items(i);
			if(itemID.equals(item.getItemID())) {
				return(item);
			}
		}
```

```
		return (null);
	}
	private static DVD items(int i)
	{
		return null;
	}
	}
```

```
package dvd.data;

import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.util.LinkedList;
import java.util.List;

public class NoveDVD_DAO extends DataAccessObject
{
	private NoveDVD read(ResultSet rs) throws SQLException
	{
		Long id = new Long(rs.getLong("id"));
		String titul = rs.getString("titul");
		String nazov = rs.getString("nazov");
		NoveDVD newsItem = new NoveDVD();
		newsItem.setId(id);
		newsItem.setTitul(titul);
		newsItem.setNazov(nazov);
		return newsItem;
	}

	public List<NoveDVD> findAll()
	{
		LinkedList<NoveDVD> newsItems = new LinkedList<NoveDVD>();
		ResultSet rs = null;
		PreparedStatement statement = null;
		Connection connection = null;
		try
		{
			connection = getConnection();
			String sql = "select * from nove_dvd order by id";
			statement = connection.prepareStatement(sql);
			rs = statement.executeQuery();
			while (rs.next())
			{
				NoveDVD newsItem = read(rs);
				newsItems.add(newsItem);
			}
			return newsItems;
		} catch (SQLException e)
		{
			throw new RuntimeException(e);
		} finally
		{
			close(rs, statement, connection);
		}
	}

	public NoveDVD find(Long id)
	{
		ResultSet rs = null;
```

```
		PreparedStatement statement = null;
		Connection connection = null;
		try
		{
			connection = getConnection();
			String sql = "select * from nove_dvd where id=?";
			statement = connection.prepareStatement(sql);
			statement.setLong(1, id.longValue());
			rs = statement.executeQuery();
			if (!rs.next())
			{
				return null;
			}
			return read(rs);
		} catch (SQLException e)
		{
			throw new RuntimeException(e);
		} finally
		{
			close(rs, statement, connection);
		}
	}

	public void update(NoveDVD newsItem)
	{
		PreparedStatement statement = null;
		Connection connection = null;
		try
		{
			connection = getConnection();
			String sql = "update nove_dvd set " + "titul=?, nazov=? where
id=?";
			statement = connection.prepareStatement(sql);
			statement.setString(1, newsItem.getTitul());
			statement.setString(2, newsItem.getNazov());
			statement.setLong(3, newsItem.getId().longValue());
			statement.execute();
		} catch (SQLException e)
		{
			throw new RuntimeException(e);
		} finally
		{
			close(statement, connection);
		}

	}

	public void create(NoveDVD newsItem)
	{
		Long id = getUniqueId();
		newsItem.setId(id);
		PreparedStatement statement = null;
		Connection connection = null;
		try
		{
			connection = getConnection();
			String sql = "insert into nove_dvd " + "(id, titul, nazov) "
					+ "values (?, ?, ?)";
			statement = connection.prepareStatement(sql);
			statement.setLong(1, id.longValue());
```

```
                statement.setString(2, newsItem.getTitul());
                statement.setString(3, newsItem.getNazov());
                statement.executeUpdate();
            } catch (SQLException e)
            {
                throw new RuntimeException(e);
            } finally
            {
                close(statement, connection);
            }
        }
        public void delete(NoveDVD newsItem)
           {
              PreparedStatement statement = null;
              Connection connection = null;
              try
              {
                 connection = getConnection();
                 String sql = "delete from nove_dvd where id=?";
                 statement = connection.prepareStatement(sql);
                 Long id = newsItem.getId();
                 statement.setLong(1, id.longValue());
                 statement.executeUpdate();
              } catch (SQLException e)
              {
                 throw new RuntimeException(e);
              } finally
              {
                 close(statement, connection);
              }
           }
}
```

```
package dvd.data;

public class NoveDVD
{
        private Long id;
        private String titul;
        private String nazov;

        public Long getId()
        {
                return id;
        }

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

        public String getTitul()
        {
                return titul;
        }

        public void setTitul(String titul)
        {
                this.titul = titul;
        }
```

```
	public String getNazov()
	{
		return nazov;
	}

	public void setNazov(String nazov)
	{
		this.nazov = nazov;
	}
}
```

```
package dvd.data;
import java.util.Vector;
public class ShoppingCart
	{
	private Vector<DVDOrder> itemsOrdered;
	public ShoppingCart() {
		itemsOrdered = new Vector<DVDOrder> ();

	}
	public Vector<DVDOrder> getItemsOrdered (){
		return(itemsOrdered);

	}
	public synchronized void addItem(String itemID) {
		DVDOrder order;
		for(int i=0; i<itemsOrdered.size(); i++) {
			order = itemsOrdered.elementAt(i);
			if(order.getItemID().equals(itemID)) {
				order.incrementPocetItems();
				return;

			}
		}
		DVDOrder newOrder = new DVDOrder (Katalog.getItem(itemID));
		itemsOrdered.addElement(newOrder);
	}
	public synchronized void setPocetOrdered(String itemID, int numOrdered) {
		DVDOrder order;
		for(int i=0; i<itemsOrdered.size(); i++) {
			order = itemsOrdered.elementAt(i);
			if (order.getItemID().equals(itemID)) {
				if(numOrdered <= 0) {
					itemsOrdered.removeElementAt(i);
				} else {
					order.setPocetItems(numOrdered);
				}
				return;
			}
		}
		DVDOrder newOrder = new DVDOrder(Katalog.getItem(itemID));
		itemsOrdered.addElement(newOrder);
				}
			}
```

```java
package dvd.data;

public class User
{
	private Long id;
	private String username;
	private String password;

	public Long getId()
	{
		return id;
	}

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

	public String getPassword()
	{
		return password;
	}

	public void setPassword(String password)
	{
		this.password = password;
	}

	public String getUsername()
	{
		return username;
	}

	public void setUsername(String username)
	{
		this.username = username;
	}
}
```

```java
package dvd.data;

import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.util.LinkedList;
import java.util.List;

public class UserDAO extends DataAccessObject
{
	private static UserDAO instance = new UserDAO();

	public static UserDAO getInstance()
	{
		return instance;
	}

	private User read(ResultSet rs) throws SQLException
	{
		Long id = new Long(rs.getLong("id"));
		String username = rs.getString("username");
```

```
        String password = rs.getString("password");
        User user = new User();
        user.setId(id);
        user.setUsername(username);
        user.setPassword(password);
        return user;
    }

    public User find(Long id)
    {
        ResultSet rs = null;
        PreparedStatement statement = null;
        Connection connection = null;
        try
        {
            connection = getConnection();
            String sql = "select * from user where id=?";
            statement = connection.prepareStatement(sql);
            statement.setLong(1, id.longValue());
            rs = statement.executeQuery();
            if (!rs.next())
            {
                return null;
            }
            return read(rs);
        } catch (SQLException e)
        {
            throw new RuntimeException(e);
        } finally
        {
            close(rs, statement, connection);
        }
    }

    public User findByUsername(String username)
    {
        ResultSet rs = null;
        PreparedStatement statement = null;
        Connection connection = null;
        try
        {
            connection = getConnection();
            String sql = "select * from user where username=?";
            statement = connection.prepareStatement(sql);
            statement.setString(1, username);
            rs = statement.executeQuery();
            if (!rs.next())
            {
                return null;
            }
            return read(rs);
        } catch (SQLException e)
        {
            throw new RuntimeException(e);
        } finally
        {
            close(rs, statement, connection);
        }
    }
```

```
public List<User> findAll()
{
	LinkedList<User> users = new LinkedList<User>();
	ResultSet rs = null;
	PreparedStatement statement = null;
	Connection connection = null;
	try
	{
		connection = getConnection();
		String sql = "select * from user order by id";
		statement = connection.prepareStatement(sql);
		rs = statement.executeQuery();
		while (rs.next())
		{
			User user = read(rs);
			users.add(user);
		}
		return users;
	} catch (SQLException e)
	{
		throw new RuntimeException(e);
	} finally
	{
		close(rs, statement, connection);
	}
}

public void update(User user)
{
	PreparedStatement statement = null;
	Connection connection = null;
	try
	{
		connection = getConnection();
		String sql = "update user set " + "password=? where id=?";
		statement = connection.prepareStatement(sql);
		statement.setString(1, user.getPassword());
		statement.setLong(2, user.getId().longValue());
		statement.executeUpdate();
	} catch (SQLException e)
	{
		throw new RuntimeException(e);
	} finally
	{
		close(statement, connection);
	}
}

public void create(User user)
{
	Long id = getUniqueId();
	user.setId(id);
	PreparedStatement statement = null;
	Connection connection = null;
	try
	{
		connection = getConnection();
		String sql = "insert into user " + "(id, username, password) "

		+ "values (?, ?, ?)";
```

```
                statement = connection.prepareStatement(sql);
                statement.setLong(1, id.longValue());
                statement.setString(2, user.getUsername());
                statement.setString(3, user.getPassword());
                statement.executeUpdate();
            } catch (SQLException e)
            {
                throw new RuntimeException(e);
            } finally
            {
                close(statement, connection);
            }
        }

        public void delete(User user)
        {
            PreparedStatement statement = null;
            Connection connection = null;
            try
            {
                connection = getConnection();
                String sql = "delete from user where id=?";
                statement = connection.prepareStatement(sql);
                Long id = user.getId();
                statement.setLong(1, id.longValue());
                statement.executeUpdate();
            } catch (SQLException e)
            {
                throw new RuntimeException(e);
            } finally
            {
                close(statement, connection);
            }
        }
}
```

Triedy so Servletmi:

```
package dvd.data;

import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.util.LinkedList;
import java.util.List;

public class UserDAO extends DataAccessObject
{
        private static UserDAO instance = new UserDAO();

        public static UserDAO getInstance()
        {
            return instance;
        }

        private User read(ResultSet rs) throws SQLException
        {
            Long id = new Long(rs.getLong("id"));
            String username = rs.getString("username");
            String password = rs.getString("password");
            User user = new User();
```

```
        user.setId(id);
        user.setUsername(username);
        user.setPassword(password);
        return user;
    }

    public User find(Long id)
    {
        ResultSet rs = null;
        PreparedStatement statement = null;
        Connection connection = null;
        try
        {
            connection = getConnection();
            String sql = "select * from user where id=?";
            statement = connection.prepareStatement(sql);
            statement.setLong(1, id.longValue());
            rs = statement.executeQuery();
            if (!rs.next())
            {
                return null;
            }
            return read(rs);
        } catch (SQLException e)
        {
            throw new RuntimeException(e);
        } finally
        {
            close(rs, statement, connection);
        }
    }

    public User findByUsername(String username)
    {
        ResultSet rs = null;
        PreparedStatement statement = null;
        Connection connection = null;
        try
        {
            connection = getConnection();
            String sql = "select * from user where username=?";
            statement = connection.prepareStatement(sql);
            statement.setString(1, username);
            rs = statement.executeQuery();
            if (!rs.next())
            {
                return null;
            }
            return read(rs);
        } catch (SQLException e)
        {
            throw new RuntimeException(e);
        } finally
        {
            close(rs, statement, connection);
        }
    }

    public List<User> findAll()
    {
```

```
        LinkedList<User> users = new LinkedList<User>();
        ResultSet rs = null;
        PreparedStatement statement = null;
        Connection connection = null;
        try
        {
                connection = getConnection();
                String sql = "select * from user order by id";
                statement = connection.prepareStatement(sql);
                rs = statement.executeQuery();
                while (rs.next())
                {
                        User user = read(rs);
                        users.add(user);
                }
                return users;
        } catch (SQLException e)
        {
                throw new RuntimeException(e);
        } finally
        {
                close(rs, statement, connection);
        }
}

public void update(User user)
{
        PreparedStatement statement = null;
        Connection connection = null;
        try
        {
                connection = getConnection();
                String sql = "update user set " + "password=? where id=?";
                statement = connection.prepareStatement(sql);
                statement.setString(1, user.getPassword());
                statement.setLong(2, user.getId().longValue());
                statement.executeUpdate();
        } catch (SQLException e)
        {
                throw new RuntimeException(e);
        } finally
        {
                close(statement, connection);
        }
}

public void create(User user)
{
        Long id = getUniqueId();
        user.setId(id);
        PreparedStatement statement = null;
        Connection connection = null;
        try
        {
                connection = getConnection();
                String sql = "insert into user " + "(id, username, password) "

                + "values (?, ?, ?)";
                statement = connection.prepareStatement(sql);
                statement.setLong(1, id.longValue());
```

```
                statement.setString(2, user.getUsername());
                statement.setString(3, user.getPassword());
                statement.executeUpdate();
            } catch (SQLException e)
            {
                throw new RuntimeException(e);
            } finally
            {
                close(statement, connection);
            }
        }

        public void delete(User user)
        {
            PreparedStatement statement = null;
            Connection connection = null;
            try
            {
                connection = getConnection();
                String sql = "delete from user where id=?";
                statement = connection.prepareStatement(sql);
                Long id = user.getId();
                statement.setLong(1, id.longValue());
                statement.executeUpdate();
            } catch (SQLException e)
            {
                throw new RuntimeException(e);
            } finally
            {
                close(statement, connection);
            }
        }
}
```

```
package dvd.online.objednaj.web;

import javax.naming.Context;
import javax.naming.InitialContext;
import javax.servlet.ServletContext;
import javax.servlet.ServletContextEvent;
import javax.servlet.ServletContextListener;
import javax.sql.DataSource;

import org.apache.log4j.Logger;

import dvd.data.DataAccessObject;

public class Init implements ServletContextListener
{
        private Logger logger = Logger.getLogger(this.getClass());

        @Override
        public void contextDestroyed(ServletContextEvent sce)
        {
        }

        private void contextInitialized2(ServletContext servletContext)
                throws Exception
        {
            InitialContext enc = new InitialContext();
```

```
			Context compContext = (Context) enc.lookup("java:comp/env");
			DataSource dataSource = (DataSource) compContext.lookup("datasource");
			DataAccessObject.setDataSource(dataSource);

		}

		@Override
		public void contextInitialized(ServletContextEvent sce)
		{
			ServletContext servletContext = sce.getServletContext();
			try
			{
				contextInitialized2(servletContext);
			} catch (Exception e)
			{
				logger.error("Inicializácia sa nepodarila", e);
				throw new RuntimeException(e);
			}
			logger.debug("Inicializácia je úspešná :).");
		}
}
```

```
package dvd.online.objednaj.web;

import java.io.IOException;
import java.io.Writer;
import java.util.ArrayList;
import java.util.Iterator;
import java.util.List;

import javax.servlet.ServletConfig;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import org.apache.log4j.Logger;


import com.sun.syndication.feed.synd.SyndEntry;
import com.sun.syndication.feed.synd.SyndEntryImpl;
import com.sun.syndication.feed.synd.SyndFeed;
import com.sun.syndication.feed.synd.SyndFeedImpl;
import com.sun.syndication.io.FeedException;
import com.sun.syndication.io.SyndFeedOutput;

import dvd.data.NoveDVD;
import dvd.data.NoveDVD_DAO;

public class ObjServlet extends HttpServlet
{
	private Logger logger = Logger.getLogger(this.getClass());

	@Override
	public void init(ServletConfig config) throws ServletException
	{
		logger.debug("init()");
		try
		{
			Class.forName("com.mysql.jdbc.Driver");
		} catch (ClassNotFoundException e)
		{
```

```
                throw new ServletException(e);
            }
        }

        @Override
        protected void doGet(HttpServletRequest req, HttpServletResponse resp)
                throws ServletException, IOException
        {

            SyndFeed feed = new SyndFeedImpl();
            feed.setFeedType("rss_2.0");
            feed.setTitle("Harry");
            feed.setLink("http://localhost:8080/MARGETOVA_PROJEKT_PRVA_VERZIA/");
            feed.setDescription("Tu su objednane");
            List<SyndEntry> entries = new ArrayList<SyndEntry>();

            List<NoveDVD> newsItems = new NoveDVD_DAO().findAll();
            Iterator<NoveDVD> it = newsItems.iterator();
            while (it.hasNext())
            {

                NoveDVD newsItem = (NoveDVD) it.next();
                String titul = newsItem.getTitul();
                String nazov = newsItem.getNazov();
                SyndEntry entry = new SyndEntryImpl();
                entry.setTitle(titul);
                entry.setLink(nazov);
                entries.add(entry);

                resp.setContentType("text/xml");

                feed.setEntries(entries);
                Writer writer = resp.getWriter();
                SyndFeedOutput output = new SyndFeedOutput();
                try
                {
                    output.output(feed, writer);
                } catch (FeedException e)
                {
                    logger.error("", e);
                }
            }

        }
}
```

```
package dvd.online.objednaj.web;

import java.io.IOException;
import java.util.Map;

import javax.servlet.RequestDispatcher;
import javax.servlet.ServletConfig;
import javax.servlet.ServletContext;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
```

```
import org.apache.log4j.Logger;

import dvd.data.NoveDVD;
import dvd.data.NoveDVD_DAO;


public class PridajNoveDVDServlet extends HttpServlet
{
	private Logger logger = Logger.getLogger(this.getClass());
	private RequestDispatcher jsp;

	public void init(ServletConfig config) throws ServletException
	{
		ServletContext context = config.getServletContext();
		jsp = context.getRequestDispatcher("/web/WEB-INF/jsp/uprav-nove-dvd.jsp");
	}

	protected void doGet(HttpServletRequest req, HttpServletResponse resp)
			throws ServletException, IOException
	{
		logger.debug("doGet()");
		jsp.forward(req, resp);
	}

	protected void doPost(HttpServletRequest req, HttpServletResponse resp)
			throws ServletException, IOException
	{
		String cancelButton = req.getParameter("zrusenie - tlacitko");
		if (cancelButton != null)
		{
			logger.debug("Zrusenie");
			resp.sendRedirect("zoznam-nove-dvd");
			return;
		}
		Map<String, String> errors = UpravNoveDVDServlet.validate(req);
		if (!errors.isEmpty())
		{
			logger.debug("Chyba");
			jsp.forward(req, resp);
			return;
		}

		NoveDVD newsItem = (NoveDVD) req.getAttribute("newsItem");
		new NoveDVD_DAO().create(newsItem);
		resp.sendRedirect("uloz-nove-dvd?id=" + newsItem.getId());
	}
}
```

```
package dvd.online.objednaj.web;

import java.io.IOException;

import javax.servlet.RequestDispatcher;
import javax.servlet.ServletConfig;
import javax.servlet.ServletContext;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
```

```
import org.apache.log4j.Logger;

import dvd.data.NoveDVD;
import dvd.data.NoveDVD_DAO;


public class UlozNoveDVDServlet extends HttpServlet
{
	private Logger logger = Logger.getLogger(this.getClass());
	private RequestDispatcher jsp;

	public void init(ServletConfig config) throws ServletException
	{
		ServletContext context = config.getServletContext();
		jsp = context.getRequestDispatcher("/web/WEB-INF/jsp/uloz-nove-dvd.jsp");
	}

	protected void doGet(HttpServletRequest req, HttpServletResponse resp)
			throws ServletException, IOException
	{
		logger.debug("doGet()");
		String idString = req.getParameter("id");
		Long id = new Long(idString);
		NoveDVD newsItem = new NoveDVD_DAO().find(id);
		req.setAttribute("newsItem", newsItem);
		jsp.forward(req, resp);
	}
}
```

```
package dvd.online.objednaj.web;

import java.io.IOException;
import java.util.HashMap;
import java.util.Map;

import javax.servlet.RequestDispatcher;
import javax.servlet.ServletConfig;
import javax.servlet.ServletContext;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

import org.apache.log4j.Logger;

import dvd.data.NoveDVD;
import dvd.data.NoveDVD_DAO;


public class UpravNoveDVDServlet extends HttpServlet
{
	private Logger logger = Logger.getLogger(this.getClass());
	private RequestDispatcher jsp;

	public void init(ServletConfig config) throws ServletException
	{
		ServletContext context = config.getServletContext();
		jsp = context.getRequestDispatcher("/web/WEB-INF/jsp/uloz-nove-dvd.jsp");
```

```
}

protected void doGet(HttpServletRequest req, HttpServletResponse resp)
		throws ServletException, IOException
{
	logger.debug("doGet()");
	String idString = req.getParameter("id");
	Long id = new Long(idString);
	NoveDVD newsItem = new NoveDVD_DAO().find(id);
	req.setAttribute("newsItem", newsItem);
	jsp.forward(req, resp);
}

protected void doPost(HttpServletRequest req, HttpServletResponse resp)
		throws ServletException, IOException
{
	String id = req.getParameter("id");

	String cancelButton = req.getParameter("zrusenie - tlacitko");
	if (cancelButton != null)
	{
		logger.debug("zrusenie");
		resp.sendRedirect("zoznam-nove-dvd?id=" + id);
		return;
	}
	Map<String, String> errors = validate(req);
	if (!errors.isEmpty())
	{
		logger.debug("chyba kontroly");
		jsp.forward(req, resp);
		return;
	}

	NoveDVD newsItem = (NoveDVD) req.getAttribute("newsItem");
	new NoveDVD_DAO().update(newsItem);
	resp.sendRedirect("uloz-nove-dvd?id=" + id);
}

public static Map<String, String> validate(HttpServletRequest req)
{
	NoveDVD newsItem = new NoveDVD();
	HashMap<String, String> errors = new HashMap<String, String>();
	req.setAttribute("errors", errors);
	req.setAttribute("newsItem", newsItem);

	String idString = req.getParameter("id");
	if (idString != null && idString.length() > 0)
	{
		Long id = new Long(idString);
		newsItem.setId(id);
	}

	String titul = req.getParameter("titul");
	if (titul == null || titul.trim().length() == 0)
	{
		errors.put("titul", "Titul .");
	}
	newsItem.setTitul(titul);
```

```
                String nazov = req.getParameter("nazov");
                if (nazov == null || nazov.trim().length() == 0)
                {
                        errors.put("nazov", "nazov dvd");
                }
                newsItem.setNazov(nazov);

                return errors;
        }
}
```

```
package dvd.online.objednaj.web;
import java.io.IOException;

import javax.servlet.RequestDispatcher;
import javax.servlet.ServletConfig;
import javax.servlet.ServletContext;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

import org.apache.log4j.Logger;
import dvd.data.NoveDVD;
import dvd.data.NoveDVD_DAO;

public class VymazDVDServlet extends HttpServlet
        {
          private Logger logger = Logger.getLogger(this.getClass());
          private RequestDispatcher jsp;

          public void init(ServletConfig config) throws ServletException {
            ServletContext context = config.getServletContext();
            jsp = context.getRequestDispatcher("/web/WEB-INF/jsp/delete-news-item.jsp");
          }

          protected void doGet(HttpServletRequest req, HttpServletResponse resp)
          throws ServletException, IOException
          {
            logger.debug("doGet()");
            jsp.forward(req, resp);
          }

          protected void doPost(HttpServletRequest req, HttpServletResponse resp)
          throws ServletException, IOException
          {
            String idString = req.getParameter("id");

            String cancelButton = req.getParameter("cancel-button");
            if (cancelButton != null)
            {
              logger.debug("cancel button pressed");
              resp.sendRedirect("view-news-item?id=" + idString);
              return;
            }

            NoveDVD_DAO newsItemDAO = new NoveDVD_DAO();
            Long id = new Long(idString);
```

```
            NoveDVD newsItem = newsItemDAO.find(id);
            new NoveDVD_DAO().delete(newsItem);
            resp.sendRedirect("zoznam-nove-dvd");
          }
        }
```

```
package dvd.online.objednaj.web;

import java.io.IOException;
import java.util.List;

import javax.servlet.RequestDispatcher;
import javax.servlet.ServletConfig;
import javax.servlet.ServletContext;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

import org.apache.log4j.Logger;

import dvd.data.NoveDVD;
import dvd.data.NoveDVD_DAO;


public class ZoznamNoveDVDServlet extends HttpServlet
{
	private Logger logger = Logger.getLogger(this.getClass());
	private RequestDispatcher jsp;

	public void init(ServletConfig config) throws ServletException
	{
		ServletContext context = config.getServletContext();
		jsp = context.getRequestDispatcher("/web/WEB-INF/jsp/zoznam-nove-dvd.jsp");
	}

	protected void doGet(HttpServletRequest req, HttpServletResponse resp)
			throws ServletException, IOException
	{
		logger.debug("doGet()");
		List<NoveDVD> newsItems = new NoveDVD_DAO().findAll();
		req.setAttribute("newsItems", newsItems);
		jsp.forward(req, resp);
	}
}
```

```
package dvd.online.objednaj.web;
import java.io.IOException;
	import java.io.PrintWriter;
	import java.util.Vector;

	import javax.servlet.ServletException;
	import javax.servlet.ServletResponse;
	import javax.servlet.http.HttpServlet;
	import javax.servlet.http.HttpServletRequest;
	import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;

import dvd.data.DVDOrder;
```

```
import dvd.data.ShoppingCart;

public class OrderFilm extends HttpServlet
{
	@SuppressWarnings("unused")
	private ServletResponse response;
	@SuppressWarnings({ "deprecation", "unused" })
	public void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException,
IOException {
		HttpSession session = request.getSession(true);
		ShoppingCart cart;
		synchronized (session) {
			cart = (ShoppingCart)session.getValue("shoppingCart");
			if (cart == null) {
				cart = new ShoppingCart();
				session.putValue("shoppingCart", cart);
			}
			String itemID = request.getParameter("itemID");

	response.setContentType("text/html");
	PrintWriter out = response.getWriter();
	String titul = "HP";
	out.println(Titul (titul) +
			"<h1 align=\"center\">" + titul + "</h1>");
	synchronized(session) {
		@SuppressWarnings("rawtypes")
		Vector itemsOrdered = cart.getItemsOrdered();
		if (itemsOrdered.size() == 0) {
			out.println("<H2><I>Ziadne polozky v tvojej karte </I></H2>");
		} else {
			out.println
			("<table border=1 align=\"center\">\n" +
			"<tr bgcolor=\"red\">\n" +
					"<th>Item ID<th>Popis\n" +
			"<th>Cena<th>Pocet<th>Celkova cena");
			DVDOrder order;
			String formURL = "/servlet/Online_obchod.OrderPage"; } } } }


			private String Titul(String titul)
	{
		return null;
	}


			public void doPost (HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
				doGet (request, response);
			}
		}
```

Databaza:

```
<project name="MARGETOVA_PROJEKT" default="all" basedir=".">
  <property name="mysql.params" value="-u MARGETOVA_PROJEKT -pMARGETOVA_PROJEKT -D
MARGETOVA_PROJEKT" />
  <target name="all" depends="cleandb, createdb, insertdb"></target>

  <target name="cleandb">
     <exec executable="mysql" input="cleandb.sql">
        <arg line="${mysql.params}" />
     </exec>
  </target>

  <target name="createdb">
     <exec executable="mysql" input="createdb.sql">
        <arg line="${mysql.params}" />
     </exec>
  </target>

  <target name="insertdb">
     <exec executable="mysql" input="insertdb.sql">
        <arg line="${mysql.params}" />
     </exec>
  </target>
</project>
```

```
drop table if exists nove_dvd;
drop table if exists objednanie;
drop table if exists user;
```

```
create table nove_dvd
(
   id integer primary key,
   titul text not null,
   nazov text not null
);

create table user
(
   id integer primary key,
   username varchar(255) unique,
   password varchar(255)
);


create table objednanie
(
   next_value integer
);
insert into objednanie value (1);
```

```
insert into nove_dvd (id, titul, nazov) values (1, 'HP', 'AA');
insert into nove_dvd (id, titul, nazov) values (2, 'AE', 'iu');
insert into user (id, username, password) values (4, 'admin', 'admin');
insert into user (id, username, password) values (5, 'harry', 'harry');
insert into user (id, username, password) values (6, 'emma', 'emma');
```

HTML:

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">

<head>
  <title>DVD online</title>
</head>

<body style="margin: 0; padding: 0">

<table width="728"
           cellspacing="0"
           cellpadding="0"
           style="padding: 0; margin: 0; border-collapse: collapse">
<tr style="padding: 0; margin: 0">
<td width="728"
       colspan="2"
       style="padding: 0; margin: 0"></td>
</tr>
<tr style="padding: 0; margin: 0">
<td width="728"
       colspan="2"
       style="padding: 0; margin: 0"><div
         style="padding: 0;
                    margin: 0;
                    text-align: center;
                    font-size: small;
                    background-color: #99CCCC">
DVD
</div></td>
</tr>
<tr>
    <td rowspan="2"
           width="240"
           valign="top">
       <div style="height: 500px; padding: 20px; border-right: 3px dashed; margin-
right: 20px">
          <a href="zoznam-nove-dvd">Nase nove DVD</a><br/>
          <a href="uprav-nove-dvd">DVD-čka</a><br/>
          <a href="logout">Odhlasenie</a> <br/>
       </div>
    </td>
    <td width="488">
         <div style="margin-top: 12px; margin-bottom: 12 px">
            <a href="edit?item=3">edit</a>
            <a href="delete?item=3">delete</a>
         </div>
    </td>
  </tr>
  <tr>
    <td valign="top">
         <h1 style="font-size: larger">Zoznam DVD</h1>
         <p>Titul: HP a kamen</p>
         <p>Link: <a href="http://localhost:8080/MARGETOVA_PROJEKT">A</a></p>
    </td>
  </tr>
</table>
```

```
</body>
</html>
```

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
<title>Filmy</title>
</head>
<body>
Tu su filmy<br/>
<ul>
<li><a href="home.jsp">Film</a></li>
</ul>
</body>
</html>
```

JSP:

```
  </td>
  </tr>
</table>

</body>
</html
```

```
<%@ include file="top.inc" %>

<%@ include file="middle.inc" %>

<h1>Vitajte</h1>

<p>
Obchod s DVD
</p>

<%@ include file="bottom.inc" %>
```

```
<%@ include file="top.inc" %>

<%@ include file="middle.inc" %>

<h1>Vitajte</h1>

<p>
Obchod s DVD
</p>

<%@ include file="bottom.inc" %>
```

```
<html>

<head>
  <title>Hlavna</title>
</head>

<body style="margin: 0; padding: 0">

<table width="728"
           cellspacing="0"
           cellpadding="0"
```

```
           style="padding: 0; margin: 0; border-collapse: collapse">
<tr style="padding: 0; margin: 0">
<td width="728"
       colspan="2"
       style="padding: 0; margin: 0"><img
          src="logo.gif"
          style="padding: 0; margin"></td>
</tr>
<tr style="padding: 0; margin: 0">
<td width="728"
       colspan="2"
       style="padding: 0; margin: 0"><div
         style="padding: 0;
                    margin: 0;
                    text-align: center;
                    font-size: small;
                    background-color: #99CCCC">
Hlavna
</div></td>
</tr>
<tr>
    <td rowspan="2"
           width="240"
           valign="top">
       <div style="height: 500px; padding: 20px; border-right: 3px dashed; margin-
right: 20px">
          <a href="zoznam-nove-dvd">Home</a><br/>
          <a href="uloz-nove-dvd">Nove</a><br/>
          <a href="logout">Koniec</a> <br/>
       </div>
    </td>
    <td width="488">
         <div style="margin-top: 12px; margin-bottom: 12 px">
```

```
<%@ include file="top.inc" %>

   <a href="uprav-nove-dvd?id=${newsItem.id}">Uprav</a>
   <a href="vymaz-nove-dvd?id=${newsItem.id}">.Vymaz</a>

<%@ include file="middle.inc" %>

<table>
   <tr>
      <td>Titul:</td>
      <td>${newsItem.titul}</td>

   </tr>
   <tr>
      <td>Nazov:</td>
      <td>
         ${newsItem.nazov}
         <a href="${newsItem.nazov}">Nazov</a>

      </td>
   </tr>
</table>

<%@ include file="bottom.inc" %>
```

```
<jsp:useBean id="errors" scope="request" type="java.util.Map"
class="java.util.HashMap" />
```

```
<%@ include file="top.inc" %>
<%@ include file="middle.inc" %>

<form method="post">
   <table>
      <tr>
         <td>Title</td>
         <td><input type="text" name="titul" value="${newsItem.titul}" size="50" />
            <%
               if (errors.containsKey("titul")) {
                  out.println("<span class=\"error\">" + errors.get("titul") +
"</span>");
               }
            %>
         </td>
      </tr>
      <tr>
         <td>Nazov</td>
         <td><input type="text" name="nazov" value="${newsItem.nazov}" size="50" />
            <%
               if (errors.containsKey("nazov")) {
                  out.println("<span class=\"error\">" + errors.get("nazov") +
"</span>");
               }
            %>
         </td>
      </tr>
      <tr>
         <td>
             <input type="submit" name="submit-button" value="Submit" />
             <input type="submit" name="zrusenie - tlacitko" value="Cancel" />
         </td>
      </tr>
   </table>
   <input type="hidden" name="id" value="${newsItem.id}" />

</form>

<%@ include file="bottom.inc" %>
```

```
<%@ include file="top.inc" %>
<%@ include file="middle.inc" %>

<p>
Vymazat uz nepredavane dvdčka
</p>

<form method="post">
   <input type="submit" name="delete-button" value="Delete" />
   <input type="submit" name="cancel-button" value="Cancel" />
   <input type="hidden" name="id" value="${params['id']}" />

</form>

<%@ include file="bottom.inc" %>
```

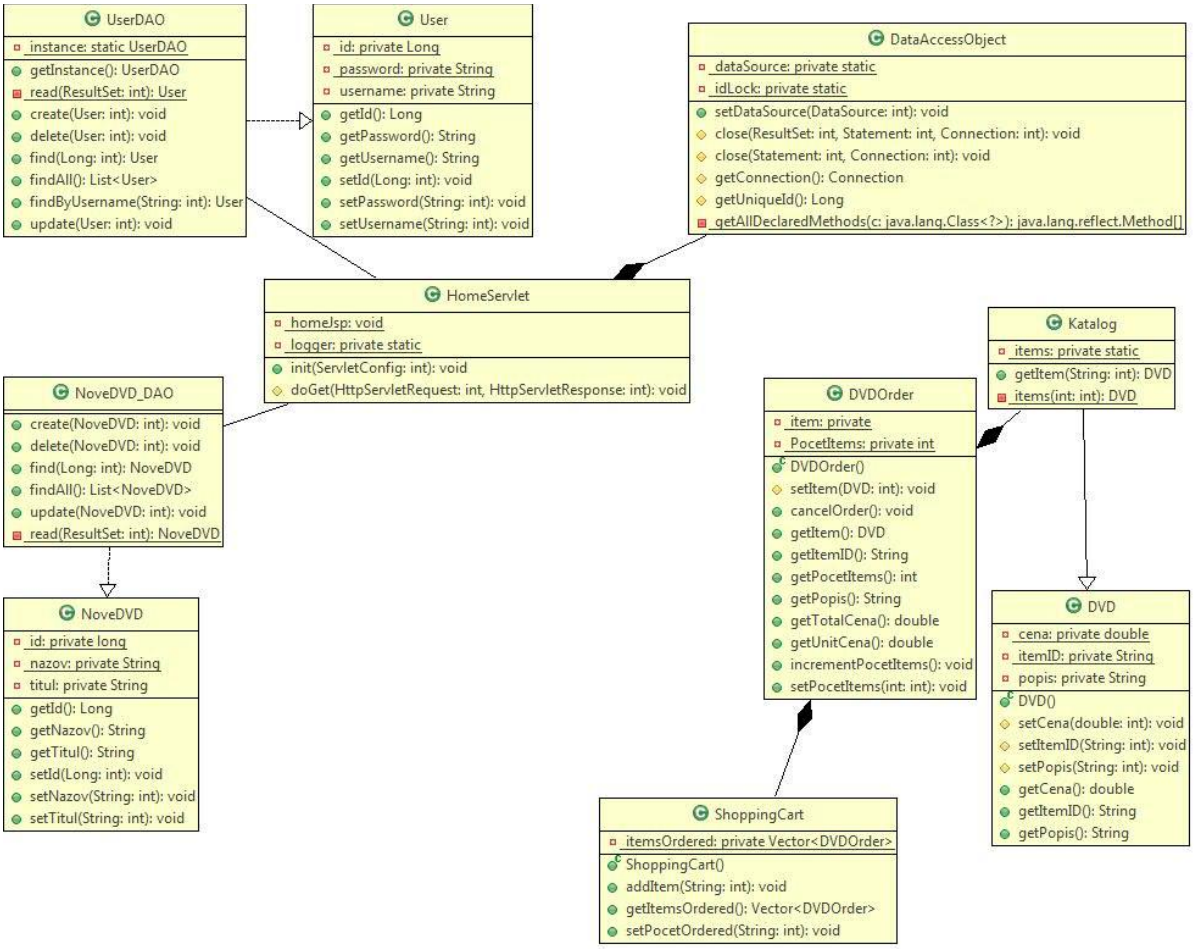
```
<%@ page import="java.util.Iterator" %>
<%@ page import="dvd.data.NoveDVD" %>
<jsp:useBean id="newsItem" scope="request" type="java.util.List" />
<%@ include file="top.inc" %>
   <a href="pridaj-nove-dvd">Nove DVD</a>
<%@ include file="middle.inc" %>
```

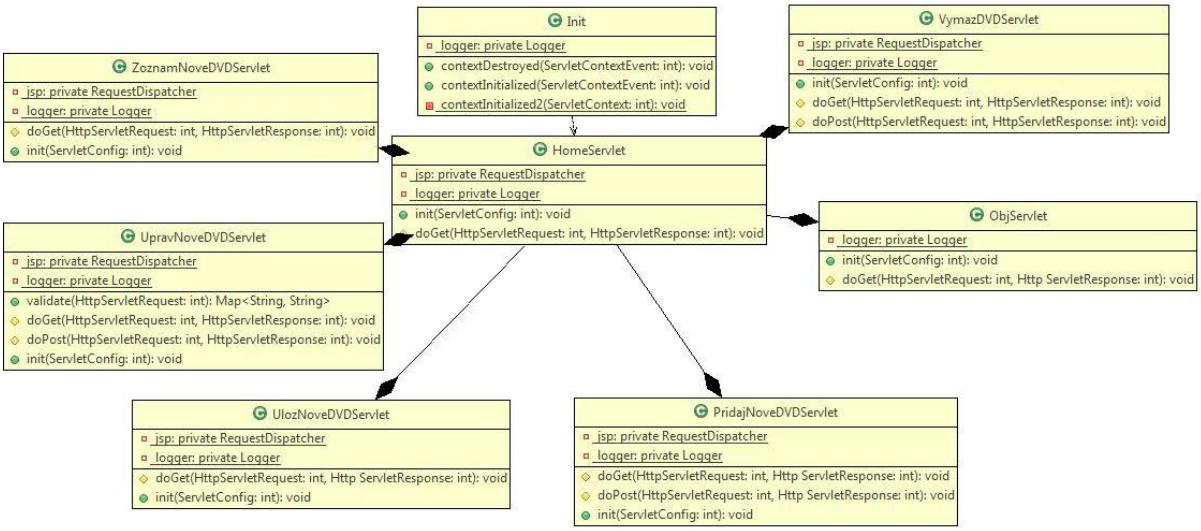
```
<ul>
   <%
      Iterator it = newsItems.iterator();
      while (it.hasNext())
      {
         NewsItem newsItem = (NewsItem) it.next();
   %>
      <li>
         <a href="view-news-
item?id=<%=newsItem.getId()%>"><%=newsItem.getTitul()%></a>
      </li>
   <% } %>
</ul>
<%@ include file="bottom.inc" %>
```

XML:

```
<?xml version="1.0"?>
<web-app
xmlns="http://java.sun.com/xml/ns/j2ee"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://java.sun.com/xml/ns/j2ee
http://java.sun.com/xml/ns/j2ee/web-app_2_4.xsd"
version="2.4">
<listener>
   <listener-class>dvd.online.objednaj.web.Init</listener-class>
</listener>

   <servlet>
      <servlet-name>Obj</servlet-name>
      <servlet-class>dvd.online.objednaj.web.ObjServlet</servlet-class>
   </servlet>

   <servlet-mapping>
      <servlet-name>news-rss</servlet-name>
      <url-pattern>/news.rss</url-pattern>
   </servlet-mapping>

  <servlet>
     <servlet-name>home</servlet-name>
     <servlet-class>dvd.online.objednaj.web.HomeServlet</servlet-class>
  </servlet>

  <servlet-mapping>
     <servlet-name>home</servlet-name>
     <url-pattern>/home</url-pattern>
  </servlet-mapping>

   <servlet>
     <servlet-name>zoznam-nove-dvd</servlet-name>
     <servlet-class>dvd.online.objednaj.web.ZoznamNoveDVDServlet</servlet-class>
 </servlet>

 <servlet-mapping>
     <servlet-name>zoznam-nove-dvd</servlet-name>
     <url-pattern>/zoznam-nove-dvd</url-pattern>
 </servlet-mapping>
  <servlet>
   <servlet-name>uloz-nove-dvd</servlet-name>
   <servlet-class>dvd.online.objednaj.web.UlozNoveDVDServlet</servlet-class>
 </servlet>
```

```
 <servlet-mapping>
   <servlet-name>uloz-nove-dvd</servlet-name>
   <url-pattern>/uloz-nove-dvd</url-pattern>
 </servlet-mapping>

 <servlet>
   <servlet-name>pridaj-nove-dvd</servlet-name>
   <servlet-class>dvd.online.objednaj.web.PridajNoveDVDServlet</servlet-class>
</servlet>

<servlet-mapping>
   <servlet-name>pridaj-nove-dvd</servlet-name>
   <url-pattern>/pridaj-nove-dvd</url-pattern>
</servlet-mapping>
<servlet>
   <servlet-name>vymaz-stare-dvd</servlet-name>
   <servlet-class>dvd.online.objednaj.web.VymazDVDServlet</servlet-class>
</servlet>
<servlet-mapping>
   <servlet-name>vymaz-stare-dvd</servlet-name>
   <url-pattern>/vymaz-stare-dvd</url-pattern>
</servlet-mapping>

<resource-ref>
      <description>dataSource</description>
      <res-ref-name>dataSource</res-ref-name>
      <res-type>javax.sql.DataSource</res-type>
      <res-auth>Container</res-auth>
</resource-ref>


</web-app>
```


UserDAO
_instance: static UserDAO
getInstance(): UserDAO
read(ResultSet: int): User
create(User: int): void
delete(User: int): void
find(Long: int): User
findAll(): List<User>
findByUsername(String: int): User
update(User: int): void
User
_id: private Long
_password: private String
username: private String
getId(): Long
getPassword(): String
getUsername(): String
setId(Long: int): void
setPassword(String: int): void
setUsername(String: int): void
DataAccessObject
_dataSource: private static
_idLock: private static
setDataSource(DataSource: int): void
close(ResultSet: int, Statement: int, Connection: int): void
close(Statement: int, Connection: int): void
getConnection(): Connection
getUniqueId(): Long
getAllDeclaredMethods(c: java.lang.Class<?>): java.lang.reflect.Method[]
HomeServlet
_homeJsp: void
_logger: private static
init(ServletConfig: int): void
doGet(HttpServletRequest: int, HttpServletResponse: int): void
Katalog
_items: private static
getItem(String: int): DVD
items(int: int): DVD
NoveDVD_DAO
create(NoveDVD: int): void
delete(NoveDVD: int): void
find(Long: int): NoveDVD
findAll(): List<NoveDVD>
update(NoveDVD: int): void
read(ResultSet: int): NoveDVD
DVDOrder
_item: private
_PocetItems: private int
DVDOrder()
setItem(DVD: int): void
cancelOrder(): void
getItem(): DVD
getItemID(): String
getPocetItems(): int
getPopis(): String
getTotalCena(): double
getUnitCena(): double
incrementPocetItems(): void
setPocetItems(int: int): void
NoveDVD
_id: private long
_nazov: private String
titul: private String
getId(): Long
getNazov(): String
getTitul(): String
setId(Long: int): void
setNazov(String: int): void
setTitul(String: int): void
DVD
_cena: private double
_itemID: private String
popis: private String
DVD()
setCena(double: int): void
setItemID(String: int): void
setPopis(String: int): void
getCena(): double
getItemID(): String
getPopis(): String
ShoppingCart
_itemsOrdered: private Vector<DVDOrder>
ShoppingCart()
addItem(String: int): void
getItemsOrdered(): Vector<DVDOrder>
setPocetOrdered(String: int): void


Init
_logger: private Logger
contextDestroyed(ServletContextEvent: int): void
contextInitialized(ServletContextEvent: int): void
contextInitialized2(ServletContext: int): void
VymazDVDServlet
_jsp: private RequestDispatcher
_logger: private Logger
init(ServletConfig: int): void
doGet(HttpServletRequest: int, HttpServletResponse: int): void
doPost(HttpServletRequest: int, HttpServletResponse: int): void
ZoznamNoveDVDServlet
_jsp: private RequestDispatcher
_logger: private Logger
doGet(HttpServletRequest: int, HttpServletResponse: int): void
init(ServletConfig: int): void
HomeServlet
_jsp: private RequestDispatcher
_logger: private Logger
init(ServletConfig: int): void
doGet(HttpServletRequest: int, HttpServletResponse: int): void
ObjServlet
_logger: private Logger
init(ServletConfig: int): void
doGet(HttpServletRequest: int, Http ServletResponse: int): void
UpravNoveDVDServlet
_jsp: private RequestDispatcher
_logger: private Logger
validate(HttpServletRequest: int): Map<String, String>
doGet(HttpServletRequest: int, HttpServletResponse: int): void
doPost(HttpServletRequest: int, HttpServletResponse: int): void
init(ServletConfig: int): void
UlozNoveDVDServlet
_jsp: private RequestDispatcher
_logger: private Logger
doGet(HttpServletRequest: int, Http ServletResponse: int): void
init(ServletConfig: int): void
PridajNoveDVDServlet
_jsp: private RequestDispatcher
_logger: private Logger
doGet(HttpServletRequest: int, Http ServletResponse: int): void
doPost(HttpServletRequest: int, Http ServletResponse: int): void
init(ServletConfig: int): void