**WT Assignment 10**

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**Web application using EJB.**

**Folder Structure:**

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**Code:**

1. **BankAccount.java**

**app.controller('RegisterController', function($scope, $location, AuthService) {**

**$scope.user = {};**

**$scope.register = function() {**

**if ($scope.user.firstName && $scope.user.lastName && $scope.user.username && $scope.user.password) {**

**AuthService.register($scope.user);**

**alert("Registration successful!");**

**$location.path('/login');**

**} else {**

**alert("Please fill out all fields.");**

**}**

**};**

**});**

**app.controller('LoginController', function($scope, AuthService) {**

**$scope.credentials = {};**

**$scope.login = function() {**

**if (AuthService.login($scope.credentials)) {**

**var user = AuthService.getUser();**

**alert("Welcome, " + user.firstName + "!");**

**} else {**

**alert("Invalid username or password.");package model;**

**public class BankAccount {**

**private String accountNumber;**

**private double balance;**

**public BankAccount(String accountNumber) {**

**this.accountNumber = accountNumber;**

**this.balance = 1000.0; // default balance**

**}**

**public String getAccountNumber() {**

**return accountNumber;**

**}**

**public double getBalance() {**

**return balance;**

**}**

**public void deposit(double amount) {**

**balance += amount;**

**}**

**public boolean withdraw(double amount) {**

**if (balance >= amount) {**

**balance -= amount;**

**return true;**

**}**

**return false;**

**}**

**}**

**}**

**};**

**});**

1. **BankService.java**

**package service;**

**import model.BankAccount;**

**public interface BankService {**

**void deposit(BankAccount account, double amount);**

**boolean withdraw(BankAccount account, double amount);**

**double getBalance(BankAccount account);**

**}**

1. **BankServiceBean.java**

**package service;**

**import jakarta.ejb.Stateless;**

**import model.BankAccount;**

**@Stateless**

**public class BankServiceBean implements BankService {**

**@Override**

**public void deposit(BankAccount account, double amount) {**

**account.deposit(amount);**

**}**

**@Override**

**public boolean withdraw(BankAccount account, double amount) {**

**return account.withdraw(amount);**

**}**

**@Override**

**public double getBalance(BankAccount account) {**

**return account.getBalance();**

**}**

**}**

1. **BankServlet.java**

**package servlet;**

**import model.BankAccount;**

**import service.BankService;**

**import service.BankServiceBean;**

**import javax.servlet.\*;**

**import javax.servlet.http.\*;**

**import java.io.IOException;**

**import java.io.PrintWriter;**

**public class BankServlet extends HttpServlet {**

**private final BankService service = new BankServiceBean();**

**private final BankAccount account = new BankAccount("123456");**

**protected void doPost(HttpServletRequest request, HttpServletResponse response)**

**throws ServletException, IOException {**

**String action = request.getParameter("action");**

**double amount = Double.parseDouble(request.getParameter("amount"));**

**response.setContentType("text/html");**

**PrintWriter out = response.getWriter();**

**if ("deposit".equals(action)) {**

**service.deposit(account, amount);**

**out.println("<h2>Deposited " + amount + "</h2>");**

**} else if ("withdraw".equals(action)) {**

**boolean success = service.withdraw(account, amount);**

**if (success) {**

**out.println("<h2>Withdrew " + amount + "</h2>");**

**} else {**

**out.println("<h2>Insufficient Balance</h2>");**

**}**

**}**

**out.println("<h3>Current Balance: " + account.getBalance() + "</h3>");**

**out.println("<a href='index.html'>Back</a>");**

**}**

**}**

1. **Index.html**

**<!DOCTYPE html>**

**<html>**

**<head>**

**<title>Bank App</title>**

**</head>**

**<body>**

**<h2>Simple Bank Transaction</h2>**

**<form action="BankServlet" method="post">**

**Amount: <input type="number" name="amount" step="0.01" required><br><br>**

**<button type="submit" name="action" value="deposit">Deposit</button>**

**<button type="submit" name="action" value="withdraw">Withdraw</button>**

**</form>**

**</body>**

**</html>**

1. **Web.xml**

**<web-app xmlns="http://java.sun.com/xml/ns/javaee"**

**version="3.0">**

**<servlet>**

**<servlet-name>BankServlet</servlet-name>**

**<servlet-class>servlet.BankServlet</servlet-class>**

**</servlet>**

**<servlet-mapping>**

**<servlet-name>BankServlet</servlet-name>**

**<url-pattern>/BankServlet</url-pattern>**

**</servlet-mapping>**

**</web-app>**

**Output:**

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