**Source Code**

**ICIN BANK**

**Admin Portal:**

**Login.component.html**

<div class="wrapper">

    <form class="form-signin" (ngSubmit)="onSubmit()" [hidden]="loggedIn">

      <h2 class="clean-font">Please login</h2>

      <input type="text" class="form-control" name="username" [(ngModel)]="username" placeholder="Username" name="username" required autofocus="" />

      <br />

      <input type="password" class="form-control" name="password" [(ngModel)]="password" placeholder="Password" required />

      <div class="form-group">

      <br/>

      <label >

         <input type="checkbox" name="remember-me" id="remember-me" />&nbsp;<span class="clean-font">Remember me</span>

      </label>

      </div>

      <button class="btn btn-primary btn-block" type="submit">Login</button>

    </form>

    <div [hidden]="!loggedIn">

      <h2>Welcome to Admin Portal!</h2>

    </div>

  </div>

**Index.html**

<!doctype html>

<html>

<head>

  <meta charset="utf-8">

  <title>ICIN Bank</title>

  <base href="/">

  <meta name="viewport" content="width=device-width, initial-scale=1">

  <link rel="icon" type="image/x-icon" href="favicon.ico">

  <head>

 <meta charset="utf-8">

 <title>ICIN Bank: Admin Portal</title>

 <base href="/">  <meta name="viewport" content="width=device-width, initial-scale=1">

 <link rel="icon" type="image/x-icon" href="favicon.ico">

 <link href="starter-template.css">

 <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css" integrity="sha384-BVYiiSIFeK1dGmJRAkycuHAHRg32OmUcww7on3RYdg4Va+PmSTsz/K68vbdEjh4u" crossorigin="anonymous">

</head>

  <link rel="stylesheet" type="text/css" href="assets/css/bootstrap.min.css">

  <link rel="stylesheet" type="text/css" href="styles.css">

</head>

<body>

  <app-root>Loading...</app-root>

  <script type="text/javascript" src="assets/js/jquery.js"></script>

  <script type="text/javascript" src="assets/js/bootstrap.min.js"></script>

</body>

</html>

**User Account.component.html**

<h1>User Accounts</h1>

<table id="userTable" class="table table-striped" cellspacing="0" width="100%">

    <thead>

        <tr>

            <th>User Name</th>

            <th>First Name</th>

            <th>Last Name</th>

            <th>Email</th>

            <th>Phone</th>

            <th>Primary Account</th>

            <th>Savings Account</th>

            <th>Enabled</th>

            <th>Action</th>

        </tr>

    </thead>

    <tbody>

        <tr \*ngFor="let user of userList">

            <td>{{user.username}}</td>

            <td>{{user.firstName}}</td>

            <td>{{user.lastName}}</td>

            <td>{{user.email}}</td>

            <td>{{user.phone}}</td>

            <td><a (click)="onSelectPrimary(user.username)" style="cursor: pointer;">{{user.primaryAccount.accountBalance}}</a></td>

            <td><a (click)="onSelectSavings(user.username)" style="cursor: pointer;">{{user.savingsAccount.accountBalance}}</a></td>

            <td>{{user.enabled}}</td>

            <td [hidden]="user.enabled"><a (click)="enableUser(user.username)" style="cursor: pointer;">Enable</a></td>

            <td [hidden]="!user.enabled"><a (click)="disableUser(user.username)" style="cursor: pointer;">Disable</a></td>

        </tr>

    </tbody>

</table>

**App.component.html**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Document</title>

</head>

<body style="background-color: #98a874;">

    <div class="container">

        <app-navbar></app-navbar>

        <router-outlet></router-outlet>

        </div>

</body>

</html>

**CheckBookRequest.compnent.html**

<h1>Cheque Book Requests</h1>

<table class="table table-striped">

    <thead>

        <tr>

            <th>Request Id</th>

            <th>User Name</th>

            <th>Description</th>

            <th>Confirmed?</th>

            <th>Action</th>

        </tr>

    </thead>

    <tbody>

        <tr \*ngFor="let chequeBookRequest of chequeBookRequestList">

            <td>{{chequeBookRequest.id}}</td>

            <td>{{chequeBookRequest.user.username}}</td>

            <td>{{chequeBookRequest.description}}</td>

            <td>{{chequeBookRequest.confirmed}}</td>

            <td [hidden]="chequeBookRequest.confirmed"><a (click)="confirmChequeBookRequest(chequeBookRequest.id)" style="cursor: pointer;">Confirm</a></td>

            <!-- <td [hidden]="!user.enabled"><a (click)="disableUser(user.username)" style="cursor: pointer;">Disable</a></td> -->

        </tr>

    </tbody>

</table>

**Primary Transaction.component.html**

<h1>Primary Account Transaction List</h1>

<table class="table table-striped">

    <thead>

        <tr>

            <th>Post Date</th>

                <th>Description</th>

                <th>Type</th>

                <th>Status</th>

                <th>Amount</th>

                <th>Available Balance</th>

        </tr>

    </thead>

    <tbody>

        <tr \*ngFor="let primaryTransaction of primaryTransactionList">

            <td>{{primaryTransaction.date | date: 'MM/dd/yyyy'}} </td>

            <td>{{primaryTransaction.description}}</td>

            <td>{{primaryTransaction.type}}</td>

            <td>{{primaryTransaction.status}}</td>

            <td>{{primaryTransaction.amount}}</td>

            <td>{{primaryTransaction.availableBalance}}</td>

        </tr>

    </tbody>

</table>

**SavingTransaction.component.html**

h1>Savings Account Transaction List</h1>

<table class="table table-striped">

    <thead>

        <tr>

            <th>Post Date</th>

                <th>Description</th>

                <th>Type</th>

                <th>Status</th>

                <th>Amount</th>

                <th>Available Balance</th>

        </tr>

    </thead>

    <tbody>

        <tr \*ngFor="let savingsTransaction of savingsTransactionList">

            <td>{{savingsTransaction.date | date: 'MM/dd/yyyy'}} </td>

            <td>{{savingsTransaction.description}}</td>

            <td>{{savingsTransaction.type}}</td>

            <td>{{savingsTransaction.status}}</td>

            <td>{{savingsTransaction.amount}}</td>

            <td>{{savingsTransaction.availableBalance}}</td>

        </tr>

    </tbody>

</table>

**Navbar.component.html**

<nav class="navbar navbar-clean">

  <div class="container-fluid">

    <div class="navbar-header">

      <button type="button" class="navbar-toggle collapsed" data-toggle="collapse" data-target="#bs-example-navbar-collapse-1">

        <span class="sr-only">Toggle navigation</span>

        <span class="icon-bar"></span>

        <span class="icon-bar"></span>

        <span class="icon-bar"></span>

      </button>

      <a class="navbar-brand" routerLink="/login" routerLinkActive="active">Admin Portal</a>

    </div>

    <div class="collapse navbar-collapse" id="bs-example-navbar-collapse-1">

      <ul class="nav navbar-nav">

        <li [style.display]="getDisplay()"><a routerLink="/userAccount" routerLinkActive="active"> User Account <span class="sr-only">(current)</span></a></li>

        <li [style.display]="getDisplay()"><a routerLink="/chequeBookRequest" routerLinkActive="active"> Cheque Book Requests <span class="sr-only">(current)</span></a></li>

      </ul>

      <ul class="nav navbar-nav navbar-right">

        <li [style.display]="getDisplay()"><a (click)="logout()" style="cursor: pointer;">Logout</a></li>

      </ul>

    </div>

  </div>

</nav>

**User Portal:**

**ICIN Bank Application**

package com.icinbank;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

public class ICINBankApplication {

public static void main(String[] args) {

SpringApplication.run(ICINBankApplication.class, args);

}

**}**

**Controller:**

**Account Controller:**

package com.icinbank.controller;

import java.security.Principal;

import java.util.List;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.stereotype.Controller;

import org.springframework.ui.Model;

import org.springframework.web.bind.annotation.ModelAttribute;

import org.springframework.web.bind.annotation.RequestMapping;

import org.springframework.web.bind.annotation.RequestMethod;

import com.icinbank.domain.PrimaryAccount;

import com.icinbank.domain.PrimaryTransaction;

import com.icinbank.domain.SavingsAccount;

import com.icinbank.domain.SavingsTransaction;

import com.icinbank.domain.User;

import com.icinbank.service.AccountService;

import com.icinbank.service.TransactionService;

import com.icinbank.service.UserService;

@Controller

@RequestMapping("/account")

public class AccountController {

@Autowired

private UserService userService;

@Autowired

private AccountService accountService;

@Autowired

private TransactionService transactionService;

@RequestMapping("/primaryAccount")

public String primaryAccount(Model model, Principal principal) {

List<PrimaryTransaction> primaryTransactionList = transactionService.findPrimaryTransactionList(principal.getName());

User user = userService.findByUsername(principal.getName());

PrimaryAccount primaryAccount = user.getPrimaryAccount();

model.addAttribute("primaryAccount", primaryAccount);

model.addAttribute("primaryTransactionList", primaryTransactionList);

return "primaryAccount";

}

@RequestMapping("/savingsAccount")

public String savingsAccount(Model model, Principal principal) {

List<SavingsTransaction> savingsTransactionList = transactionService.findSavingsTransactionList(principal.getName());

User user = userService.findByUsername(principal.getName());

SavingsAccount savingsAccount = user.getSavingsAccount();

model.addAttribute("savingsAccount", savingsAccount);

model.addAttribute("savingsTransactionList", savingsTransactionList);

return "savingsAccount";

}

@RequestMapping(value = "/deposit", method = RequestMethod.GET)

public String deposit(Model model) {

model.addAttribute("accountType", "");

model.addAttribute("amount", "");

return "deposit";

}

@RequestMapping(value = "/deposit", method = RequestMethod.POST)

public String depositPOST(@ModelAttribute("amount") String amount, @ModelAttribute("accountType") String accountType, Principal principal) {

accountService.deposit(accountType, Double.parseDouble(amount), principal);

return "redirect:/ICINBank";

}

@RequestMapping(value = "/withdraw", method = RequestMethod.GET)

public String withdraw(Model model) {

model.addAttribute("accountType", "");

model.addAttribute("amount", "");

return "withdraw";

}

@RequestMapping(value = "/withdraw", method = RequestMethod.POST)

public String withdrawPOST(@ModelAttribute("amount") String amount, @ModelAttribute("accountType") String accountType, Principal principal) {

accountService.withdraw(accountType, Double.parseDouble(amount), principal);

return "redirect:/ICINBank";

}

}

**Home Controller:**

package com.icinbank.controller;

import java.security.Principal;

import java.util.HashSet;

import java.util.Set;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.stereotype.Controller;

import org.springframework.ui.Model;

import org.springframework.web.bind.annotation.ModelAttribute;

import org.springframework.web.bind.annotation.RequestMapping;

import org.springframework.web.bind.annotation.RequestMethod;

import com.icinbank.dao.RoleDao;

import com.icinbank.domain.PrimaryAccount;

import com.icinbank.domain.SavingsAccount;

import com.icinbank.domain.User;

import com.icinbank.domain.security.UserRole;

import com.icinbank.service.UserService;

@Controller

public class HomeController {

@Autowired

private UserService userService;

@Autowired

private RoleDao roleDao;

@RequestMapping("/")

public String home() {

return "redirect:/index";

}

@RequestMapping("/index")

public String index() {

return "index";

}

@RequestMapping(value = "/signup", method = RequestMethod.GET)

public String signup(Model model) {

User user = new User();

model.addAttribute("user", user);

return "signup";

}

@RequestMapping(value = "/signup", method = RequestMethod.POST)

public String signupPost(@ModelAttribute("user") User user, Model model) {

if(userService.checkUserExists(user.getUsername(), user.getEmail())) {

if (userService.checkEmailExists(user.getEmail())) {

model.addAttribute("emailExists", true);

}

if (userService.checkUsernameExists(user.getUsername())) {

model.addAttribute("usernameExists", true);

}

return "signup";

} else {

Set<UserRole> userRoles = new HashSet<>();

userRoles.add(new UserRole(user, roleDao.findByName("ROLE\_USER")));

userService.createUser(user, userRoles);

return "redirect:/";

}

}

@RequestMapping("/ICINBank")

public String ICINBank(Principal principal, Model model) {

User user = userService.findByUsername(principal.getName());

PrimaryAccount primaryAccount = user.getPrimaryAccount();

SavingsAccount savingsAccount = user.getSavingsAccount();

model.addAttribute("primaryAccount", primaryAccount);

model.addAttribute("savingsAccount", savingsAccount);

return "ICINBank";

}

}

**RequestCheckbook Controller:**

package com.icinbank.controller;

import java.security.Principal;

import java.text.ParseException;

import java.text.SimpleDateFormat;

import java.util.Date;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.stereotype.Controller;

import org.springframework.ui.Model;

import org.springframework.web.bind.annotation.ModelAttribute;

import org.springframework.web.bind.annotation.RequestMapping;

import org.springframework.web.bind.annotation.RequestMethod;

import com.icinbank.domain.RequestChequeBook;

import com.icinbank.domain.User;

import com.icinbank.service.RequestChequeBookService;

import com.icinbank.service.UserService;

@Controller

@RequestMapping("/requestChequeBook")

public class RequestChequeBookController {

@Autowired

private RequestChequeBookService requestChequeBookService;

@Autowired

private UserService userService;

@RequestMapping(value = "/create",method = RequestMethod.GET)

public String createRequestChequeBook(Model model) {

RequestChequeBook requestChequeBook = new RequestChequeBook();

model.addAttribute("requestChequeBook", requestChequeBook);

model.addAttribute("dateString", "");

return "requestChequeBook";

}

@RequestMapping(value = "/create",method = RequestMethod.POST)

public String createRequestChequeBookPost(@ModelAttribute("requestChequeBook") RequestChequeBook requestChequeBook, Model model, Principal principal) throws ParseException {

User user = userService.findByUsername(principal.getName());

requestChequeBook.setUser(user);

requestChequeBookService.createRequestChequeBook(requestChequeBook);

return "redirect:/ICINBank";

}

}

**Transfer Controller:**

package com.icinbank.controller;

import java.security.Principal;

import java.util.List;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.stereotype.Controller;

import org.springframework.transaction.annotation.Transactional;

import org.springframework.ui.Model;

import org.springframework.web.bind.annotation.ModelAttribute;

import org.springframework.web.bind.annotation.RequestMapping;

import org.springframework.web.bind.annotation.RequestMethod;

import org.springframework.web.bind.annotation.RequestParam;

import com.icinbank.domain.PrimaryAccount;

import com.icinbank.domain.Recipient;

import com.icinbank.domain.SavingsAccount;

import com.icinbank.domain.User;

import com.icinbank.service.TransactionService;

import com.icinbank.service.UserService;

@Controller

@RequestMapping("/transfer")

public class TransferController {

@Autowired

private TransactionService transactionService;

@Autowired

private UserService userService;

@RequestMapping(value = "/betweenAccounts", method = RequestMethod.GET)

public String betweenAccounts(Model model) {

model.addAttribute("transferFrom", "");

model.addAttribute("transferTo", "");

model.addAttribute("amount", "");

return "betweenAccounts";

}

@RequestMapping(value = "/betweenAccounts", method = RequestMethod.POST)

public String betweenAccountsPost(

@ModelAttribute("transferFrom") String transferFrom,

@ModelAttribute("transferTo") String transferTo,

@ModelAttribute("amount") String amount,

Principal principal

) throws Exception {

User user = userService.findByUsername(principal.getName());

PrimaryAccount primaryAccount = user.getPrimaryAccount();

SavingsAccount savingsAccount = user.getSavingsAccount();

transactionService.betweenAccountsTransfer(transferFrom, transferTo, amount, primaryAccount, savingsAccount);

return "redirect:/ICINBank";

}

@RequestMapping(value = "/recipient", method = RequestMethod.GET)

public String recipient(Model model, Principal principal) {

List<Recipient> recipientList = transactionService.findRecipientList(principal);

Recipient recipient = new Recipient();

model.addAttribute("recipientList", recipientList);

model.addAttribute("recipient", recipient);

return "recipient";

}

@RequestMapping(value = "/recipient/save", method = RequestMethod.POST)

public String recipientPost(@ModelAttribute("recipient") Recipient recipient, Principal principal) {

User user = userService.findByUsername(principal.getName());

recipient.setUser(user);

transactionService.saveRecipient(recipient);

return "redirect:/transfer/recipient";

}

@RequestMapping(value = "/recipient/edit", method = RequestMethod.GET)

public String recipientEdit(@RequestParam(value = "recipientName") String recipientName, Model model, Principal principal){

Recipient recipient = transactionService.findRecipientByName(recipientName);

List<Recipient> recipientList = transactionService.findRecipientList(principal);

model.addAttribute("recipientList", recipientList);

model.addAttribute("recipient", recipient);

return "recipient";

}

@RequestMapping(value = "/recipient/delete", method = RequestMethod.GET)

@Transactional

public String recipientDelete(@RequestParam(value = "recipientName") String recipientName, Model model, Principal principal){

transactionService.deleteRecipientByName(recipientName);

List<Recipient> recipientList = transactionService.findRecipientList(principal);

Recipient recipient = new Recipient();

model.addAttribute("recipient", recipient);

model.addAttribute("recipientList", recipientList);

return "recipient";

}

@RequestMapping(value = "/toSomeoneElse",method = RequestMethod.GET)

public String toSomeoneElse(Model model, Principal principal) {

List<Recipient> recipientList = transactionService.findRecipientList(principal);

model.addAttribute("recipientList", recipientList);

model.addAttribute("accountType", "");

return "toSomeoneElse";

}

@RequestMapping(value = "/toSomeoneElse",method = RequestMethod.POST)

public String toSomeoneElsePost(@ModelAttribute("recipientName") String recipientName, @ModelAttribute("accountType") String accountType, @ModelAttribute("amount") String amount, Principal principal) {

User user = userService.findByUsername(principal.getName());

Recipient recipient = transactionService.findRecipientByName(recipientName);

transactionService.toSomeoneElseTransfer(recipient, accountType, amount, user.getPrimaryAccount(), user.getSavingsAccount());

return "redirect:/ICINBank

}

}

**User Controller:**

package com.icinbank.controller;

import java.security.Principal

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.stereotype.Controller;

import org.springframework.ui.Model;

import org.springframework.web.bind.annotation.ModelAttribute;

import org.springframework.web.bind.annotation.RequestMapping;

import org.springframework.web.bind.annotation.RequestMethod;

import com.icinbank.domain.User;

import com.icinbank.service.UserService;

@Controller

@RequestMapping("/user")

public class UserController {

@Autowired

private UserService userService;

@RequestMapping(value = "/profile", method = RequestMethod.GET)

public String profile(Principal principal, Model model) {

User user = userService.findByUsername(principal.getName());

model.addAttribute("user", user);

return "profile";

}

@RequestMapping(value = "/profile", method = RequestMethod.POST)

public String profilePost(@ModelAttribute("user") User newUser, Model model) {

User user = userService.findByUsername(newUser.getUsername());

user.setUsername(newUser.getUsername());

user.setFirstName(newUser.getFirstName());

user.setLastName(newUser.getLastName());

user.setEmail(newUser.getEmail());

user.setPhone(newUser.getPhone());

model.addAttribute("user", user);

userService.saveUser(user);

return "profile";

}

}

**Request Checkbook Resources:**

package com.icinbank.resource;

import java.util.List;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.security.access.prepost.PreAuthorize;

import org.springframework.web.bind.annotation.PathVariable;

import org.springframework.web.bind.annotation.RequestMapping;

import org.springframework.web.bind.annotation.RestController;

import com.icinbank.domain.RequestChequeBook;

import com.icinbank.service.RequestChequeBookService;

@RestController

@RequestMapping("/api/chequeBookRequest")

@PreAuthorize("hasRole('ADMIN')")

public class RequestChequeBookResource {

@Autowired

private RequestChequeBookService requestChequeBookService;

@RequestMapping("/all")

public List<RequestChequeBook> findRequestChequeBookList() {

List<RequestChequeBook> requestChequeBookList = requestChequeBookService.findAll();

return requestChequeBookList;

}

@RequestMapping("/{id}/confirm")

public void confirmRequestChequeBook(@PathVariable("id") Long id) {

requestChequeBookService.confirmRequestChequeBook(id);

}

}

**User Resources:**

package com.icinbank.resource;

import java.util.List;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.security.access.prepost.PreAuthorize;

import org.springframework.web.bind.annotation.PathVariable;

import org.springframework.web.bind.annotation.RequestMapping;

import org.springframework.web.bind.annotation.RequestMethod;

import org.springframework.web.bind.annotation.RequestParam;

import org.springframework.web.bind.annotation.RestController;

import com.icinbank.domain.PrimaryTransaction;

import com.icinbank.domain.SavingsTransaction;

import com.icinbank.domain.User;

import com.icinbank.service.TransactionService;

import com.icinbank.service.UserService;

@RestController

@RequestMapping("/api")

@PreAuthorize("hasRole('ADMIN')")

public class UserResource {

@Autowired

private UserService userService;

@Autowired

private TransactionService transactionService;

@RequestMapping(value = "/user/all", method = RequestMethod.GET)

public List<User> userList() {

return userService.findUserList();

}

@RequestMapping(value = "/user/primary/transaction", method = RequestMethod.GET)

public List<PrimaryTransaction> getPrimaryTransactionList(@RequestParam("username") String username) {

return transactionService.findPrimaryTransactionList(username);

}

@RequestMapping(value = "/user/savings/transaction", method = RequestMethod.GET)

public List<SavingsTransaction> getSavingsTransactionList(@RequestParam("username") String username) {

return transactionService.findSavingsTransactionList(username);

@RequestMapping("/user/{username}/enable")

public void enableUser(@PathVariable("username") String username) {

userService.enableUser(username);

}

@RequestMapping("/user/{username}/disable")

public void diableUser(@PathVariable("username") String username) {

userService.disableUser(username);

}

}

**Services:**

**Account Services ImpI :**

package com.icinbank.service.UserServiceImpl;

import java.math.BigDecimal;

import java.security.Principal;

import java.util.Date;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.stereotype.Service;

import com.icinbank.dao.PrimaryAccountDao;

import com.icinbank.dao.SavingsAccountDao;

import com.icinbank.domain.PrimaryAccount;

import com.icinbank.domain.PrimaryTransaction;

import com.icinbank.domain.SavingsAccount;

import com.icinbank.domain.SavingsTransaction;

import com.icinbank.domain.User;

import com.icinbank.service.AccountService;

import com.icinbank.service.TransactionService;

import com.icinbank.service.UserService;

@Service

public class AccountServiceImpl implements AccountService {

private static int nextAccountNumber = 11223145;

@Autowired

private PrimaryAccountDao primaryAccountDao;

@Autowired

private SavingsAccountDao savingsAccountDao;

@Autowired

private UserService userService;

@Autowired

private TransactionService transactionService;

public PrimaryAccount createPrimaryAccount() {

PrimaryAccount primaryAccount = new PrimaryAccount();

primaryAccount.setAccountBalance(new BigDecimal(0.0));

primaryAccount.setAccountNumber(accountGen());

primaryAccountDao.save(primaryAccount);

return primaryAccountDao.findByAccountNumber(primaryAccount.getAccountNumber());

}

public SavingsAccount createSavingsAccount() {

SavingsAccount savingsAccount = new SavingsAccount();

savingsAccount.setAccountBalance(new BigDecimal(0.0));

savingsAccount.setAccountNumber(accountGen());

savingsAccountDao.save(savingsAccount);

return savingsAccountDao.findByAccountNumber(savingsAccount.getAccountNumber());

}

public void deposit(String accountType, double amount, Principal principal) {

User user = userService.findByUsername(principal.getName());

if (accountType.equalsIgnoreCase("Primary")) {

PrimaryAccount primaryAccount = user.getPrimaryAccount();

primaryAccount.setAccountBalance(primaryAccount.getAccountBalance().add(new BigDecimal(amount)));

primaryAccountDao.save(primaryAccount);

Date date = new Date();

PrimaryTransaction primaryTransaction = new PrimaryTransaction(date, "Deposit to Primary Account", "Account", "Finished", amount, primaryAccount.getAccountBalance(), primaryAccount);

transactionService.savePrimaryDepositTransaction(primaryTransaction);

} else if (accountType.equalsIgnoreCase("Savings")) {

SavingsAccount savingsAccount = user.getSavingsAccount();

savingsAccount.setAccountBalance(savingsAccount.getAccountBalance().add(new BigDecimal(amount)));

savingsAccountDao.save(savingsAccount);

Date date = new Date();

SavingsTransaction savingsTransaction = new SavingsTransaction(date, "Deposit to savings Account", "Account", "Finished", amount, savingsAccount.getAccountBalance(), savingsAccount);

transactionService.saveSavingsDepositTransaction(savingsTransaction);

}

}

public void withdraw(String accountType, double amount, Principal principal) {

User user = userService.findByUsername(principal.getName());

if (accountType.equalsIgnoreCase("Primary")) {

PrimaryAccount primaryAccount = user.getPrimaryAccount();

primaryAccount.setAccountBalance(primaryAccount.getAccountBalance().subtract(new BigDecimal(amount)));

primaryAccountDao.save(primaryAccount);

Date date = new Date();

PrimaryTransaction primaryTransaction = new PrimaryTransaction(date, "Withdraw from Primary Account", "Account", "Finished", amount, primaryAccount.getAccountBalance(), primaryAccount);

transactionService.savePrimaryWithdrawTransaction(primaryTransaction);

} else if (accountType.equalsIgnoreCase("Savings")) {

SavingsAccount savingsAccount = user.getSavingsAccount();

savingsAccount.setAccountBalance(savingsAccount.getAccountBalance().subtract(new BigDecimal(amount)));

savingsAccountDao.save(savingsAccount);

Date date = new Date();

SavingsTransaction savingsTransaction = new SavingsTransaction(date, "Withdraw from savings Account", "Account", "Finished", amount, savingsAccount.getAccountBalance(), savingsAccount);

transactionService.saveSavingsWithdrawTransaction(savingsTransaction);

}

}

private int accountGen() {

return ++nextAccountNumber;

}

}

**Request Checkbook Services ImpI:**

package com.icinbank.service.UserServiceImpl;

import java.util.List;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.stereotype.Service;

import com.icinbank.dao.RequestChequeBookDao;

import com.icinbank.domain.RequestChequeBook;

import com.icinbank.service.RequestChequeBookService;

@Service

public class RequestChequeBookServiceImpl implements RequestChequeBookService {

@Autowired

private RequestChequeBookDao requestChequeBookDao;

public RequestChequeBook createRequestChequeBook(RequestChequeBook requestChequeBook) {

return requestChequeBookDao.save(requestChequeBook);

}

public List<RequestChequeBook> findAll() {

return requestChequeBookDao.findAll();

}

public RequestChequeBook findRequestChequeBook(Long id) {

//return requestChequeBookDao.findOne(id);

return requestChequeBookDao.findById(id).orElse(null);

}

public void confirmRequestChequeBook(Long id) {

RequestChequeBook requestChequeBook = findRequestChequeBook(id);

requestChequeBook.setConfirmed(true);

requestChequeBookDao.save(requestChequeBook);

}

/\*@Override

public RequestChequeBook findRequestChequeBook(Long id) {

// TODO Auto-generated method stub

return null;

}\*/

}

**Transaction Services ImpI:**

package com.icinbank.service.UserServiceImpl;

import java.math.BigDecimal;

import java.security.Principal;

import java.util.Date;

import java.util.List;

import java.util.stream.Collectors;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.stereotype.Service;

import com.icinbank.dao.PrimaryAccountDao;

import com.icinbank.dao.PrimaryTransactionDao;

import com.icinbank.dao.RecipientDao;

import com.icinbank.dao.SavingsAccountDao;

import com.icinbank.dao.SavingsTransactionDao;

import com.icinbank.domain.PrimaryAccount;

import com.icinbank.domain.PrimaryTransaction;

import com.icinbank.domain.Recipient;

import com.icinbank.domain.SavingsAccount;

import com.icinbank.domain.SavingsTransaction;

import com.icinbank.domain.User;

import com.icinbank.service.TransactionService;

import com.icinbank.service.UserService;

@Service

public class TransactionServiceImpl implements TransactionService {

@Autowired

private UserService userService;

@Autowired

private PrimaryTransactionDao primaryTransactionDao;

@Autowired

private SavingsTransactionDao savingsTransactionDao;

@Autowired

private PrimaryAccountDao primaryAccountDao;

@Autowired

private SavingsAccountDao savingsAccountDao;

@Autowired

private RecipientDao recipientDao;

public List<PrimaryTransaction> findPrimaryTransactionList(String username){

User user = userService.findByUsername(username);

List<PrimaryTransaction> primaryTransactionList = user.getPrimaryAccount().getPrimaryTransactionList();

return primaryTransactionList;

}

public List<SavingsTransaction> findSavingsTransactionList(String username) {

User user = userService.findByUsername(username);

List<SavingsTransaction> savingsTransactionList = user.getSavingsAccount().getSavingsTransactionList();

return savingsTransactionList;

}

public void savePrimaryDepositTransaction(PrimaryTransaction primaryTransaction) {

primaryTransactionDao.save(primaryTransaction);

}

public void saveSavingsDepositTransaction(SavingsTransaction savingsTransaction) {

savingsTransactionDao.save(savingsTransaction);

}

public void savePrimaryWithdrawTransaction(PrimaryTransaction primaryTransaction) {

primaryTransactionDao.save(primaryTransaction);

}

public void saveSavingsWithdrawTransaction(SavingsTransaction savingsTransaction) {

savingsTransactionDao.save(savingsTransaction);

}

public void betweenAccountsTransfer(String transferFrom, String transferTo, String amount, PrimaryAccount primaryAccount, SavingsAccount savingsAccount) throws Exception {

if (transferFrom.equalsIgnoreCase("Primary") && transferTo.equalsIgnoreCase("Savings")) {

primaryAccount.setAccountBalance(primaryAccount.getAccountBalance().subtract(new BigDecimal(amount)));

savingsAccount.setAccountBalance(savingsAccount.getAccountBalance().add(new BigDecimal(amount)));

primaryAccountDao.save(primaryAccount);

savingsAccountDao.save(savingsAccount);

Date date = new Date();

PrimaryTransaction primaryTransaction = new PrimaryTransaction(date, "Between account transfer from "+transferFrom+" to "+transferTo, "Account", "Finished", Double.parseDouble(amount), primaryAccount.getAccountBalance(), primaryAccount);

primaryTransactionDao.save(primaryTransaction);

} else if (transferFrom.equalsIgnoreCase("Savings") && transferTo.equalsIgnoreCase("Primary")) {

primaryAccount.setAccountBalance(primaryAccount.getAccountBalance().add(new BigDecimal(amount)));

savingsAccount.setAccountBalance(savingsAccount.getAccountBalance().subtract(new BigDecimal(amount)));

primaryAccountDao.save(primaryAccount);

savingsAccountDao.save(savingsAccount);

Date date = new Date();

SavingsTransaction savingsTransaction = new SavingsTransaction(date, "Between account transfer from "+transferFrom+" to "+transferTo, "Transfer", "Finished", Double.parseDouble(amount), savingsAccount.getAccountBalance(), savingsAccount);

savingsTransactionDao.save(savingsTransaction);

} else {

throw new Exception("Invalid Transfer");

}

}

public List<Recipient> findRecipientList(Principal principal) {

String username = principal.getName();

List<Recipient> recipientList = recipientDao.findAll().stream() //convert list to stream

.filter(recipient -> username.equals(recipient.getUser().getUsername())) //filters the line, equals to username

.collect(Collectors.toList());

return recipientList;

}

public Recipient saveRecipient(Recipient recipient) {

return recipientDao.save(recipient);

}

public Recipient findRecipientByName(String recipientName) {

return recipientDao.findByName(recipientName);

}

public void deleteRecipientByName(String recipientName) {

recipientDao.deleteByName(recipientName);

}

public void toSomeoneElseTransfer(Recipient recipient, String accountType, String amount, PrimaryAccount primaryAccount, SavingsAccount savingsAccount) {

if (accountType.equalsIgnoreCase("Primary")) {

primaryAccount.setAccountBalance(primaryAccount.getAccountBalance().subtract(new BigDecimal(amount)));

primaryAccountDao.save(primaryAccount);

Date date = new Date();

PrimaryTransaction primaryTransaction = new PrimaryTransaction(date, "Transfer to recipient "+recipient.getName(), "Transfer", "Finished", Double.parseDouble(amount), primaryAccount.getAccountBalance(), primaryAccount);

primaryTransactionDao.save(primaryTransaction);

} else if (accountType.equalsIgnoreCase("Savings")) {

savingsAccount.setAccountBalance(savingsAccount.getAccountBalance().subtract(new BigDecimal(amount)));

savingsAccountDao.save(savingsAccount);

Date date = new Date();

SavingsTransaction savingsTransaction = new SavingsTransaction(date, "Transfer to recipient "+recipient.getName(), "Transfer", "Finished", Double.parseDouble(amount), savingsAccount.getAccountBalance(), savingsAccount);

savingsTransactionDao.save(savingsTransaction);

}

}

}

**User Services ImpI:**

package com.icinbank.service.UserServiceImpl;

import java.util.List;

import java.util.Set;

import org.slf4j.Logger;

import org.slf4j.LoggerFactory;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.security.crypto.bcrypt.BCryptPasswordEncoder;

import org.springframework.stereotype.Service;

import org.springframework.transaction.annotation.Transactional;

import com.icinbank.dao.RoleDao;

import com.icinbank.dao.UserDao;

import com.icinbank.domain.User;

import com.icinbank.domain.security.UserRole;

import com.icinbank.service.AccountService;

import com.icinbank.service.UserService;

@Service

@Transactional

public class UserServiceImpl implements UserService{

private static final Logger LOG = LoggerFactory.getLogger(UserService.class);

@Autowired

private UserDao userDao;

@Autowired

private RoleDao roleDao;

@Autowired

private BCryptPasswordEncoder passwordEncoder;

@Autowired

private AccountService accountService;

public void save(User user) {

userDao.save(user);

}

public User findByUsername(String username) {

return userDao.findByUsername(username);

}

public User findByEmail(String email) {

return userDao.findByEmail(email);

}

public User createUser(User user, Set<UserRole> userRoles) {

User localUser = userDao.findByUsername(user.getUsername());

if (localUser != null) {

LOG.info("User with username {} already exist. Nothing will be done. ", user.getUsername());

} else {

String encryptedPassword = passwordEncoder.encode(user.getPassword());

user.setPassword(encryptedPassword);

for (UserRole ur : userRoles) {

roleDao.save(ur.getRole());

}

user.getUserRoles().addAll(userRoles);

user.setPrimaryAccount(accountService.createPrimaryAccount());

user.setSavingsAccount(accountService.createSavingsAccount());

localUser = userDao.save(user);

}

return localUser;

}

public boolean checkUserExists(String username, String email){

if (checkUsernameExists(username) || checkEmailExists(username)) {

return true;

} else {

return false;

}

}

public boolean checkUsernameExists(String username) {

if (null != findByUsername(username)) {

return true;

}

return false;

}

public boolean checkEmailExists(String email) {

if (null != findByEmail(email)) {

return true;

}

return false;

}

public User saveUser (User user) {

return userDao.save(user);

}

public List<User> findUserList() {

return userDao.findAll();

}

public void enableUser (String username) {

User user = findByUsername(username);

user.setEnabled(true);

userDao.save(user);

}

public void disableUser (String username) {

User user = findByUsername(username);

user.setEnabled(false);

System.out.println(user.isEnabled());

userDao.save(user);

System.out.println(username + " is disabled.");

}

}

**User Security Services:**

package com.icinbank.service.UserServiceImpl;

import org.slf4j.Logger;

import org.slf4j.LoggerFactory;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.security.core.userdetails.UserDetails;

import org.springframework.security.core.userdetails.UserDetailsService;

import org.springframework.security.core.userdetails.UsernameNotFoundException;

import org.springframework.stereotype.Service;

import com.icinbank.dao.UserDao;

import com.icinbank.domain.User;

@Service

public class UserSecurityService implements UserDetailsService {

/\*\* The application logger \*/

private static final Logger LOG = LoggerFactory.getLogger(UserSecurityService.class);

@Autowired

private UserDao userDao;

@Override

public UserDetails loadUserByUsername(String username) throws UsernameNotFoundException {

User user = userDao.findByUsername(username);

if (null == user) {

LOG.warn("Username {} not found", username);

throw new UsernameNotFoundException("Username " + username + " not found");

}

return user;

}

}

**Security:**

**Authority:**

package com.icinbank.domain.security;

import org.springframework.security.core.GrantedAuthority;

public class Authority implements GrantedAuthority{

private final String authority;

public Authority(String authority) {

this.authority = authority;

}

@Override

public String getAuthority() {

return authority;

}

}

**Role:**

package com.icinbank.domain.security;

import javax.persistence.\*;

import java.util.HashSet;

import java.util.Set;

@Entity

public class Role {

@Id

// @GeneratedValue(strategy = GenerationType.AUTO)

private int roleId;

private String name;

@OneToMany(mappedBy = "role", cascade = CascadeType.ALL, fetch = FetchType.LAZY)

private Set<UserRole> userRoles = new HashSet<>();

public Role() {

}

public int getRoleId() {

return roleId;

}

public void setRoleId(int roleId) {

this.roleId = roleId;

}

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

public Set<UserRole> getUserRoles() {

return userRoles;

}

public void setUserRoles(Set<UserRole> userRoles) {

this.userRoles = userRoles;

}

}

**User role:**

package com.icinbank.domain.security;

import com.icinbank.domain.User;

import javax.persistence.\*;

@Entity

@Table(name="user\_role")

public class UserRole {

@Id

@GeneratedValue(strategy = GenerationType.AUTO)

private long userRoleId;

public UserRole(User user, Role role) {

this.user = user;

this.role = role;

}

@ManyToOne(fetch = FetchType.EAGER)

@JoinColumn(name = "user\_id")

private User user;

@ManyToOne(fetch = FetchType.EAGER)

@JoinColumn(name = "role\_id")

private Role role;

public UserRole() {}

public long getUserRoleId() {

return userRoleId;

}

public void setUserRoleId(long userRoleId) {

this.userRoleId = userRoleId;

}

public User getUser() {

return user;

}

public void setUser(User user) {

this.user = user;

}

public Role getRole() {

return role;

}

public void setRole(Role role) {

this.role = role;

}

}

**DAO: Primary Account Dao**

package com.icinbank.dao;

import com.icinbank.domain.PrimaryAccount;

import org.springframework.data.repository.CrudRepository;

public interface PrimaryAccountDao extends CrudRepository<PrimaryAccount,Long> {

PrimaryAccount findByAccountNumber (int accountNumber);}

**Primary Transaction Dao:**

package com.icinbank.dao;

import java.util.List;

import org.springframework.data.repository.CrudRepository;

import com.icinbank.domain.PrimaryTransaction;

public interface PrimaryTransactionDao extends CrudRepository<PrimaryTransaction, Long> {

List<PrimaryTransaction> findAll();

}

**Recipient Dao:**

package com.icinbank.dao;

import java.util.List;

import org.springframework.data.repository.CrudRepository;

import com.icinbank.domain.Recipient;

public interface RecipientDao extends CrudRepository<Recipient, Long> {

List<Recipient> findAll();

Recipient findByName(String recipientName);

void deleteByName(String recipientName);

}

**Request Check book Dao:**

package com.icinbank.dao;

import java.util.List;

import org.springframework.data.repository.CrudRepository;

import com.icinbank.domain.RequestChequeBook;

public interface RequestChequeBookDao extends CrudRepository<RequestChequeBook, Long> {

List<RequestChequeBook> findAll();

/\*RequestChequeBook findOne(Long id);\*/}

**Role Dao:**

package com.icinbank.dao;

import org.springframework.data.repository.CrudRepository;

import com.icinbank.domain.security.Role;

public interface RoleDao extends CrudRepository<Role, Integer> {

Role findByName(String name);}

**Saving Account Dao:**

package com.icinbank.dao;

import com.icinbank.domain.SavingsAccount;

import org.springframework.data.repository.CrudRepository;

public interface SavingsAccountDao extends CrudRepository<SavingsAccount, Long> {

SavingsAccount findByAccountNumber (int accountNumber);

}

**Saving Transaction Dao:**

package com.icinbank.dao;

import java.util.List;

import org.springframework.data.repository.CrudRepository;

import com.icinbank.domain.SavingsTransaction;

public interface SavingsTransactionDao extends CrudRepository<SavingsTransaction, Long> {

List<SavingsTransaction> findAll();

}

**User Dao:**

package com.icinbank.dao;

import java.util.List;

import org.springframework.data.repository.CrudRepository;

import com.icinbank.domain.User;

public interface UserDao extends CrudRepository<User, Long> {

User findByUsername(String username);

User findByEmail(String email);

List<User> findAll();

}

**Selenium Test Automation:**

**Admin Automation:**

package firsttestngpackage;

import java.util.concurrent.TimeUnit;

import org.openqa.selenium.Alert;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.chrome.ChromeDriver;

import org.testng.annotations.BeforeSuite;

import org.testng.annotations.Test;

public class AdminAutomation {

public String baseUrl = "http://localhost:4201";

WebDriver driver;

@BeforeSuite

public void launchBrowser() {

System.out.println("Launching chrome Browser");

System.setProperty("webdriver.chrome.driver", "C:\\Users\\USHA\\Downloads\\ICIN-BANK-master\\ICIN-BANK-master\\Selenium-Test-Automation\\AdminPortalAutomation-master\\resources\\chromedriver.exe");

driver = new ChromeDriver();

driver.get(baseUrl);

driver.manage().timeouts().implicitlyWait(5, TimeUnit.SECONDS);

}

@Test(priority=0) public void login\_Pass() {

driver.manage().timeouts().implicitlyWait(5, TimeUnit.SECONDS);

driver.findElement(By.name("inputUserName")).sendKeys("madhuri");

driver.findElement(By.name("password")).sendKeys("mad12345");

//Login Button

driver.findElement(By.xpath("/html/body/app-root/app-login/div/form/button")).click();

String actualUrl="http://localhost:4200/user-account";

String expectedUrl= driver.getCurrentUrl();

if(actualUrl.equalsIgnoreCase(expectedUrl)) {

System.out.println("Login Successful"); }

driver.manage().window().maximize();

}

@Test(priority=1) public void useraccount\_login\_enabling(){

//User Account Hyperlink

driver.findElement(By.xpath("/html/body/app-root/div/nav/div/ul/li[1]/a")).click();

//Enable Button

driver.findElement(By.xpath("/html/body/app-root/app-user-account/table/tbody/tr[1]/td[6]/button")).click();

System.out.println("Enabled Login Feature");

//Disable Button

driver.findElement(By.xpath("/html/body/app-root/app-user-account/table/tbody/tr[2]/td[7]/button")).click();

System.out.println("Disabled Login Feature");

}

@Test(priority=2) public void useraccount\_features(){

//Click on the dropdown

driver.findElement(By.xpath("/html/body/app-root/app-user-account/table/tbody/tr/td[9]/select")).click();

//Select the first option

driver.findElement(By.xpath("/html/body/app-root/app-user-account/table/tbody/tr/td[9]/select/option[1]")).click();

//Set button

driver.findElement(By.xpath("/html/body/app-root/app-user-account/table/tbody/tr/td[9]/button")).click();

System.out.println("User Roles Changed");

}

@Test(priority=4) public void checkbookRequests() {

//Checkbook Request Hyperlink

driver.findElement(By.xpath("/html/body/app-root/div/nav/div/ul/li[2]/a")).click();

//Confirm Request Button

driver.findElement(By.xpath("/html/body/app-root/app-checkbook-requests/table/tbody/tr[1]/td[7]/button")).click();

System.out.println("Request Confirmed");

}

@Test(priority=3) public void authorization() {

//Authorization link

driver.findElement(By.xpath("/html/body/app-root/div/nav/div/ul/li[3]/a")).click();

//Create Account Button

driver.findElement(By.xpath("/html/body/app-root/app-authorize-registration/table/tbody/tr/td[9]/button")).click();

System.out.println("Authorized");

//Cancel Button

driver.findElement(By.xpath("/html/body/app-root/app-authorize-registration/table/tbody/tr[2]/td[10]/button")).click();

System.out.println(" Not Authorized");

}

@Test(priority=5) public void logout() {

//LogOut Button

driver.findElement(By.xpath("/html/body/app-root/div/nav/div/ul/li[4]/a")).

click(); System.out.println("Logged Out");

}

@Test(priority=6) public void login\_Fail() {

driver.manage().timeouts().implicitlyWait(5, TimeUnit.SECONDS);

driver.findElement(By.name("inputUserName")).sendKeys("madhuri");

driver.findElement(By.name("password")).sendKeys("mad");

//Login Button

driver.findElement(By.xpath("/html/body/app-root/app-login/div/form/button")).click();

Alert alert = driver.switchTo().alert();

alert.accept();

String actualUrl="http://localhost:4200/user-account";

String expectedUrl= driver.getCurrentUrl();

if(!actualUrl.equalsIgnoreCase(expectedUrl)) {

System.out.println("Login UnSuccessful"); }

driver.manage().window().maximize();

}

}

**User Portal Testing:**

**Authentication:**

package Authentication;

import org.openqa.selenium.\*;

import org.openqa.selenium.chrome.\*;

import org.openqa.selenium.support.ui.ExpectedConditions;

import org.openqa.selenium.support.ui.WebDriverWait;

import java.util.concurrent.TimeUnit;

import org.junit.Test;

public class Login {

@Test

public void LoginTest() throws InterruptedException {

System.setProperty("webdriver.chrome.driver", "C:\\Users\\USHA\\Downloads\\ICIN-BANK-master\\ICIN-BANK-master\\Selenium-Test-Automation\\AdminPortalAutomation-master\\resources\\chromedriver.exe");

WebDriver driver = new ChromeDriver();

driver.get("http://localhost:4200/login");

Thread.sleep(5000);

driver.manage().timeouts().implicitlyWait(14, TimeUnit.SECONDS);

driver.findElement(By.xpath("/html/body/app-root/app-login/div/form/div[1]/input")).sendKeys("Novina");

driver.findElement(By.xpath("/html/body/app-root/app-login/div/form/div[2]/input")).sendKeys("123456p");

driver.findElement(By.xpath("/html/body/app-root/app-login/div/form/div[3]/button")).click();

try

{

WebDriverWait wait=new WebDriverWait(driver, 14);

wait.until(ExpectedConditions.visibilityOfElementLocated(By.xpath("http://localhost:4200/home")));

System.out.println("Login Successfull");

}

catch(Exception e)

{

System.out.println("Error in browser!!\nPlease have a look");

}

Thread.sleep(5000);

driver.quit();

}

}

**User Actions:**

**Check Book Request:**

package UserActions;

import java.util.concurrent.TimeUnit;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.chrome.ChromeDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

import org.openqa.selenium.support.ui.ExpectedConditions;

import org.openqa.selenium.support.ui.Select;

import org.openqa.selenium.support.ui.WebDriverWait;

import org.testng.annotations.Test;

public class ChequeBookRequest {

@Test

public void chequeBookRequest() throws InterruptedException {

System.setProperty("webdriver.chrome.driver", "C:\\Users\\USHA\\Downloads\\ICIN-BANK-master\\ICIN-BANK-master\\Selenium-Test-Automation\\AdminPortalAutomation-master\\resources\\chromedriver.exe");

WebDriver driver = new ChromeDriver();

driver.get("http://localhost:4200/login");

Thread.sleep(5000);

driver.manage().timeouts().implicitlyWait(14, TimeUnit.SECONDS);

driver.findElement(By.xpath(

"/html/body/app-root/app-login/div/form/div[1]/input")).sendKeys("Novina");

driver.findElement(By.xpath(

"/html/body/app-root/app-login/div/form/div[2]/input")).sendKeys("Novina123")

;

driver.findElement(By.xpath(

"/html/body/app-root/app-login/div/form/div[3]/button")).click();

try

{

WebDriverWait wait=new WebDriverWait(driver, 14);

wait.until(ExpectedConditions.visibilityOfElementLocated(By.xpath(

"/html/body/app-root/app-home/div[1]/h2")));

System.out.println("Login Successfull");

driver.findElement(By.xpath("/html/body/app-root/nav/ul/li[4]/a")).click();

driver.findElement(By.xpath("/html/body/app-root/app-cheque-book-request/div/div[2]/select")).click();

driver.findElement(By.xpath("/html/body/app-root/app-cheque-book-request/div/div[2]/select/option[1]")).click();

driver.findElement(By.xpath("/html/body/app-root/app-cheque-book-request/div/form/button")).click();

System.out.println("Cheque Book Issued Successfully!!");

// driver.findElement(By.xpath("/html/body/app-root/nav/ul/li[5]/div/a[2]")).click();

// wait.until(ExpectedConditions.visibilityOfElementLocated(By.xpath("/html/body/app-root/app-login/div/form/h3")));

// System.out.println("Signed Out");

}

catch(Exception e)

{

System.out.println("Error in browser!!\nPlease have a look");

}

Thread.sleep(5000);

driver.quit();

}

}

**Edit Profile:**

package UserActions;

import java.util.concurrent.TimeUnit;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.chrome.ChromeDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

import org.openqa.selenium.support.ui.ExpectedConditions;

import org.openqa.selenium.support.ui.Select;

import org.openqa.selenium.support.ui.WebDriverWait;

import org.testng.annotations.Test;

public class EditProfile {

@Test

public void EditPorfile() throws InterruptedException {

System.setProperty("webdriver.chrome.driver", "C:\\Users\\USHA\\Downloads\\ICIN-BANK-master\\ICIN-BANK-master\\Selenium-Test-Automation\\AdminPortalAutomation-master\\resources\\chromedriver.exe");

WebDriver driver= new ChromeDriver();

driver.get("http://localhost:4200/home");

/\*

\* System.setProperty(

\* "webdriver.chrome.driver","D:\\Novina\_BNP\\Simplilearn\_Projects\\Project 4\\Chrome Driver\\chromedriver.exe"

\* ); WebDriver driver = new ChromeDriver();

\*

\* driver.get("http://localhost:4200/login");

\*/

Thread.sleep(5000);

try

{

/\*

\* WebDriverWait wait=new WebDriverWait(driver, 14);

\* wait.until(ExpectedConditions.visibilityOfElementLocated(By.xpath(

\* "/html/body/app-root/app-home/div[1]/h2")));

\* System.out.println("Login Successfull");

\*/

driver.manage().timeouts().implicitlyWait(14, TimeUnit.SECONDS);

driver.findElement(By.xpath("//\*[@id=\"dropdown04\"]")).click();

driver.findElement(By.xpath("/html/body/app-root/nav/div/ul/li[5]/div/a[1]")).click();

driver.findElement(By.xpath("/html/body/app-root/app-edit-profile/div[1]/form/div/div[1]/input")).sendKeys("7666854389");

driver.findElement(By.xpath("/html/body/app-root/app-edit-profile/div[1]/form/div/div[2]/input")).sendKeys("Mumbai");

driver.findElement(By.xpath("/html/body/app-root/app-edit-profile/div[1]/form/div/div[2]/div[1]/input")).sendKeys("novinarayudu.97@gmail.com");

driver.findElement(By.xpath("/html/body/app-root/app-edit-profile/div[1]/form/div/div[2]/div[2]/input")).sendKeys("123P1234");

driver.findElement(By.xpath("/html/body/app-root/app-edit-profile/div[1]/form/div/div[2]/div[3]/input")).sendKeys("123P1234");

//driver.findElement(By.xpath("/html/body/app-root/app-edit-profile/div[1]/form/div/div[3]/button")).click();

System.out.println("Profile edited");

driver.manage().timeouts().implicitlyWait(14, TimeUnit.SECONDS);

driver.findElement(By.xpath("//\*[@id=\"dropdown04\"]")).click();

driver.findElement(By.xpath("/html/body/app-root/nav/div/ul/li[5]/div/a[2]")).click();

//wait.until(ExpectedConditions.visibilityOfElementLocated(By.xpath("/html/body/app-root/app-login/div/form/h3")));

System.out.println("Signed Out");

}

catch(Exception e)

{

System.out.println("Error in browser!!\nPlease have a look");

}

Thread.sleep(5000);

}

}

**Register:**

package UserActions;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.WebElement;

import org.openqa.selenium.chrome.ChromeDriver;

import org.openqa.selenium.support.ui.ExpectedConditions;

import org.openqa.selenium.support.ui.Select;

import org.openqa.selenium.support.ui.WebDriverWait;

import org.testng.annotations.Test;

public class Register {

@Test

public void register() throws InterruptedException {

System.setProperty("webdriver.chrome.driver", "C:\\Users\\USHA\\Downloads\\ICIN-BANK-master\\ICIN-BANK-master\\Selenium-Test-Automation\\AdminPortalAutomation-master\\resources\\chromedriver.exe");

WebDriver driver = new ChromeDriver();

driver.get("http://localhost:4200/login");

Thread.sleep(5000);

try {

//WebDriverWait wait=new WebDriverWait(driver, 14);

driver.findElement(By.xpath("/html/body/app-root/app-login/div/form/div[3]/a")).click();

driver.findElement(By.xpath("/html/body/app-root/app-register/div/form/div/div[1]/input")).sendKeys("Novina");

driver.findElement(By.xpath("/html/body/app-root/app-register/div/form/div/div[2]/input")).sendKeys("Rayudu");

driver.findElement(By.xpath("/html/body/app-root/app-register/div/form/div/div[3]/input")).sendKeys("Novina");

driver.findElement(By.xpath("/html/body/app-root/app-register/div/form/div/div[4]/input")).sendKeys("123456p");

driver.findElement(By.xpath("/html/body/app-root/app-register/div/form/div/div[5]/input")).sendKeys("17/08/2020");

driver.findElement(By.xpath("/html/body/app-root/app-register/div/form/div/div[6]/input")).sendKeys("7666854389");

driver.findElement(By.xpath("/html/body/app-root/app-register/div/form/div/div[7]/input")).sendKeys("Mumbai");

Select id=new Select(driver.findElement(By.xpath("/html/body/app-root/app-register/div/form/div/div[8]/select")));

id.selectByIndex(2);

WebElement fileInput = driver.findElement(By.xpath("/html/body/app-root/app-register/div/form/div/div[9]/input"));

fileInput.sendKeys("C:\\Users\\USHA\\Desktop\\MAVURI USHASRI\\KYC\\demo.txt");

driver.findElement(By.xpath("/html/body/app-root/app-register/div/form/div/div[10]/input")).sendKeys("abcde1234");

driver.findElement(By.xpath("/html/body/app-root/app-register/div/form/div/div[11]/input")).sendKeys("novinarayudu.97@gmail.com");

driver.findElement(By.xpath("/html/body/app-root/app-register/div/form/div/div[12]/button")).click();

Thread.sleep(5000);

//wait.until(ExpectedConditions.visibilityOfElementLocated(By.xpath("/html/body/app-root/app-login/div/form/h3")));

System.out.println("Registration Successfull");

}

catch(Exception e) {

System.out.println("Erro in web browser\nPlease have a look");

}

Thread.sleep(5000);

driver.quit();

}

}

**Transaction History:**

package UserActions;

import java.util.concurrent.TimeUnit;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.chrome.ChromeDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

import org.openqa.selenium.support.ui.ExpectedConditions;

import org.openqa.selenium.support.ui.WebDriverWait;

import org.testng.annotations.Test;

public class TransactionHistory {

@Test

public void TransactionHistory() throws InterruptedException {

System.setProperty("webdriver.chrome.driver", "C:\\Users\\USHA\\Downloads\\ICIN-BANK-master\\ICIN-BANK-master\\Selenium-Test-Automation\\AdminPortalAutomation-master\\resources\\chromedriver.exe");

WebDriver driver = new ChromeDriver();

driver.get("http://localhost:4200/home");

/\*

\* System.setProperty("webdriver.chrome.driver",

\* "D:\\Novina\_BNP\\Simplilearn\_Projects\\Project 4\\Chrome Driver\\chromedriver.exe"

\* ); WebDriver driver = new ChromeDriver();

\*

\* driver.get("http://localhost:4200/login");

\*/

Thread.sleep(5000);

/\*

\* driver.manage().timeouts().implicitlyWait(14, TimeUnit.SECONDS);

\* driver.findElement(By.xpath(

\* "/html/body/app-root/app-login/div/form/div[1]/input")).sendKeys("Novina");

\* driver.findElement(By.xpath(

\* "/html/body/app-root/app-login/div/form/div[2]/input")).sendKeys("Novina123")

\* ;

\*

\* driver.findElement(By.xpath(

\* "/html/body/app-root/app-login/div/form/div[3]/button")).click();

\*/

try

{

/\*

\* WebDriverWait wait=new WebDriverWait(driver, 14);

\* wait.until(ExpectedConditions.visibilityOfElementLocated(By.xpath(

\* "/html/body/app-root/app-home/div[1]/h2")));

\* System.out.println("Login Successfull");

\*/

driver.manage().timeouts().implicitlyWait(14, TimeUnit.SECONDS);

driver.findElement(By.xpath("/html/body/app-root/nav/ul/li[1]/a")).click();

System.out.println("Transaction History Displayed");

driver.findElement(By.xpath("//\*[@id=\"navbardrop\"]")).click();

driver.findElement(By.xpath("/html/body/app-root/nav/ul/li[5]/div/a[2]")).click();

// wait.until(ExpectedConditions.visibilityOfElementLocated(By.xpath("/html/body/app-root/app-login/div/form/h3")));

System.out.println("Signed Out");

}

catch(Exception e)

{

System.out.println("Error in browser!!\nPlease have a look");

}

Thread.sleep(5000);

driver.quit();

}

}

**Transfer history:**

package UserActions;

import java.util.concurrent.TimeUnit;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.chrome.ChromeDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

import org.openqa.selenium.support.ui.ExpectedConditions;

import org.openqa.selenium.support.ui.WebDriverWait;

import org.testng.annotations.Test;

public class TransferHistory {

@Test

public void TransactionHistory() throws InterruptedException {

System.setProperty("webdriver.chrome.driver", "C:\\Users\\USHA\\Downloads\\ICIN-BANK-master\\ICIN-BANK-master\\Selenium-Test-Automation\\AdminPortalAutomation-master\\resources\\chromedriver.exe");

WebDriver driver = new ChromeDriver();

driver.get("http://localhost:4200/home");

Thread.sleep(5000);

driver.manage().timeouts().implicitlyWait(14, TimeUnit.SECONDS);

/\*

\* driver.findElement(By.xpath(

\* "/html/body/app-root/app-login/div/form/div[1]/input")).sendKeys("Novina");

\* driver.findElement(By.xpath(

\* "/html/body/app-root/app-login/div/form/div[2]/input")).sendKeys("Novina123")

\* ;

\*

\* driver.findElement(By.xpath(

\* "/html/body/app-root/app-login/div/form/div[3]/button")).click();

\*/

try

{

/\*

\* WebDriverWait wait=new WebDriverWait(driver, 14);

\* wait.until(ExpectedConditions.visibilityOfElementLocated(By.xpath(

\* "/html/body/app-root/app-home/div[1]/h2")));

\* System.out.println("Login Successfull");

\*/

driver.manage().timeouts().implicitlyWait(14, TimeUnit.SECONDS);

driver.findElement(By.xpath("/html/body/app-root/nav/ul/li[2]/a")).click();

System.out.println("Transfer History Displayed");

// driver.findElement(By.xpath("/html/body/app-root/nav/ul/li[5]/div/a[2]")).click();

// wait.until(ExpectedConditions.visibilityOfElementLocated(By.xpath("/html/body/app-root/app-login/div/form/h3")));

// System.out.println("Signed Out");

}

catch(Exception e)

{

System.out.println("Error in browser!!\nPlease have a look");

}

Thread.sleep(5000);

driver.quit();

}

}

**Transfer Money:**

package UserActions;

import java.util.concurrent.TimeUnit;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.chrome.ChromeDriver;

import org.openqa.selenium.support.ui.ExpectedConditions;

import org.openqa.selenium.support.ui.WebDriverWait;

import org.testng.annotations.Test;

public class TransferMoney {

@Test

public void TransferMoney() throws InterruptedException{

System.setProperty("webdriver.chrome.driver", "C:\\Users\\USHA\\Downloads\\ICIN-BANK-master\\ICIN-BANK-master\\Selenium-Test-Automation\\AdminPortalAutomation-master\\resources\\chromedriver.exe");

WebDriver driver = new ChromeDriver();

driver.get("http://localhost:4200/login");

Thread.sleep(5000);

driver.manage().timeouts().implicitlyWait(14, TimeUnit.SECONDS);

driver.findElement(By.xpath("/html/body/app-root/app-login/div/form/div[1]/input")).sendKeys("Novina");

driver.findElement(By.xpath("/html/body/app-root/app-login/div/form/div[2]/input")).sendKeys("Novina123");

driver.findElement(By.xpath("/html/body/app-root/app-login/div/form/div[3]/button")).click();

try

{

WebDriverWait wait=new WebDriverWait(driver, 14);

wait.until(ExpectedConditions.visibilityOfElementLocated(By.xpath("/html/body/app-root/app-home/div[1]/h2")));

System.out.println("Login Successfull");

driver.manage().timeouts().implicitlyWait(14, TimeUnit.SECONDS);

driver.findElement(By.xpath("/html/body/app-root/nav/ul/li[3]/a")).click();

driver.manage().timeouts().implicitlyWait(14, TimeUnit.SECONDS);

driver.findElement(By.xpath("/html/body/app-root/app-transfer-between-accounts/div/form/div[3]/input")).sendKeys("123456789");

driver.findElement(By.xpath("/html/body/app-root/app-transfer-between-accounts/div/form/div[4]/input")).sendKeys("1234");

driver.findElement(By.xpath("/html/body/app-root/app-transfer-between-accounts/div/form/div[5]/input")).sendKeys("1000");

Thread.sleep(5000);

driver.manage().timeouts().implicitlyWait(14, TimeUnit.SECONDS);

driver.findElement(By.xpath("/html/body/app-root/app-transfer-between-accounts/div/form/div[6]/button")).click();

wait.until(ExpectedConditions.visibilityOfElementLocated(By.xpath("/html/body/app-root/app-home/div[1]/h2")));

System.out.println("Transfer Money Successfull");

// driver.findElement(By.xpath("/html/body/app-root/nav/ul/li[5]/div/a[2]")).click();

// wait.until(ExpectedConditions.visibilityOfElementLocated(By.xpath("/html/body/app-root/app-login/div/form/h3")));

// System.out.println("Signed Out");

}

catch(Exception e)

{

System.out.println("Error in browser!!\nPlease have a look");

}

Thread.sleep(5000);

driver.quit();

}

}

**Pom.xml:**

<?xml version="1.0" encoding="UTF-8"?>

<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 https://maven.apache.org/xsd/maven-4.0.0.xsd">

<modelVersion>4.0.0</modelVersion>

<parent>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-parent</artifactId>

<version>2.3.1.RELEASE</version>

<relativePath/> <!-- lookup parent from repository -->

</parent>

<groupId>com.example</groupId>

<artifactId>demo</artifactId>

<version>0.0.1-SNAPSHOT</version>

<name>ICINBank</name>

<description>ICIN Bank: Online Banking</description>

<properties>

<java.version>1.8</java.version>

<maven-jar-plugin.version>3.1.1</maven-jar-plugin.version>

</properties>

<dependencies>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-web</artifactId>

</dependency>

<!-- https://mvnrepository.com/artifact/org.springframework.boot/spring-boot-starter-data-jpa -->

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-data-jpa</artifactId>

</dependency>

<!-- https://mvnrepository.com/artifact/org.seleniumhq.selenium/selenium-java -->

<dependency>

<groupId>org.seleniumhq.selenium</groupId>

<artifactId>selenium-java</artifactId>

<version>3.141.59</version>

</dependency>

<dependency>

<groupId>org.hibernate</groupId>

<artifactId>hibernate-core</artifactId>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-thymeleaf</artifactId>

</dependency>

<!-- https://mvnrepository.com/artifact/org.hibernate.javax.persistence/hibernate-jpa-2.0-api -->

<dependency>

<groupId>org.hibernate.javax.persistence</groupId>

<artifactId>hibernate-jpa-2.1-api</artifactId>

<version>1.0.0.Final</version>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-jdbc</artifactId>

</dependency>

<!-- https://mvnrepository.com/artifact/org.springframework.security/spring-security-core -->

<dependency>

<groupId>org.springframework.security</groupId>

<artifactId>spring-security-core</artifactId>

</dependency>

<!-- https://mvnrepository.com/artifact/org.springframework.boot/spring-boot-starter-test -->

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-test</artifactId>

<scope>test</scope>

</dependency>

<dependency>

<groupId>org.springframework.security</groupId>

<artifactId>spring-security-web</artifactId>

</dependency>

<!-- https://mvnrepository.com/artifact/org.springframework.security/spring-security-config -->

<dependency>

<groupId>org.springframework.security</groupId>

<artifactId>spring-security-config</artifactId>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-cache</artifactId>

</dependency>

<dependency>

<groupId>net.sf.ehcache</groupId>

<artifactId>ehcache-core</artifactId>

<version>2.6.10</version>

</dependency>

<dependency>

<groupId>mysql</groupId>

<artifactId>mysql-connector-java</artifactId>

</dependency>

</dependencies>

<build>

<plugins>

<plugin>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-maven-plugin</artifactId>

</plugin>

</plugins>

</build>

</project>

**testing.xml:**

<?xml version="1.0" encoding="UTF-8"?>

<!DOCTYPE suite SYSTEM "http://testng.org/testng-1.0.dtd">

<suite name="Suite">

<test thread-count="5" name="Test">

<classes>

<class name="com.icinbank.RegistrationForm"/>

<class name="com.icinbank.Profiledisplay"/>

<class name="com.icinbank.Deposit"/>

<class name="com.icinbank.RequestChequebook"/>

<class name="com.icinbank.TransferbtwAccounts"/>

<class name="com.icinbank.LoginForm"/>

<class name="com.icinbank.AddRecipient"/>

<class name="com.icinbank.Withdraw"/>

</classes>

</test> <!-- Test -->

</suite> <!-- Suite -->

**Pom.xml1:**

project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/xsd/maven-4.0.0.xsd">

<modelVersion>4.0.0</modelVersion>

<groupId>AdminPortalAutomation</groupId>

<artifactId>AdminPortalAutomation</artifactId>

<version>0.0.1-SNAPSHOT</version>

<dependencies>

<dependency>

<groupId>org.testng</groupId>

<artifactId>testng</artifactId>

<version>6.14.3</version>

<scope>test</scope>

</dependency>

<dependency>

<groupId>org.seleniumhq.selenium</groupId>

<artifactId>selenium-java</artifactId>

<version>3.141.59</version>

</dependency>

<!-- https://mvnrepository.com/artifact/org.webjars/jquery -->

<dependency>

<groupId>org.webjars</groupId>

<artifactId>jquery</artifactId>

<version>3.5.1</version>

</dependency>

</dependencies>

<build>

<sourceDirectory>src</sourceDirectory>

<plugins>

<plugin>

<groupId>org.apache.maven.plugins</groupId>

<artifactId>maven-compiler-plugin</artifactId>

<version>3.8.1</version>

<configuration>

<source>1.8</source>

<target>1.8</target>

<fork>true</fork>

<executable>C:\Program Files\Java\jdk1.8.0\_171\bin\javac.exe</executable>

</configuration>

</plugin>

<plugin>

<groupId>org.apache.maven.plugins</groupId>

<artifactId>maven-surefire-plugin</artifactId>

<version>3.0.0-M3</version>

</plugin>

</plugins>

</build>

</project>

**Pom.xml2:**

<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 https://maven.apache.org/xsd/maven-4.0.0.xsd">

<modelVersion>4.0.0</modelVersion>

<groupId>UserPortalTesting</groupId>

<artifactId>UserPortalTesting</artifactId>

<version>0.0.1-SNAPSHOT</version>

<name>UserPortalAuthentication</name>

<description>User portal testing</description>

<dependencies>

<dependency>

<groupId>org.seleniumhq.selenium</groupId>

<artifactId>selenium-java</artifactId>

<version>3.141.59</version>

</dependency>

<dependency>

<groupId>org.webjars</groupId>

<artifactId>jquery</artifactId>

<version>3.5.1</version>

</dependency>

<dependency>

<groupId>junit</groupId>

<artifactId>junit</artifactId>

<version>4.12</version>

<scope>test</scope>

</dependency>

<dependency>

<groupId>org.slf4j</groupId>

<artifactId>slf4j-api</artifactId>

<version>1.7.5</version>

</dependency>

<dependency>

<groupId>org.slf4j</groupId>

<artifactId>slf4j-log4j12</artifactId>

<version>1.7.5</version>

</dependency>

</dependencies>

</project>