Bank Management – Case Study

Various SpringBoot dependencies are injected in pom.xml to perform spring boot functions

BankManagementApplication.java | BankManagement/pom.xml

```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>2.5.0</version>
        <relativePath/> <!-- lookup parent from repository -->
    </parent>
    <groupId>com.wipro</groupId>
    <artifactId>BankManagement</artifactId>
    <version>0.0.1-SNAPSHOT</version>
    <name>BankManagement</name>
    <description>Demo project for Spring Boot</description>
    <properties>
        <java.version>1.8</java.version>
    </properties>
    <dependencies>
        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-starter-web</artifactId>
        </dependency>

        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-starter-test</artifactId>
            <scope>test</scope>
        </dependency>
    </dependencies>

    <build>
        <plugins>
            <plugin>
                <groupId>org.springframework.boot</groupId>
                <artifactId>spring-boot-maven-plugin</artifactId>
            </plugin>
        </plugins>
    </build>

</project>
```

BankManagementAppilcation main class is created to initialize @SpringBootApplication Annotation.

BankManagementApplication.java | BankManagement/pom.xml

```java
package com.wipro.BankManagement;

import org.springframework.boot.SpringApplication;

@SpringBootApplication
public class BankManagementApplication {

    public static void main(String[] args) {
        SpringApplication.run(BankManagementApplication.class, args);
    }

}
```

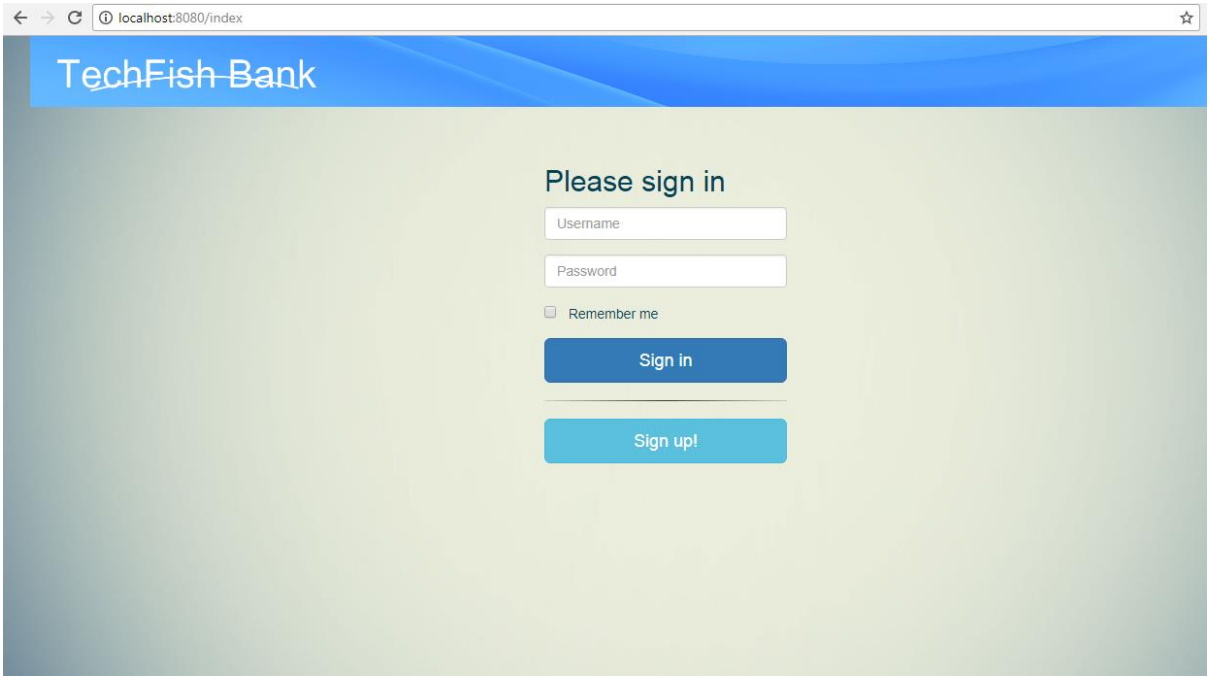
HomeController is used to get the page URL http://localhost:8080/index to get the login page.

The URL is mapped using @RequestMapping Annotation

BankManagementApplication.java BankManagement/pom.xml

```java
package com.wipro.BankManagement.controller;

import org.springframework.stereotype.Controller;

@Controller
public class HomeController {
    @RequestMapping("/")
    public String home() {
        return "redirect:/index";
    }

    @RequestMapping("/index")
    public String index() {
        return "index";
    }



}

```

The first login page of the project



User class in the project is used to store the details of the customer in the Lists

Such as userID, username, password, firstName, LastName, email, phone

```java
package com.wipro.BankManagement.domain;

import java.util.List;

public class User {
    private Long userId;
    private String username;
    private String password;
    private String firstName;
    private String lastName;
    private String email;
    private String phone;

    private boolean enabled = true;


    private PrimaryAccount primaryAccount;

    private SavingsAccount savingsAccount;

    private List<Appointment> appointmentList;

    private List<Recipient> recipientList;

    public Long getUserId() {
        return userId;
    }

    public void setUserId(Long userId) {
        this.userId = userId;
    }

    public String getUsername() {
        return username;
    }

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

    public String getPassword() {
        return password;
    }

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

    public String getFirstName() {
        return firstName;
    }

    public void setFirstName(String firstName) {
```

```java
        this.firstName = firstName;
    }

    public String getLastName() {
        return lastName;
    }

    public void setLastName(String lastName) {
        this.lastName = lastName;
    }

    public String getEmail() {
        return email;
    }

    public void setEmail(String email) {
        this.email = email;
    }

    public String getPhone() {
        return phone;
    }

    public void setPhone(String phone) {
        this.phone = phone;
    }

    public boolean isEnabled() {
        return enabled;
    }

    public void setEnabled(boolean enabled) {
        this.enabled = enabled;
    }

    public PrimaryAccount getPrimaryAccount() {
        return primaryAccount;
    }

    public void setPrimaryAccount(PrimaryAccount primaryAccount) {
        this.primaryAccount = primaryAccount;
    }

    public SavingsAccount getSavingsAccount() {
        return savingsAccount;
    }

    public void setSavingsAccount(SavingsAccount savingsAccount) {
        this.savingsAccount = savingsAccount;
    }

```

```java
    public List<Appointment> getAppointmentList() {
        return appointmentList;
    }

    public void setAppointmentList(List<Appointment> appointmentList) {
        this.appointmentList = appointmentList;
    }

    public List<Recipient> getRecipientList() {
        return recipientList;
    }

    public void setRecipientList(List<Recipient> recipientList) {
        this.recipientList = recipientList;
    }

    @Override
    public String toString() {
        return "User [userId=" + userId + ", username=" + username + ", password=" + password + ", firstName="
                + firstName + ", lastName=" + lastName + ", email=" + email + ", phone=" + phone + ", enabled="
                + enabled + "]";
    }



}
```

Various classes SavingsAccount, SvaingsTransaction, Reciepent are used to perform the transaction among the accounts.

BankManagementApplicationTest is the testing class which is used to run the Junit testing using `@test` Annotation

```
package com.wipro.BankManagement;

import org.junit.jupiter.api.Test;

@SpringBootTest
class BankManagementApplicationTests {

    @Test
    void contextLoads() {
    }

}
```

Finished after 4.978 seconds

Runs: 1/1 Errors: 0 Failures: 0

BankManagementApplicationTests [Runner: JUnit 5] (0.606 s)