



# Software design specification document

2022

## Project Team

ID	Name	Email
20200387	Kariman Ayman Abd El Latif	<a href="mailto:karimanaymankaram@gmail.com">karimanaymankaram@gmail.com</a>
20200076	Esraa Mohamed Abd El Sattar	<a href="mailto:esrramhumd@gmail.com">esrramhumd@gmail.com</a>
20200006	Ibrahim Yasser Ibrahim	<a href="mailto:ibrahimyasser450@gmail.com">ibrahimyasser450@gmail.com</a>
20200313	Abdalrhman Hassan Abo-Elghit	<a href="mailto:body0550@gmail.com">body0550@gmail.com</a>



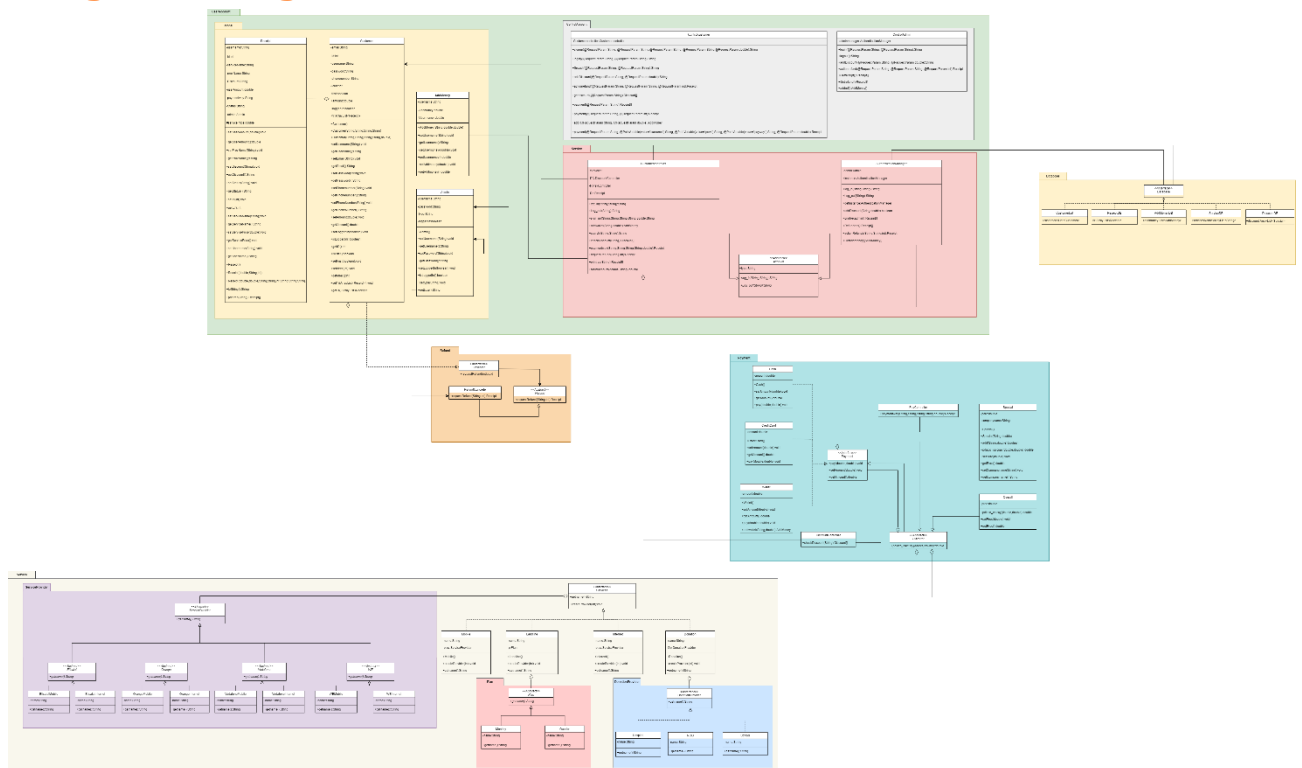
# CS352: Sprint SDS– Team Name, Proj Name

## SDS document

### Contents

Class diagram design .....	2
Class diagram Explanation .....	3
Sequence diagram design .....	4
Github repository link .....	16

### Class diagram design





# CS352: Sprint SDS– **Team Name, Proj Name**

## SDS document

### Class diagram Explanation

Design Pattern	Participating Classes
Abstract Factory	<ul style="list-style-type: none"> <li>• Servicee</li> <li>• Landline</li> <li>• Mobile</li> <li>• Internet</li> <li>• Donation</li> <li>• ServiceProvider <ul style="list-style-type: none"> <li>• Etisalat</li> </ul> </li> <li>• EtisalatInternet</li> <li>• EtisalatMobile <ul style="list-style-type: none"> <li>• WE</li> </ul> </li> <li>• WEInternet</li> <li>• WEMobile <ul style="list-style-type: none"> <li>• Orange</li> </ul> </li> <li>• OrangeInternet</li> <li>• OrangeMobile <ul style="list-style-type: none"> <li>• Vodafone</li> </ul> </li> <li>• VodafoneInternet</li> <li>• VodafoneMobile <ul style="list-style-type: none"> <li>• Plan</li> <li>• Monthly</li> <li>• Quarterly</li> </ul> </li> <li>• DonationProvider <ul style="list-style-type: none"> <li>• NGO</li> <li>• Hospital</li> <li>• School</li> </ul> </li> </ul>
Observer	<ul style="list-style-type: none"> <li>• Observer</li> <li>• Refund</li> <li>• RefundConcrete</li> </ul>
Singleton	<ul style="list-style-type: none"> <li>• Database</li> </ul> <ol style="list-style-type: none"> <li>1. CustomerDB</li> <li>2. ReceiptDB</li> <li>3. AddMoneyDB</li> <li>4. DiscountDB</li> <li>5. ServiceDB</li> </ol>
Singleton	<ul style="list-style-type: none"> <li>• Admin</li> </ul>



# CS352: Sprint SDS– **Team Name, Proj Name**

## SDS document

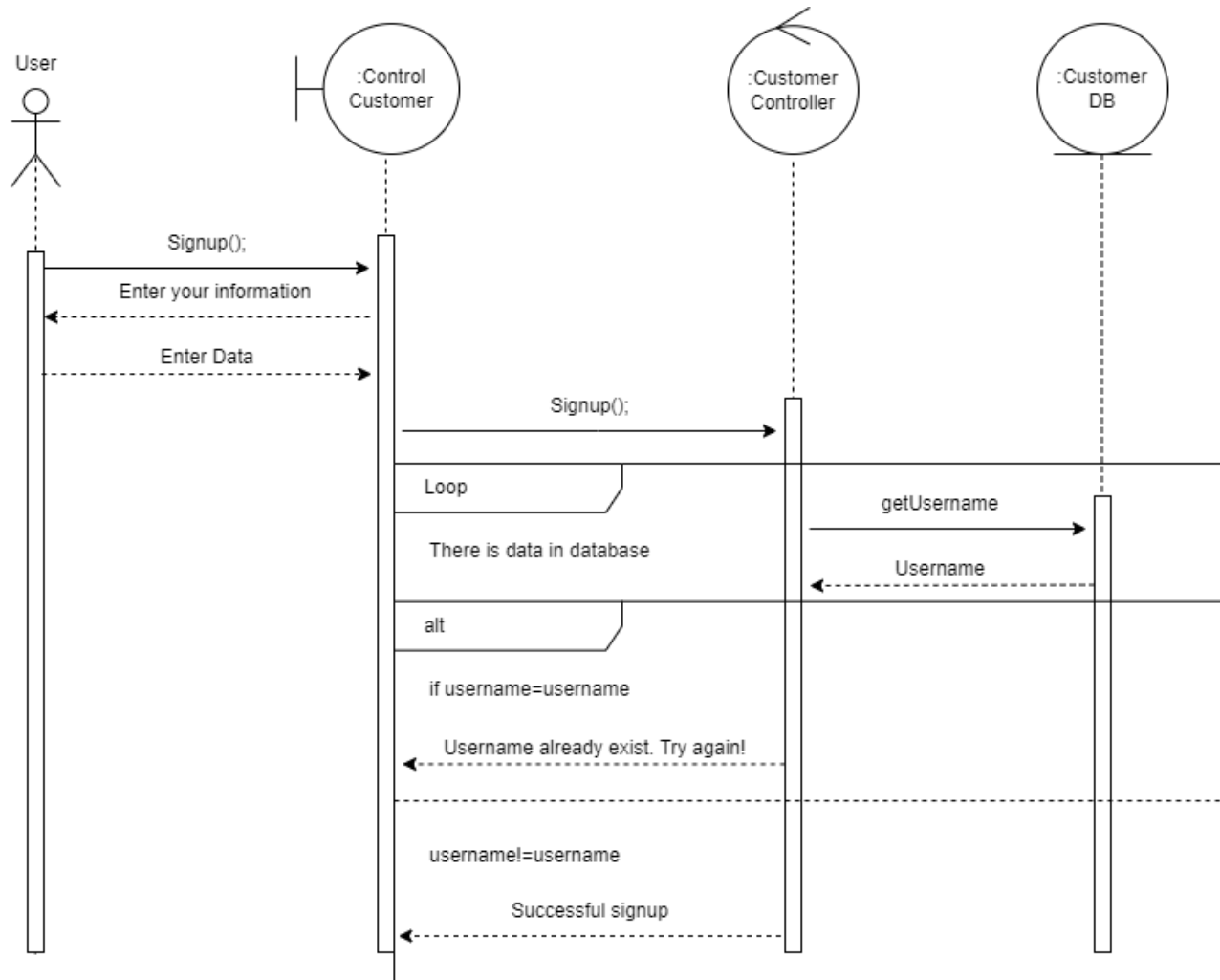
Strategy	<ul style="list-style-type: none"> <li>• Payment <ul style="list-style-type: none"> <li>• Cash</li> <li>• CreditCard</li> <li>• Wallet</li> </ul> </li> </ul>
Strategy	<ul style="list-style-type: none"> <li>• Account</li> <li>• AuthenticationManager</li> <li>• CustomerController</li> </ul>
MVC	<ul style="list-style-type: none"> <li>• Package ControlAccount <ul style="list-style-type: none"> <li>• ControlAdmin</li> <li>• ControlCustomer</li> </ul> </li> <li>• Package Model <ul style="list-style-type: none"> <li>• AddMoney <ul style="list-style-type: none"> <li>• Admin</li> <li>• Customer</li> <li>• Receipt</li> </ul> </li> </ul> </li> <li>• Package Service <ul style="list-style-type: none"> <li>• Account</li> </ul> </li> <li>• AuthenticationManager</li> <li>• CustomerController</li> </ul>
Decorator	<ul style="list-style-type: none"> <li>• Payment</li> <li>• Discount</li> <li>• Overall</li> <li>• Special</li> </ul>



# CS352: Sprint SDS– **Team Name, Proj Name**

## SDS document

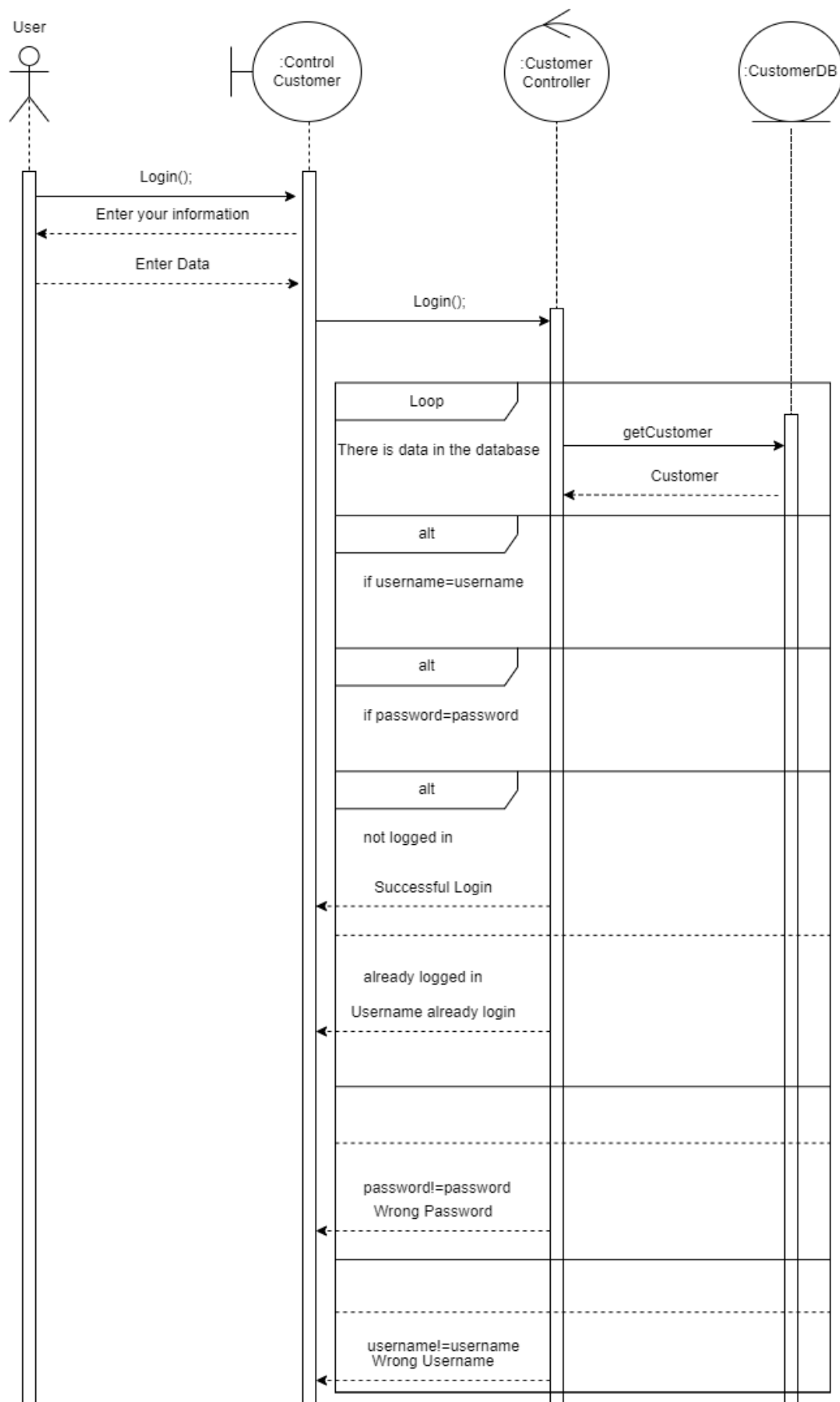
### Sequence diagram design





# CS352: Sprint SDS- Team Name, Proj Name

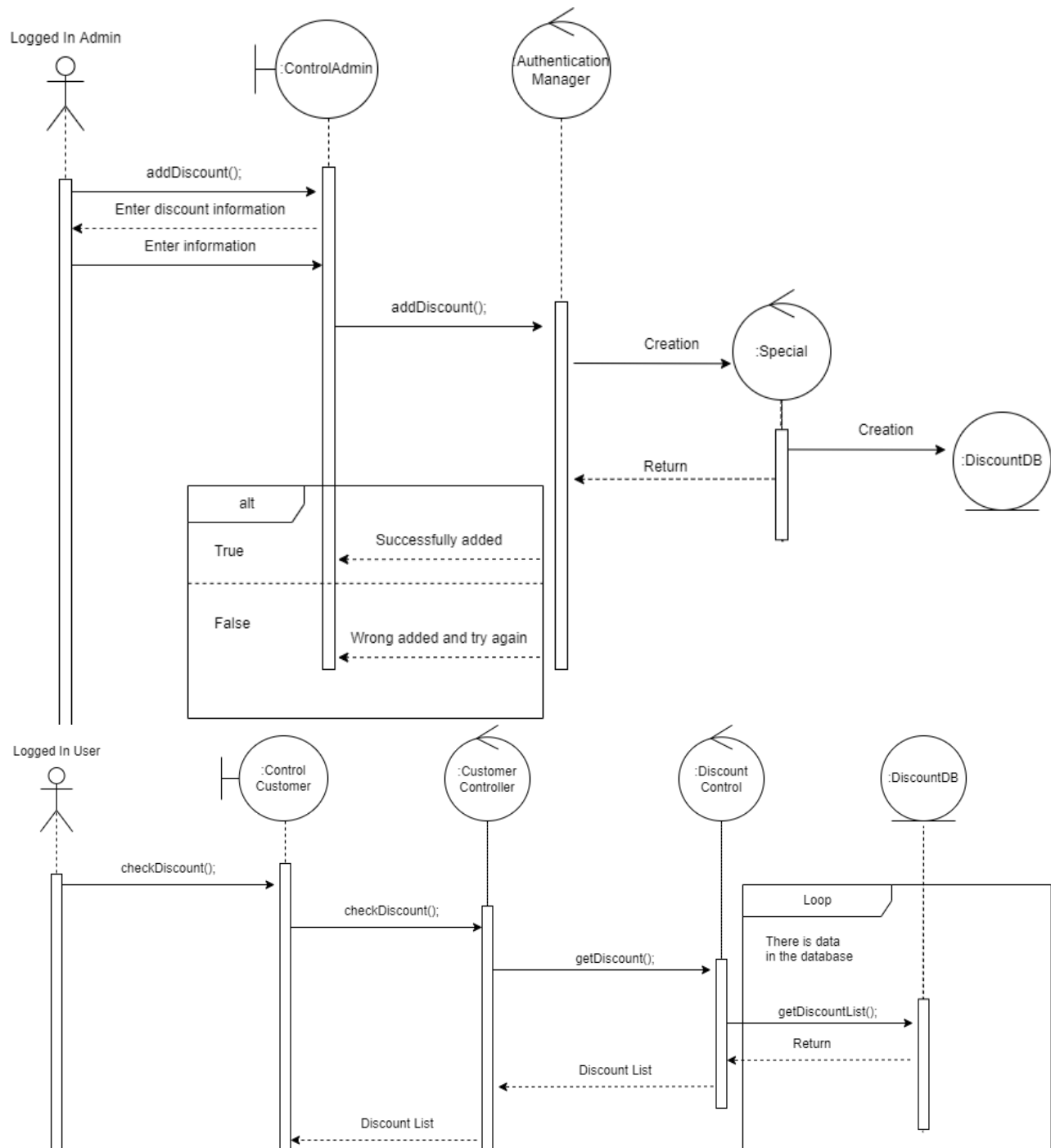
## SDS document





# CS352: Sprint SDS – Team Name, Proj Name

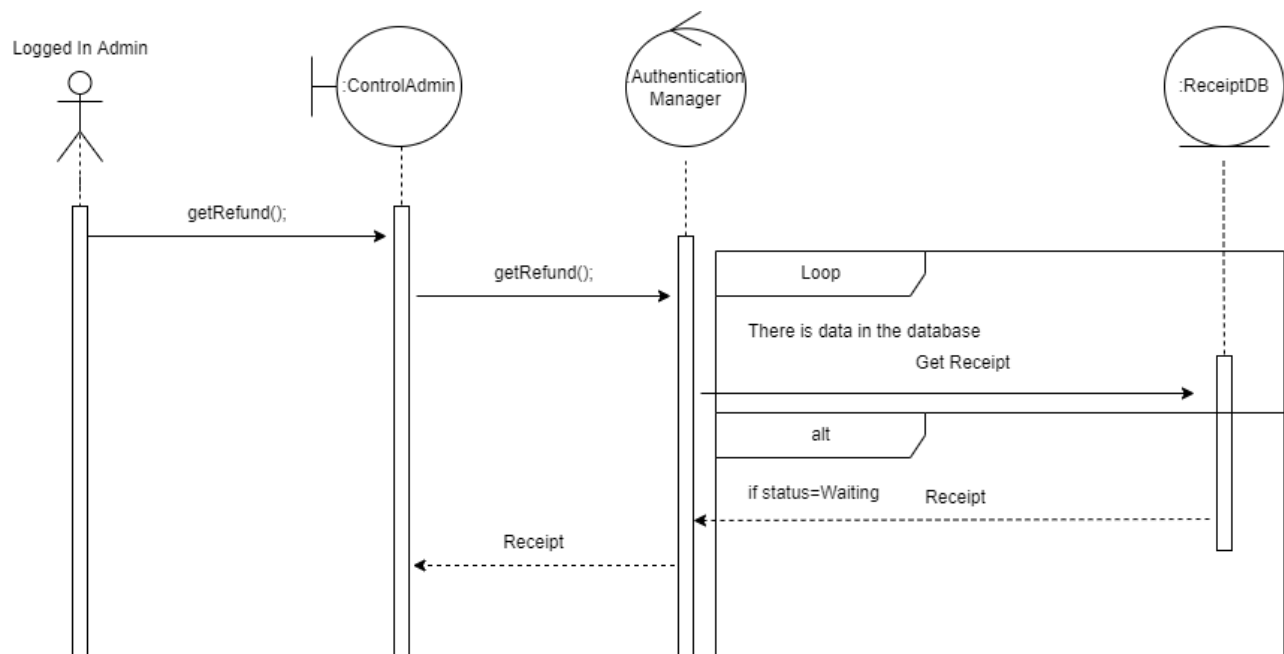
## SDS document





# CS352: Sprint SDS – Team Name, Proj Name

## SDS document

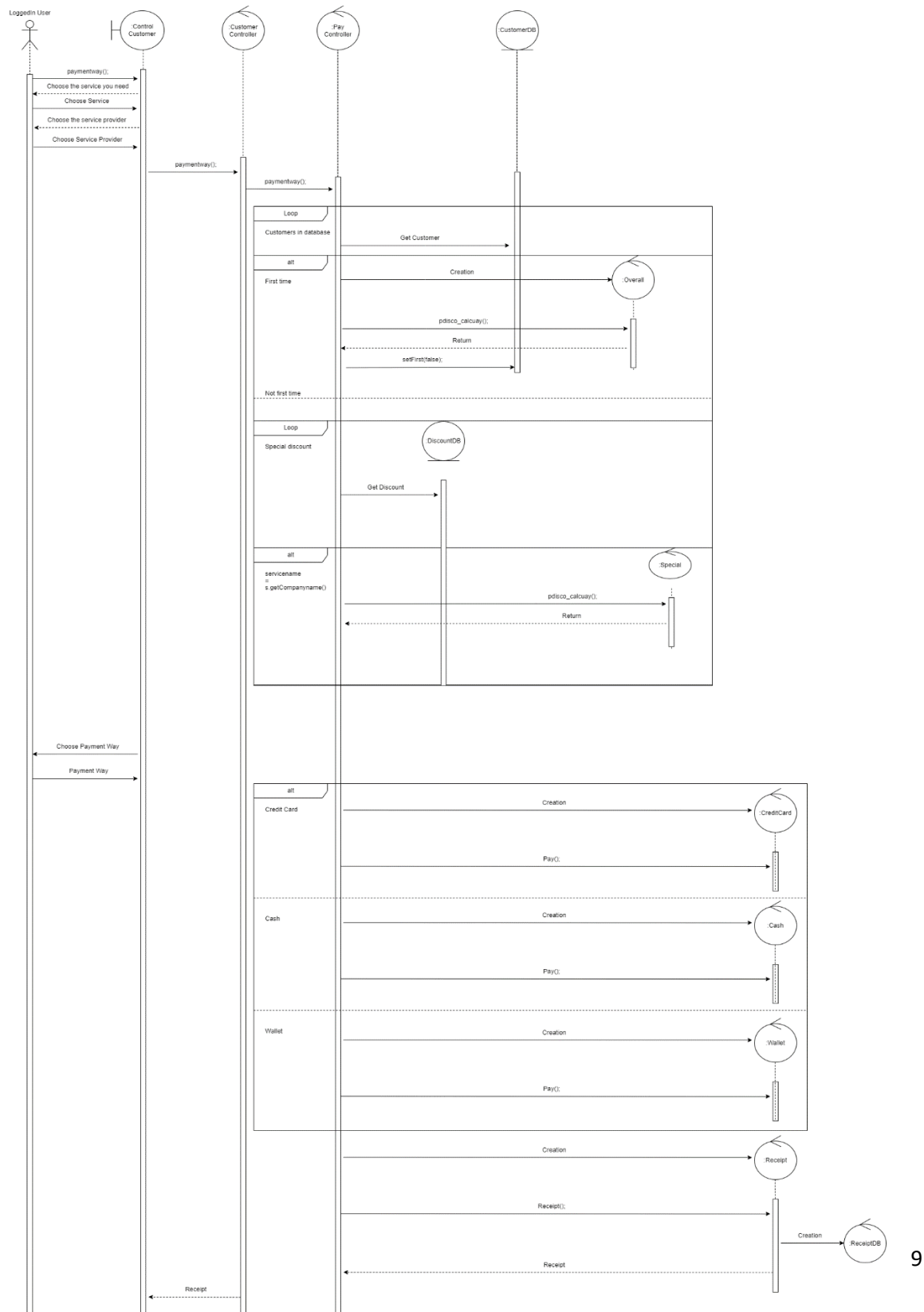






# CS352: Sprint SDS – Team Name, Proj Name

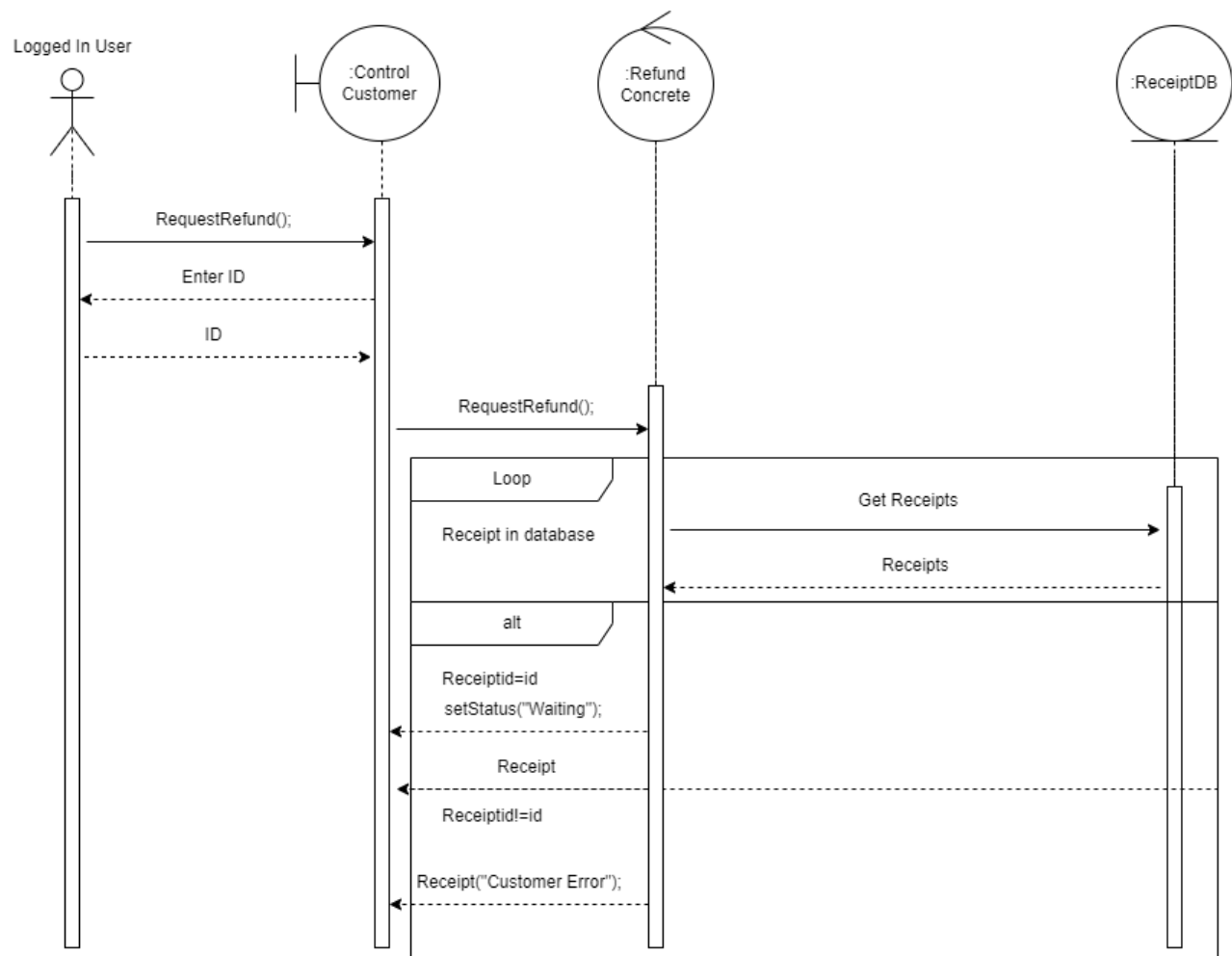
## SDS document





# CS352: Sprint SDS– Team Name, Proj Name

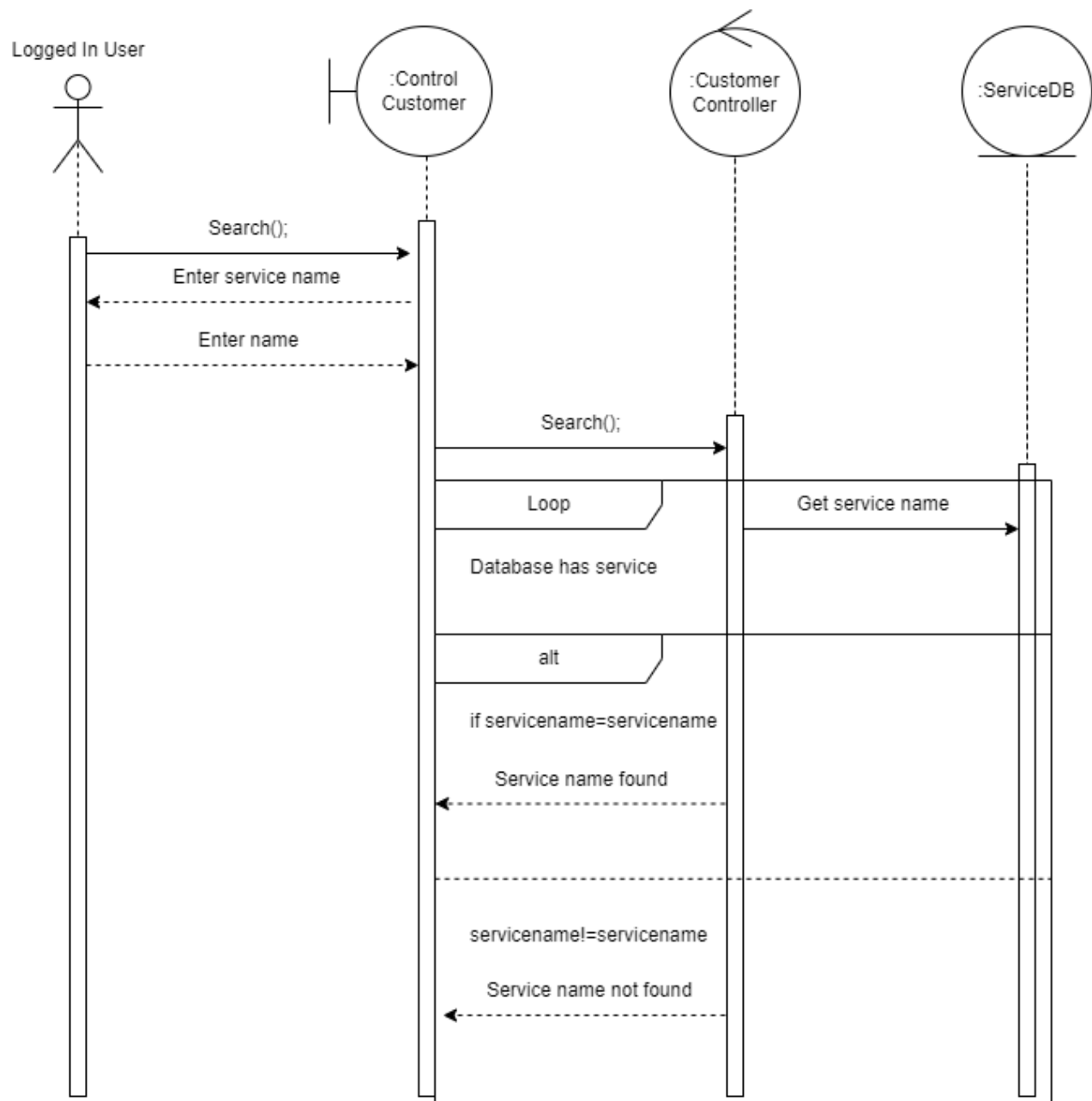
## SDS document





# CS352: Sprint SDS– Team Name, Proj Name

## SDS document





CS352: Sprint SDS– **Team Name, Proj Name**

## SDS document

### Requirements Exposure as Web Service API

#### Part 1: Exposed Postman Collection

<https://www.postman.com/crimson-desert-390392/workspace/fawry-system/collection/25112445-6066bf0c-87fa-4edd-aa4b-dc6355b06e11?action=share&creator=25112445>



fawry-system.postman\_collection.json



# CS352: Sprint SDS – Team Name, Proj Name

## SDS document

Requirement	Exposed API
Customer sign up	<p>Method: POST</p> <p>1: Customer/signup</p> <p>A service to the customer sign up and the system must check if the customer is registered before , the service returns successful sign up or username already exists try again</p> <p>Input : name , password , email , phone number &amp; amount</p> <p>For example :</p> <p><a href="http://localhost:8080/Customer/signup?name=body&amp;password=123&amp;email=body@&amp;phonenumber=01156&amp;amount=1000">http://localhost:8080/Customer/signup?name=body&amp;password=123&amp;email=body@&amp;phonenumber=01156&amp;amount=1000</a></p>
Customer login up	<p>Method : POST</p> <p>1: Customer/logincustomer</p> <p>A service to make the customer login to can use any of the system functionalities and the system should check if the name and password same username and password that the customer entered when signing up and check if the customer is registered before , the service returns successful logged in or username already logged in or wrong username or wrong password or account not exist</p> <p>Input : name , password</p> <p>For example:</p> <p><a href="http://localhost:8080/Customer/logincustomer?name=body&amp;password=123">http://localhost:8080/Customer/logincustomer?name=body&amp;password=123</a></p>
The Customer should be able to Search	<p>Method: GET</p> <p>1: Customer/Sreach</p> <p>A service to the customer should be able to search for any service in the system and the customer can insert the service name and the service will return if the service name is found or not</p> <p>Input: name (username wants to search) and service name.</p> <p>For example</p> <p><a href="http://localhost:8080/Customer/Sreach?sename=internet&amp;name=body">http://localhost:8080/Customer/Sreach?sename=internet&amp;name=body</a></p>
Payment	<p>Method : GET</p> <p>1: Customer/Service/{sename}/Provider/{prov}/Paymentway/{payway}</p> <p>A service to The Customer can pay for any service provider in the system and payment way he wants to pay through it and the service returns information of this operation like username , id operation , his money before pay , his money after pay , discount if there is , status successful</p> <p>Input : name (username wants to pay ) and amount (money he wants to pay it )</p> <p>For example :</p> <p><a href="http://localhost:8080/Customer/Service/Internet/Provider/WEInternet/Paymentway/Wallet?name=body&amp;amount=60">http://localhost:8080/Customer/Service/Internet/Provider/WEInternet/Paymentway/Wallet?name=body&amp;amount=60</a></p>
Request refund	<p>Method : PUT</p> <p>1: Customer/Sendrefund</p> <p>A service to the customer wants to refund his money at any services he did it and the service takes name and id operation that he wants his money back and returns information of this operation and make his status waiting to wait the admin receive the request and return it accept or refuse if accept the money back and add to his money</p> <p>Input : name , id operation</p> <p>For example :</p> <p><a href="http://localhost:8080/Customer/Sendrefund?name=body&amp;id=2">http://localhost:8080/Customer/Sendrefund?name=body&amp;id=2</a></p>



# CS352: Sprint SDS – **Team Name, Proj Name**

## SDS document

<b>Add to wallet</b>	<p>Method : POST</p> <p>1: Customer/Addwallet</p> <p>A service to the customer wants to add money to his wallet and the service takes the money and add to his wallet and returns his money before add money and his money after add money</p> <p>Input : name (username) , amount (he wants to add to his wallet)</p> <p>For example:</p> <p><a href="http://localhost:8080/Customer/Addwallet?name=body&amp;amount=100">http://localhost:8080/Customer/Addwallet?name=body&amp;amount=100</a></p>
<b>Check discount</b>	<p>Method : GET</p> <p>1: Customer/GetDiscount</p> <p>A service to the Customer should be able to check any discount for any service in the system. Discounts could be added by the admin and the service returns all services provider with percentage</p> <p>Input : name (username)</p> <p>For example:</p> <p><a href="http://localhost:8080/Customer/GetDiscount?name=body">http://localhost:8080/Customer/GetDiscount?name=body</a></p>
<b>My receipt</b>	<p>Method: GET</p> <p>1: Customer/Myreceipt</p> <p>A service to the Customer display all operations he did them and the system when the customer do request refund on special operation make status waiting until the admin receive the request and return it accept or refuse if accept the money back and add to his money</p> <p>Input : name (username)</p> <p>For example:</p> <p><a href="http://localhost:8080/Customer/Myreceipt?name=body">http://localhost:8080/Customer/Myreceipt?name=body</a></p>
<b>Customer logout</b>	<p>Method : POST</p> <p>1: Customer/logoutcustomer</p> <p>A service to make the customer logout the system should check if the name same username that the customer entered when login up , the service returns successful logged out or username already logged out or wrong logout and try again</p> <p>Input : name (username)</p> <p>For example:</p> <p><a href="http://localhost:8080/Customer/logoutcustomer?name=body">http://localhost:8080/Customer/logoutcustomer?name=body</a></p>
<b>Admin login</b>	<p>Method: POST</p> <p>1: Admin/loginadmin</p> <p>A service to make the admin login and the system should check if the name and password same username (admin) and password (admin) fixed account to admin and check if the admin is registered before , the service returns successful logged in or username already logged in or wrong username or wrong password</p> <p>For example :</p>



# CS352: Sprint SDS – **Team Name, Proj Name**

## SDS document

	<a href="http://localhost:8080/Admin/loginadmin?name=admin&amp;password=admin">http://localhost:8080/Admin/loginadmin?name=admin&amp;password=admin</a>
<b>Add discount</b>	<p>Method : POST</p> <p>1: Admin/addDiscount</p> <p>A service to The admin should be able to add any new service provider to the system , the service takes service provider name and percentage and it returns successful added or wrong added and try again</p> <p>Input : servicename (service provider) , perc (percentage)</p> <p>For example :</p> <p><a href="http://localhost:8080/Admin/addDiscount?Servicename=WEInternet&amp;Prec=20">http://localhost:8080/Admin/addDiscount?Servicename=WEInternet&amp;Prec=20</a></p>
<b>View all receipts</b>	<p>Method : GET</p> <p>1: Admin/allreceipt</p> <p>A service to the admin display all receipts made from customers ( payment transactions ) and the service returns all information of each receipt ( payment transaction )</p> <p>Input : not there</p> <p>For example :</p> <p><a href="http://localhost:8080/Admin/allreceipt">http://localhost:8080/Admin/allreceipt</a></p>
<b>Show refund array</b>	<p>Method : GET</p> <p>1: Admin/Refund</p> <p>A service to the admin display all refund list made from customers and the service returns all information of each operation that customer requested refund for it</p> <p>Input : not there</p> <p>For example :</p> <p><a href="http://localhost:8080/Admin/Refund">http://localhost:8080/Admin/Refund</a></p>
<b>Action with refund</b>	<p>Method : PUT</p> <p>1: Admin/actionrefund</p> <p>A service to the admin do action with all requests refund either accept or refuse and the service put name (username) , id operation and action either accept or refuse</p> <p>Input : name , id , action</p> <p>For example :</p> <p><a href="http://localhost:8080/Admin/actionrefund?name&amp;action&amp;id">http://localhost:8080/Admin/actionrefund?name&amp;action&amp;id</a></p>
<b>Show transaction added to wallet</b>	<p>Method : GET</p> <p>1: Admin/addedmoney</p> <p>A service to the admin display all transaction added money to wallet and the service returns added money , username and all money in his wallet after added money</p> <p>Input : not there</p> <p>For example :</p>



# CS352: Sprint SDS– **Team Name, Proj Name**

## SDS document

	<a href="http://localhost:8080/Admin/addedmoney">http://localhost:8080/Admin/addedmoney</a>
<b>Admin logout</b>	<p>Method : GET</p> <p>1: Admin/logoutadmin</p> <p>A service to admin wants to logout and the system should check if the name and password same username (admin) and password (admin) and the service returns successful logged out or wrong logout and try again</p> <p>Input : not there</p> <p>For example :</p> <p><a href="http://localhost:8080/Admin/logoutadmin">http://localhost:8080/Admin/logoutadmin</a></p>

## Github repository link

<https://github.com/esraa155/Fawry-System>