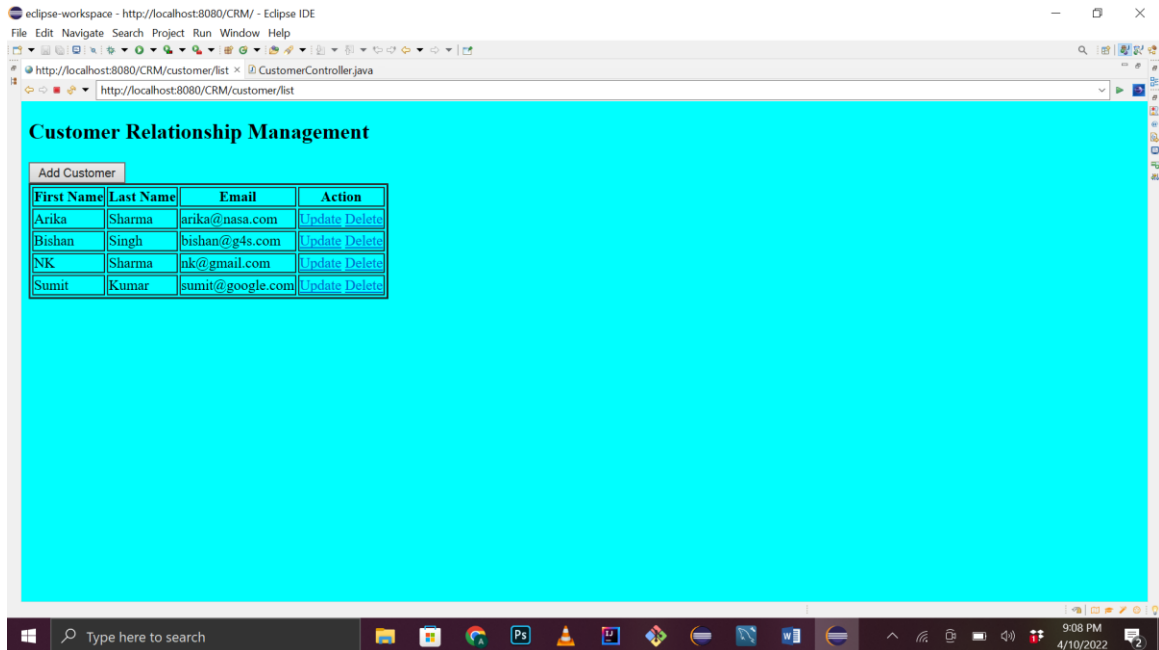


**ASSIGNMENT -5**  
**CUSTOMER RELATIONSHIP MANAGEMENT**  
**USING**  
**SPRING MVC**

**SNAPSHOTS**  
**FOR THE CRUD OPERATION**  
**USING MAVEN PROJECT**

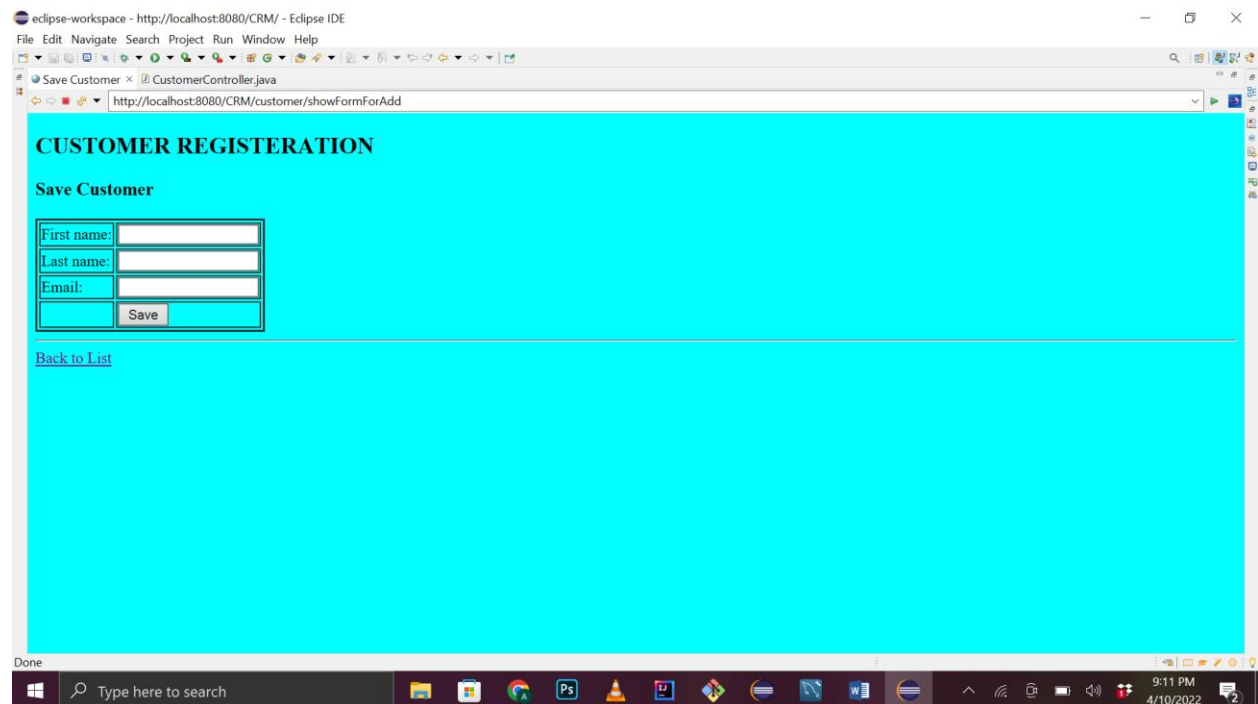
List All Customers

url: <http://localhost:8080/CRM/customer/list>



On Click AddCustomer Button

<http://localhost:8080/CRM/customer/showFormForAdd>



Upon Adding New Customer Redirect Back to List

eclipse-workspace - http://localhost:8080/CRM/ - Eclipse IDE

File Edit Navigate Search Project Run Window Help

http://localhost:8080/CRM/customer/list CustomerController.java

### Customer Relationship Management

Add Customer

First Name	Last Name	Email	Action
Arika	Sharma	arika@nasa.com	Update Delete
Bishan	Singh	bishan@g4s.com	Update Delete
NK	Sharma	nk@gmail.com	Update Delete
Shyam	Vats	shyam.vats@gmail.com	Update Delete
Sumit	Kumar	sumit@google.com	Update Delete

Tomcat v9.0 Server at localhost [Apache Tomcat] C:\Program Files\Java\jdk-16.0.2\bin\javaw.exe (Apr 10, 2022, 9:06:57 PM)

```

INFO: Looking for @ControllerAdvice: WebApplicationContext for namespace 'spring-ser
Apr 10, 2022 9:07:33 PM org.springframework.web.servlet.FrameworkServlet initServlet
Apr 10, 2022 9:07:33 PM org.springframework.web.servlet.FrameworkServlet initServlet
INFO: FrameworkServlet 'spring': initialization completed in 18154 ms
Apr 10, 2022 9:07:33 PM org.apache.coyote.AbstractProtocol start
INFO: Starting ProtocolHandler ["http-nio-8080"]
Apr 10, 2022 9:07:33 PM org.apache.catalina.startup.Catalina start
INFO: Server startup in [31769] milliseconds
Hibernate: select customer0_Id as id1_0_, customer0_Email_Id as email_id2_0_, cust
Hibernate: select customer0_Id as id1_0_, customer0_Email_Id as email_id2_0_, cust
Hibernate: insert into CRM (Email_Id, First_Name, Last_name) values (?, ?, ?)
Hibernate: select customer0_Id as id1_0_, customer0_Email_Id as email_id2_0_, cust
  
```

9:12 PM 4/10/2022

Update Existing Record

http://localhost:8080/CRM/customer/showFormForUpdate?customerId=2

eclipse-workspace - http://localhost:8080/CRM/ - Eclipse IDE

File Edit Navigate Search Project Run Window Help

Save Customer CustomerController.java

http://localhost:8080/CRM/customer/showFormForUpdate?customerId=2

### CUSTOMER REGISTRATION

Save Customer

First name:	Sumit
Last name:	Kumar
Email:	sumit@google.com
	Save

[Back to List](#)

Tomcat v9.0 Server at localhost [Apache Tomcat] C:\Program Files\Java\jdk-16.0.2\bin\javaw.exe (Apr 10, 2022, 9:06:57 PM)

```

Apr 10, 2022 9:07:33 PM org.apache.coyote.AbstractProtocol start
INFO: Starting ProtocolHandler ["http-nio-8080"]
Apr 10, 2022 9:07:33 PM org.apache.catalina.startup.Catalina start
INFO: Server startup in [31769] milliseconds
Hibernate: select customer0_Id as id1_0_, customer0_Email_Id as email_id2_0_, cust
Hibernate: select customer0_Id as id1_0_, customer0_Email_Id as email_id2_0_, cust
Hibernate: insert into CRM (Email_Id, First_Name, Last_name) values (?, ?, ?)
Hibernate: select customer0_Id as id1_0_, customer0_Email_Id as email_id2_0_, cust
Hibernate: select customer0_Id as id1_0_, customer0_Email_Id as email_id2_0_, cust
  
```

9:14 PM 4/10/2022

After Updating Existing record with Customer Id =2.

**Customer Relationship Management**

Add Customer

First Name	Last Name	Email	Action
Arika	Sharma	arika@nasa.com	<a href="#">Update</a> <a href="#">Delete</a>
Bishan	Singh	bishan@g4s.com	<a href="#">Update</a> <a href="#">Delete</a>
NK	Sharma	nk@gmail.com	<a href="#">Update</a> <a href="#">Delete</a>
Shyam	Vats	shyam.vats@gmail.com	<a href="#">Update</a> <a href="#">Delete</a>
Sumit	sharma	sumit@google.com	<a href="#">Update</a> <a href="#">Delete</a>

Tomcat v9.0 Server at localhost [Apache Tomcat] C:\Program Files\Java\jdk-16.0.2\bin\javaw.exe (Apr 10, 2022, 9:06:57 PM)  
Apr 10, 2022 9:07:33 PM org.apache.catalina.startup.Catalina start  
INFO: Server startup in [31769] milliseconds  
Hibernate: select customer0\_.Id as id1\_0\_, customer0\_.Email\_Id as email\_id2\_0\_, cust  
Hibernate: select customer0\_.Id as id1\_0\_, customer0\_.Email\_Id as email\_id2\_0\_, cust  
Hibernate: insert into CRM (Email\_Id, First\_Name, Last\_name) values (?, ?, ?)  
Hibernate: select customer0\_.Id as id1\_0\_, customer0\_.Email\_Id as email\_id2\_0\_, cust  
Hibernate: select customer0\_.Id as id1\_0\_, customer0\_.Email\_Id as email\_id2\_0\_, (c  
Hibernate: select customer0\_.Id as id1\_0\_, customer0\_.Email\_Id as email\_id2\_0\_, (c  
Hibernate: update CRM set Email\_Id=?, First\_Name=?, Last\_name=? where Id=?  
Hibernate: select customer0\_.Id as id1\_0\_, customer0\_.Email\_Id as email\_id2\_0\_, cust

Deleting a Record

**Customer Relationship Management**

Add Customer

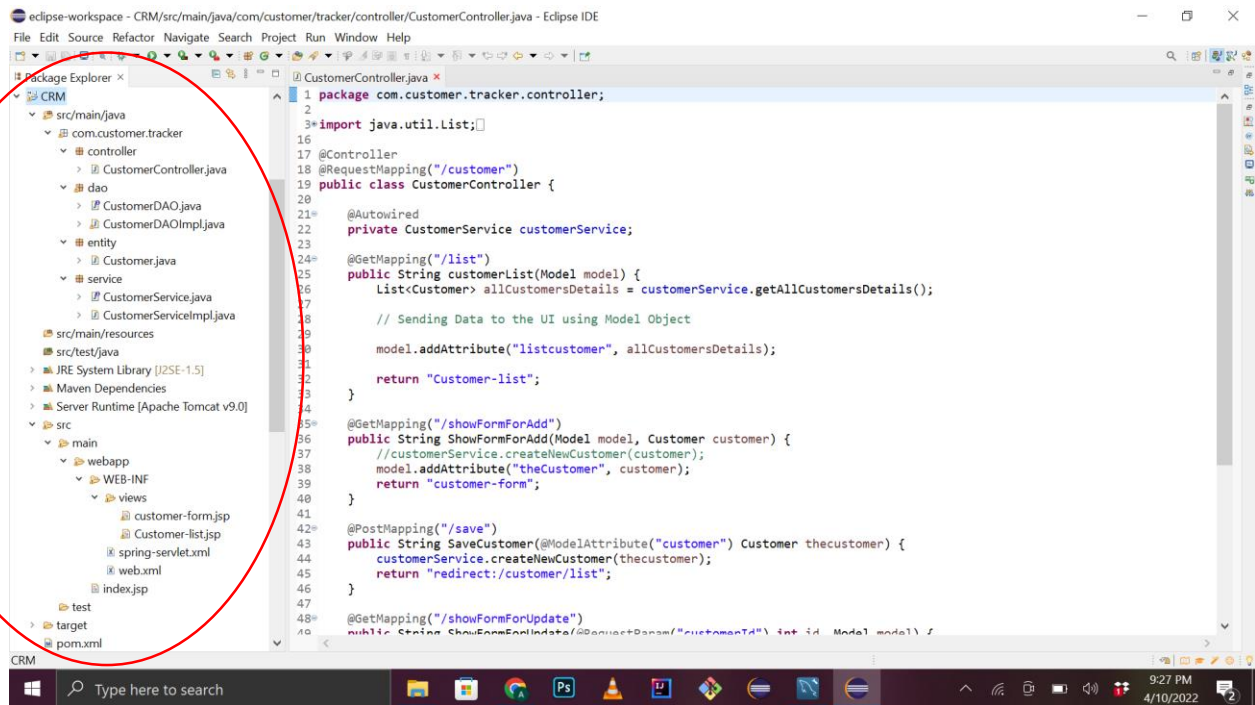
First Name	Last Name	Email	Action
Arika	Sharma	arika@nasa.com	<a href="#">Update</a> <a href="#">Delete</a>
Bishan	Singh	bishan@g4s.com	<a href="#">Update</a> <a href="#">Delete</a>
NK	Sharma	nk@gmail.com	<a href="#">Update</a> <a href="#">Delete</a>
Shyam	Vats	shyam.vats@gmail.com	<a href="#">Update</a> <a href="#">Delete</a>
Sumit	sharma	sumit@google.com	<a href="#">Update</a> <a href="#">Delete</a>

Message from webpage

Are you Sure you want to delete this Customer?

OK Cancel

## Project Structure



The screenshot displays the Eclipse IDE interface for a project named 'CRM'. The Package Explorer on the left shows the project structure, with a red circle highlighting the 'src/main/java' directory. The main editor shows the code for 'CustomerController.java'.

**Project Structure (Package Explorer):**

- CRM
  - src/main/java
    - com.customer.tracker
      - controller
        - CustomerController.java
      - dao
        - CustomerDAO.java
        - CustomerDAOImpl.java
      - entity
        - Customer.java
      - service
        - CustomerService.java
        - CustomerServiceImpl.java
    - src/main/resources
      - src/test/java
    - JRE System Library [J2SE-1.5]
    - Maven Dependencies
    - Server Runtime [Apache Tomcat v9.0]
    - src
      - main
        - webapp
          - WEB-INF
            - views
              - customer-form.jsp
              - Customer-list.jsp
            - spring-servlet.xml
            - web.xml
            - index.jsp
        - test
      - target
      - pom.xml

**CustomerController.java Code:**

```
1 package com.customer.tracker.controller;
2
3 import java.util.List;
4
5 @Controller
6 @RequestMapping("/customer")
7 public class CustomerController {
8
9     @Autowired
10     private CustomerService customerService;
11
12     @GetMapping("/list")
13     public String customerList(Model model) {
14         List<Customer> allCustomersDetails = customerService.getAllCustomersDetails();
15
16         // Sending Data to the UI using Model Object
17         model.addAttribute("listcustomer", allCustomersDetails);
18
19         return "Customer-list";
20     }
21
22     @GetMapping("/showFormForAdd")
23     public String ShowFormForAdd(Model model, Customer customer) {
24         //customerService.createNewCustomer(customer);
25         model.addAttribute("theCustomer", customer);
26         return "customer-form";
27     }
28
29     @PostMapping("/save")
30     public String SaveCustomer(@ModelAttribute("customer") Customer thecustomer) {
31         customerService.createNewCustomer(thecustomer);
32         return "redirect:/customer/list";
33     }
34
35     @GetMapping("/showFormForUpdate")
36     public String ShowFormForUpdate(@RequestParam("customerId") int id, Model model) {
```