

UE22CS352A -OBJECT ORIENTED ANALYSIS AND DESIGN LAB 8

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Code Screen Shot:

WASTE PICKUP CONTROLLER:

```
WastePickupController.java 1 X
C:\> Users > HP > Desktop > WastePickup > demo > src > main > java > com > example > demo > controller > WastePickupController.java > ...
1  package com.example.demo.controller;
2
3  import com.example.demo.model.WastePickup;
4  import com.example.demo.service.WastePickupService;
5  import org.springframework.beans.factory.annotation.Autowired;
6  import org.springframework.stereotype.Controller;
7  import org.springframework.ui.Model;
8  import org.springframework.web.bind.annotation.*;
9
10 import java.util.List;
11 import java.util.Optional;
12
13 @Controller
14 @RequestMapping("/wastepickups")
15 public class WastePickupController {
16
17     @Autowired
18     private WastePickupService service;
19
20     @GetMapping
21     public String showWastePickups(Model model) {
22         List<WastePickup> wastePickups = service.getAllWastePickups();
23         model.addAttribute("wastePickups", wastePickups);
24         return "waste_pickups"; // Thymeleaf view
25     }
26
27     @GetMapping("/new")
28     public String showNewWastePickupForm(Model model) {
29         model.addAttribute("wastePickup", new WastePickup());
30         return "new_waste_pickup";
31     }
32
33     @PostMapping("/save")
34     public String saveWastePickup(@ModelAttribute WastePickup wastePickup) {
35         service.saveWastePickup(wastePickup);
36         return "redirect:/wastepickups";
37     }
38
39     @GetMapping("/view/{id}")
```

WastePickupController.java 1 x

C:\Users\> HP > Desktop > WastePickup > demo > src > main > java > com > example > demo > controller > WastePickupController.java > ...

```
15 public class WastePickupController {
39     @GetMapping("/view/{id}")
40     public String viewWastePickup(@PathVariable Long id, Model model) {
41         Optional<WastePickup> wastePickup = service.getWastePickupById(id);
42         if (wastePickup.isEmpty()) {
43             return "redirect:/wastepickups";
44         }
45         model.addAttribute("wastePickup", wastePickup.get());
46         return "view_waste_pickup";
47     }
48
49     @GetMapping("/edit/{id}")
50     public String editWastePickup(@PathVariable Long id, Model model) {
51         Optional<WastePickup> wastePickup = service.getWastePickupById(id);
52         if (wastePickup.isEmpty()) {
53             return "redirect:/wastepickups";
54         }
55         model.addAttribute("wastePickup", wastePickup.get());
56         return "edit_waste_pickup";
57     }
58
59     @PostMapping("/update/{id}")
60     public String updateWastePickup(@PathVariable Long id, @ModelAttribute WastePickup wastePickup) {
61         wastePickup.setId(id);
62         service.saveWastePickup(wastePickup);
63         return "redirect:/wastepickups";
64     }
65
66     @GetMapping("/delete/{id}")
67     public String deleteWastePickup(@PathVariable Long id) {
68         service.deleteWastePickup(id);
69         return "redirect:/wastepickups";
70     }
71
72     @GetMapping("/")
73     public String home() {
74         return "index"; // Landing page
75     }
76 }
```

WASTEPICKUP(model):

```
J WastePickup.java 1 X
C: > Users > HP > Desktop > WastePickup > demo > src > main > java > com > example > demo > model > J WastePickup.java > WastePickup
1 package com.example.demo.model;
2
3 import jakarta.persistence.*;
4 import java.time.LocalDateTime;
5
6 @Entity
7 public class WastePickup {
8     @Id
9     @GeneratedValue(strategy = GenerationType.IDENTITY)
10    private Long id;
11    private String wasteType;
12    private String pickupLocation;
13    private LocalDateTime pickupDateTime;
14    private String status; // Pending, Scheduled, Completed
15    private String userName;
16
17    // Getters and Setters
18    public Long getId() { return id; }
19    public void setId(Long id) { this.id = id; }
20
21    public String getWasteType() { return wasteType; }
22    public void setWasteType(String wasteType) { this.wasteType = wasteType; }
23
24    public String getPickupLocation() { return pickupLocation; }
25    public void setPickupLocation(String pickupLocation) { this.pickupLocation = pickupLocation; }
26
27    public LocalDateTime getPickupDateTime() { return pickupDateTime; }
28    public void setPickupDateTime(LocalDateTime pickupDateTime) { this.pickupDateTime = pickupDateTime; }
29
30    public String getStatus() { return status; }
31    public void setStatus(String status) { this.status = status; }
32
33    public String getUserName() { return userName; }
34    public void setUserName(String userName) { this.userName = userName; }
35 }
```

WASTEPICKUP REPOSITORY:

```
J WastePickupRepository.java 1 X
C: > Users > HP > Desktop > WastePickup > demo > src > main > java > com > example > demo > repository > J WastePickupRepo
1 package com.example.demo.repository;
2
3 import com.example.demo.model.WastePickup;
4 import org.springframework.data.jpa.repository.JpaRepository;
5 import org.springframework.stereotype.Repository;
6
7 import java.util.List;
8
9 @Repository
10 public interface WastePickupRepository extends JpaRepository<WastePickup, Long> {
11     List<WastePickup> findByStatus(String status);
12     List<WastePickup> findByUserName(String userName);
13 }
```

WASTEPICKUP SERVICE:

```
> Users > HP > Desktop > WastePickup > demo > src > main > java > com > example > demo > service > J WasteF
1  package com.example.demo.service;
2
3  import com.example.demo.model.WastePickup;
4  import com.example.demo.repository.WastePickupRepository;
5  import org.springframework.beans.factory.annotation.Autowired;
6  import org.springframework.stereotype.Service;
7
8  import java.time.LocalDateTime;
9  import java.util.List;
10 import java.util.Optional;
11
12 @Service
13 public class WastePickupService {
14     @Autowired
15     private WastePickupRepository repository;
16
17     public List<WastePickup> getAllWastePickups() {
18         return repository.findAll();
19     }
20
21     public Optional<WastePickup> getWastePickupById(Long id) {
22         return repository.findById(id);
23     }
24
25     public WastePickup saveWastePickup(WastePickup wastePickup) {
26         if (wastePickup.getPickupDateTime().isBefore(LocalDateTime.now())) {
27             wastePickup.setStatus(status:"Completed");
28         }
29         return repository.save(wastePickup);
30     }
31
32     public void deleteWastePickup(Long id) {
33         repository.deleteById(id);
34     }
35
36     public List<WastePickup> getWastePickupsByStatus(String status) {
37         return repository.findByStatus(status);
38     }
39 }
```

```
32     public void deleteWastePickup(Long id) {
33         repository.deleteById(id);
34     }
35
36     public List<WastePickup> getWastePickupsByStatus(String status) {
37         return repository.findByStatus(status);
38     }
39
40     public List<WastePickup> getWastePickupsByUser(String userName) {
41         return repository.findByUserName(userName);
42     }
43 }
```

APPLICATION:

```
C: > Users > HP > Desktop > WastePickup > demo > src > main > java > com > example > demo > J EventMasterA
1  package com.example.demo;
2
3  import org.springframework.boot.SpringApplication;
4  import org.springframework.boot.autoconfigure.SpringBootApplication;
5
6  @SpringBootApplication
7  public class EventMasterApplication {
8      Run | Debug
9      public static void main(String[] args) {
10         SpringApplication.run(EventMasterApplication.class, args);
11     }
12 }
```

application.properties:

```
C: > Users > HP > Desktop > WastePickup > demo > src > main > resources > application.properties
1  spring.datasource.url=jdbc:mysql://localhost:3306/data
2  spring.datasource.username=root
3  spring.datasource.password=88888888
4  spring.jpa.hibernate.ddl-auto=update
5  spring.jpa.properties.hibernate.dialect=org.hibernate.dialect.MySQL8Dialect
6  spring.thymeleaf.prefix=classpath:/templates/
7  spring.thymeleaf.suffix=.html
8
9  server.port=8080
10
```

Front-end:

```
C:\Users\HP\Desktop> WastePickup > demo > src > main > resources > templates > edit_waste_pickup.html > ...
1  <!DOCTYPE html>
2  <html xmlns:th="http://www.thymeleaf.org">
3  <head>
4      <meta charset="UTF-8">
5      <title>Edit Waste Pickup</title>
6      <link rel="stylesheet" th:href="@{/styles.css}">
7  </head>
8  <body>
9      <h1>Edit Waste Pickup Request</h1>
10     <form th:action="@{/wastepickups/update/{id}(id=${wastePickup.id})}" th:object="${wastePickup}" method="post">
11         <div>
12             <label for="wasteType">Waste Type:</label>
13             <input type="text" id="wasteType" th:field="**{wasteType}" required>
14         </div>
15         <div>
16             <label for="pickupLocation">Pickup Location:</label>
17             <input type="text" id="pickupLocation" th:field="**{pickupLocation}" required>
18         </div>
19         <div>
20             <label for="pickupDateTime">Pickup Date & Time:</label>
21             <input type="datetime-local" id="pickupDateTime" th:field="**{pickupDateTime}" required>
22         </div>
23         <div>
24             <label for="status">Status:</label>
25             <select id="status" th:field="**{status}">
26                 <option value="Pending">Pending</option>
27                 <option value="Scheduled">Scheduled</option>
28                 <option value="Completed">Completed</option>
29             </select>
30         </div>
31         <div>
32             <label for="userName">User Name:</label>
33             <input type="text" id="userName" th:field="**{userName}" required>
34         </div>
35         <div>
36             <button type="submit">Update</button>
37         </div>
38     </form>
39     <a th:href="@{/wastepickups}">Back to List</a>
40 </body>
41 </html>
```



```

1 <!DOCTYPE html>
2 <html xmlns:th="http://www.thymeleaf.org">
3 <head>
4     <meta charset="UTF-8">
5     <title>New Waste Pickup Request</title>
6     <link rel="stylesheet" th:href="@{/styles.css}">
7 </head>
8 <body>
9     <h1>Create New Waste Pickup Request</h1>
10    <form th:action="@{/wastepickups/save}" th:object="${wastePickup}" method="post">
11        <div>
12            <label for="wasteType">Waste Type:</label>
13            <input type="text" id="wasteType" th:field="**{wasteType}" required>
14        </div>
15        <div>
16            <label for="pickupLocation">Pickup Location:</label>
17            <input type="text" id="pickupLocation" th:field="**{pickupLocation}" required>
18        </div>
19        <div>
20            <label for="pickupDateTime">Pickup Date & Time:</label>
21            <input type="datetime-local" id="pickupDateTime" th:field="**{pickupDateTime}" required>
22        </div>
23        <div>
24            <label for="userName">User Name:</label>
25            <input type="text" id="userName" th:field="**{userName}" required>
26        </div>
27        <div>
28            <button type="submit">Submit</button>
29        </div>
30    </form>
31    <a th:href="@{/wastepickups}">Back to List</a>
32 </body>
33 </html>

```

```

1 <!DOCTYPE html>
2 <html xmlns:th="http://www.thymeleaf.org">
3 <head>
4     <meta charset="UTF-8">
5     <title>View Waste Pickup</title>
6     <link rel="stylesheet" th:href="@{/styles.css}">
7 </head>
8 <body>
9     <h1>Waste Pickup Details</h1>
10    <div>
11        <p><strong>ID:</strong> <span th:text="${wastePickup.id}"></span></p>
12        <p><strong>Waste Type:</strong> <span th:text="${wastePickup.wasteType}"></span></p>
13        <p><strong>Pickup Location:</strong> <span th:text="${wastePickup.pickupLocation}"></span></p>
14        <p><strong>Pickup Date & Time:</strong> <span th:text="${wastePickup.pickupDateTime}"></span></p>
15        <p><strong>Status:</strong> <span th:text="${wastePickup.status}"></span></p>
16        <p><strong>User:</strong> <span th:text="${wastePickup.userName}"></span></p>
17    </div>
18    <a th:href="@{/wastepickups}">Back to List</a>
19 </body>
20 </html>

```



```
J WastePickupRepository.java 1 J WastePickupService.java 1 J EventMasterApplication.java 1 application.properties edit_waste_pickup.html
C: > Users > HP > Desktop > WastePickup > demo > src > main > resources > templates > waste_pickups.html > ...
1 <!DOCTYPE html>
2 <html xmlns:th="http://www.thymeleaf.org">
3 <head>
4 <meta charset="UTF-8">
5 <title>Waste Pickups</title>
6 <link rel="stylesheet" th:href="@{/styles.css}">
7 </head>
8 <body>
9 <div class="container">
10 <h1>Waste Pickup Requests</h1>
11 <a th:href="@{/wastepickups/new}" class="button">Create New Request</a>
12 <table>
13 <thead>
14 <tr>
15 <th>ID</th>
16 <th>Waste Type</th>
17 <th>Pickup Location</th>
18 <th>Pickup Date & Time</th>
19 <th>Status</th>
20 <th>User</th>
21 <th>Actions</th>
22 </tr>
23 </thead>
24 <tbody>
25 <tr th:each="wastePickup : ${wastePickups}">
26 <td th:text="${wastePickup.id}"></td>
27 <td th:text="${wastePickup.wasteType}"></td>
28 <td th:text="${wastePickup.pickupLocation}"></td>
29 <td th:text="${wastePickup.pickupDateTime}"></td>
30 <td th:text="${wastePickup.status}"></td>
31 <td th:text="${wastePickup.userName}"></td>
32 <td>
33 <a th:href="@{/wastepickups/view/{id}(id=${wastePickup.id})}" class="button view">View</a>
34 <a th:href="@{/wastepickups/edit/{id}(id=${wastePickup.id})}" class="button edit">Edit</a>
35 <a th:href="@{/wastepickups/delete/{id}(id=${wastePickup.id})}" class="button delete">Delete</a>
36 </td>
37 </tr>
38 </tbody>
39 </table>
40 </div>
41 </body>
42 </html>
```

```
C: > Users > HP > Desktop > WastePickup > demo > src > main > resources > templates > index.html >
1 <!DOCTYPE html>
2 <html xmlns:th="http://www.thymeleaf.org">
3 <head>
4 <meta charset="UTF-8">
5 <title>WasteMaster</title>
6 <link rel="stylesheet" th:href="@{/styles.css}">
7 </head>
8 <body>
9 <h2>Welcome to WasteMaster</h2>
10 <p>Your Hyperlocal Smart Waste Management System</p>
11 <a th:href="@{/wastepickups}">View Waste Pickup Requests</a>
12 </body>
13 </html>
```

UI

Create New Waste Pickup Request

Waste Type:

Wet

Pickup Location:

Mangalore

Pickup Date & Time:

06/03/2025 04:39 PM



User Name:

Ananth

Submit

Create New Waste Pickup Request

Waste Type:

Dry

Pickup Location:

Bangalore

Pickup Date & Time:

06/03/2025 04:37 PM



User Name:

Amandeep

Submit

Waste Pickup Requests

[Create New Request](#)

ID	Waste Type	Pickup Location	Pickup Date & Time	Status	User	Actions		
1	Dry	Bangalore	2025-03-06T16:32	Completed	Amandeep	View	Edit	Delete
4	Dry	Bangalore	2025-03-06T16:39	Completed	Ashrith	View	Edit	Delete
5	Wet	Mangalore	2025-03-06T16:39	Completed	Ananth	View	Edit	Delete

Database:

```
PES1UG22CS107>SELECT * FROM WASTE_PICKUP;
```

id	pickup_date_time	pickup_location	status	user_name	waste_type
1	2025-03-06 16:32:00.000000	Bangalore	Completed	Amandeep	Dry
4	2025-03-06 16:39:00.000000	Bangalore	Completed	Ashriith	Dry
5	2025-03-06 16:39:00.000000	Mangalore	Completed	Ananth	Wet

```
3 rows in set (0.00 sec)
```

```
PES1UG22CS107>
```

Console:

```
Maximum pool size: undefined/unknown
2025-03-06T16:24:02.911+05:30 INFO 332 --- [main] o.h.e.t.j.p.i.JtaPlatformInitiator : HHH000489: No JTA platform available (set 'hibernate
2025-03-06T16:24:02.949+05:30 INFO 332 --- [main] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persisten
2025-03-06T16:24:03.329+05:30 WARN 332 --- [main] JpaBaseConfiguration$JpaWebConfiguration : spring.jpa.open-in-view is enabled by default. There
2025-03-06T16:24:03.358+05:30 INFO 332 --- [main] o.s.b.a.w.s.WelcomePageHandlerMapping : Adding welcome page template: index
2025-03-06T16:24:03.787+05:30 INFO 332 --- [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port 8080 (http) with context path
2025-03-06T16:24:03.798+05:30 INFO 332 --- [main] c.example.demo.EventMasterApplication : Started EventMasterApplication in 4.892 seconds (pro
2025-03-06T16:24:32.503+05:30 INFO 332 --- [nio-8080-exec-1] o.a.c.c.C.[Tomcat].[localhost].[/] : Initializing Spring DispatcherServlet 'dispatcherSer
2025-03-06T16:24:32.503+05:30 INFO 332 --- [nio-8080-exec-1] o.s.web.servlet.DispatcherServlet : Initializing Servlet 'dispatcherServlet'
2025-03-06T16:24:32.506+05:30 INFO 332 --- [nio-8080-exec-1] o.s.web.servlet.DispatcherServlet : Completed initialization in 3 ms
```