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Reservable.java

```
1  package interface_;
2
3  public interface Reservable {
4      void displayReservation();
5      String getReservationType();
6  }
7
```

DineInReservation.java

```
1  package model;
2
3  public final class DineInReservation extends Reservation {
4      private int tableNumber;
5      private int guestCount;
6
7      public DineInReservation(int id, String customerName, String reservationDate, int tableNumber, int guestCount) {
8          super(id, customerName, reservationDate);
9          this.tableNumber = tableNumber;
10         this.guestCount = guestCount;
11     }
12
13     public int getTableNumber() {
14         return tableNumber;
15     }
16
17     public int getGuestCount() {
18         return guestCount;
19     }
20
21     @Override
22     public void displayReservation() {
23         System.out.println("DINE-IN | ID: " + getId() + ", Nama: " + getCustomerName() +
24             ", Meja: " + tableNumber + ", Jumlah Tamu: " + guestCount + ", Tanggal: " + getReservationDate());
25     }
26
27     @Override
28     public String getReservationType() {
29         return "Dine-In";
30     }
31 }
32
```

Reservation.java

```
1  package model;
2
3  import interface_.Reservable;
4
5  public abstract class Reservation implements Reservable {
6      private final int id;
7      private String customerName;
8      private String reservationDate;
9
10     public static int totalReservations = 0; // Static variable
11
12     public Reservation(int id, String customerName, String reservationDate) {
13         this.id = id;
14         this.customerName = customerName;
15         this.reservationDate = reservationDate;
16         totalReservations++;
17     }
18
19     public int getId() {
20         return id;
21     }
22
23     public String getCustomerName() {
24         return customerName;
25     }
26
27     public String getReservationDate() {
28         return reservationDate;
29     }
30
31     public void setCustomerName(String name) {
32         this.customerName = name;
33     }
34
35     public void setReservationDate(String date) {
36         this.reservationDate = date;
37     }
38
39     public static void showTotalReservations() {
40         System.out.println("Total reservasi: " + totalReservations);
41     }
42
43     public abstract void displayReservation(); // Abstract method
44 }
45
```

TakeAwayReservation.java

```
1  package model;
2
3  public class TakeAwayReservation extends Reservation {
4      private String pickupTime;
5
6      public TakeAwayReservation(int id, String customerName, String reservationDate, String pickupTime) {
7          super(id, customerName, reservationDate);
8          this.pickupTime = pickupTime;
9      }
10
11     public String getPickupTime() {
12         return pickupTime;
13     }
14
15     @Override
16     public void displayReservation() {
17         System.out.println("TAKE-AWAY | ID: " + getId() + ", Nama: " + getCustomerName() +
18             ", Tanggal: " + getReservationDate() + ", Waktu Ambil: " + pickupTime);
19     }
20
21     @Override
22     public String getReservationType() {
23         return "Take-Away";
24     }
25 }
26
```

ReservationService.java

```
1  package service;
2
3  import model.*;
4  import java.util.ArrayList;
5
6  public class ReservationService {
7      private final ArrayList<Reservation> reservations = new ArrayList<>();
8      private int idCounter = 1;
9
10     public void addDineIn(String name, String date, int table, int guests) {
11         reservations.add(new DineInReservation(idCounter++, name, date, table, guests));
12         System.out.println("Reservasi Dine-In berhasil!");
13     }
14
15     public void addTakeAway(String name, String date, String time) {
16         reservations.add(new TakeAwayReservation(idCounter++, name, date, time));
17         System.out.println("Reservasi Take-Away berhasil!");
18     }
19
20     public void viewReservations() {
21         if (reservations.isEmpty()) {
22             System.out.println("Belum ada reservasi.");
23         } else {
24             for (Reservation r : reservations) {
25                 r.displayReservation(); // Polymorphism - override
26             }
27             Reservation.showTotalReservations(); // Static method call
28         }
29     }
30
31     public void deleteReservation(int id) {
32         boolean found = reservations.removeIf(r -> r.getId() == id);
33         if (found) {
34             System.out.println("Reservasi berhasil dihapus.");
35         } else {
36             System.out.println("Reservasi dengan ID " + id + " tidak ditemukan.");
37         }
38     }
39 }
40
```

RestaurantReservationSystem.java

```

1  import service.ReservationService;
2  import java.util.InputMismatchException;
3  import java.util.Scanner;
4
5  public class RestaurantReservationSystem {
6      public static void main(String[] args) {
7          Scanner scanner = new Scanner(System.in);
8          ReservationService service = new ReservationService();
9
10         while (true) {
11             try {
12                 System.out.println("\n=== Sistem Reservasi Restoran ===");
13                 System.out.println("1. Tambah Reservasi Dine-In");
14                 System.out.println("2. Tambah Reservasi Take-Away");
15                 System.out.println("3. Lihat Semua Reservasi");
16                 System.out.println("4. Hapus Reservasi");
17                 System.out.println("5. Keluar");
18                 System.out.print("Pilih menu: ");
19                 int choice = scanner.nextInt();
20                 scanner.nextLine();
21
22                 switch (choice) {
23                     case 1:
24                         System.out.print("Nama Pelanggan: ");
25                         String name1 = scanner.nextLine();
26                         System.out.print("Tanggal Reservasi (YYYY-MM-DD): ");
27                         String date1 = scanner.nextLine();
28                         System.out.print("Nomor Meja: ");
29                         int table = scanner.nextInt();
30                         System.out.print("Jumlah Tamu: ");
31                         int guests = scanner.nextInt();
32                         scanner.nextLine();
33                         service.addDineIn(name1, date1, table, guests);
34                         break;
35                     case 2:
36                         System.out.print("Nama Pelanggan: ");
37                         String name2 = scanner.nextLine();
38                         System.out.print("Tanggal Reservasi (YYYY-MM-DD): ");
39                         String date2 = scanner.nextLine();
40                         System.out.print("Waktu Ambil (HH:MM): ");
41                         String time = scanner.nextLine();
42                         service.addTakeAway(name2, date2, time);
43                         break;
44                     case 3:
45                         service.viewReservations();
46                         break;
47                     case 4:
48                         service.viewReservations();
49                         System.out.print("ID reservasi yang dihapus: ");
50                         int delId = scanner.nextInt();
51                         scanner.nextLine();
52                         service.deleteReservation(delId);
53                         break;
54                     case 5:
55                         System.out.println("Terima kasih telah menggunakan sistem reservasi.");
56                         scanner.close();
57                         System.exit(0);
58                     default:
59                         System.out.println("Pilihan tidak valid.");
60                 }
61             } catch (InputMismatchException e) {
62                 System.out.println("Input tidak sesuai. Harap masukkan angka dengan benar.");
63                 scanner.nextLine();
64             } catch (Exception e) {
65                 System.out.println("Terjadi kesalahan: " + e.getMessage());
66             }
67         }
68     }
69 }
70

```