Nama: Demosa Guardy Nugroho

NIM: 2309106026

DineInReservation.java

```java
package model;

public class DineInReservation extends Reservation {
    private int tableNumber;
    private int numberOfGuests;

    public DineInReservation(int id, String customerName, String reservationDate, int tableNumber, int numberOfGuests) {
        super(id, customerName, reservationDate);
        this.tableNumber = tableNumber;
        this.numberOfGuests = numberOfGuests;
    }

    @Override
    public String toString() {
        return super.getBasicInfo() +
                ", Tipe: " + getReservationType() +
                ", Meja: " + tableNumber + ", Jumlah Tamu: " + numberOfGuests;
    }

    @Override
    public String getReservationType() {
        return "Dine-In";
    }
}
```

Reservation.java

```java
package model;

public abstract class Reservation {
    private final int id;
    private String customerName;
    private String reservationDate;

    public Reservation(int id, String customerName, String reservationDate) {
        this.id = id;
        this.customerName = customerName;
        this.reservationDate = reservationDate;
    }

    public int getId() {
        return id;
    }

    public String getCustomerName() {
        return customerName;
    }

    public void setCustomerName(String customerName) {
        this.customerName = customerName;
    }

    public String getReservationDate() {
        return reservationDate;
    }

    public void setReservationDate(String reservationDate) {
        this.reservationDate = reservationDate;
    }

    public final String getBasicInfo() {
        return "ID: " + id + ", Nama: " + customerName + ", Tanggal: " + reservationDate;
    }

    public abstract String getReservationType();

    @Override
    public String toString() {
        return getBasicInfo();
    }
}
```

TakeAwayReservation.java

```java
package model;

public class TakeAwayReservation extends Reservation {
    private String pickupTime;

    public TakeAwayReservation(int id, String customerName, String reservationDate, String pickupTime) {
        super(id, customerName, reservationDate);
        this.pickupTime = pickupTime;
    }

    @Override
    public String toString() {
        return super.getBasicInfo() +
                ", Tipe: " + getReservationType() +
                ", Waktu Ambil: " + pickupTime;
    }

    @Override
    public String getReservationType() {
        return "Take-Away";
    }
}
```

ReservationService.java

```java
package service;

import model.*;

import java.util.ArrayList;

public final class ReservationService {
    private ArrayList<Reservation> reservations = new ArrayList<>();
    private int idCounter = 1;

    public void addDineIn(String customerName, String reservationDate, int tableNumber, int guests) {
        reservations.add(new DineInReservation(idCounter++, customerName, reservationDate, tableNumber, guests));
        System.out.println("Reservasi Dine-In berhasil ditambahkan!");
    }

    public void addTakeAway(String customerName, String reservationDate, String pickupTime) {
        reservations.add(new TakeAwayReservation(idCounter++, customerName, reservationDate, pickupTime));
        System.out.println("Reservasi Take-Away berhasil ditambahkan!");
    }

    public void viewReservations() {
        if (reservations.isEmpty()) {
            System.out.println("Belum ada reservasi.");
        } else {
            for (Reservation r : reservations) {
                System.out.println(r);
            }
        }
    }

    public void deleteReservation(int id) {
        reservations.removeIf(r -> r.getId() == id);
        System.out.println("Reservasi berhasil dihapus!");
    }
}
```

RestaurantReservationSystem.java

```java
import service.ReservationService;
import java.util.Scanner;

public class RestaurantReservationSystem {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        ReservationService service = new ReservationService();

        while (true) {
            System.out.println("\n=== Sistem Reservasi Restoran ===");
            System.out.println("1. Tambah Reservasi Dine-In");
            System.out.println("2. Tambah Reservasi Take-Away");
            System.out.println("3. Lihat Semua Reservasi");
            System.out.println("4. Hapus Reservasi");
            System.out.println("5. Keluar");
            System.out.print("Pilih menu: ");
            int choice = scanner.nextInt();
            scanner.nextLine();

            switch (choice) {
                case 1:
                    System.out.print("Nama Pelanggan: ");
                    String name1 = scanner.nextLine();
                    System.out.print("Tanggal Reservasi (YYYY-MM-DD): ");
                    String date1 = scanner.nextLine();
                    System.out.print("Nomor Meja: ");
                    int table = scanner.nextInt();
                    System.out.print("Jumlah Tamu: ");
                    int guests = scanner.nextInt();
                    scanner.nextLine();
                    service.addDineIn(name1, date1, table, guests);
                    break;
                case 2:
                    System.out.print("Nama Pelanggan: ");
                    String name2 = scanner.nextLine();
                    System.out.print("Tanggal Reservasi (YYYY-MM-DD): ");
                    String date2 = scanner.nextLine();
                    System.out.print("Waktu Ambil (HH:MM): ");
                    String pickupTime = scanner.nextLine();
                    service.addTakeAway(name2, date2, pickupTime);
                    break;
                case 3:
                    service.viewReservations();
                    break;
                case 4:
                    System.out.print("ID Reservasi yang dihapus: ");
                    int deleteId = scanner.nextInt();
                    scanner.nextLine();
                    service.deleteReservation(deleteId);
                    break;
                case 5:
                    System.out.println("Terima kasih telah menggunakan sistem reservasi.");
                    scanner.close();
                    System.exit(0);
                default:
                    System.out.println("Pilihan tidak valid. Coba lagi.");
            }
        }
    }
}
```