

Calendar Application Problem

Overview

You are tasked with implementing a simple calendar application in C#. The application manages appointments, each of which has a name, start time, duration, and location. The **Calendar** class will be responsible for scheduling, deleting, and retrieving appointments. Some of the methods in the **Calendar** class have been left as TODOs, and you need to implement them.

Classes

1. Appointment Class:

- Represents an appointment with the following properties:
 - **Name**: The name of the appointment.
 - **StartTime**: The start time of the appointment.
 - **DurationInMinutes**: The duration of the appointment in minutes.
 - **Location**: The location of the appointment.
- Constructor to initialize these properties.

2. Calendar Class:

- Manages a list of appointments.
- Methods to schedule, delete, and retrieve appointments.

Your Task

You need to implement the following methods in the **Calendar** class:

1. DeleteAppointment Method:

- Deletes an appointment by its name from the list of appointments. If no appointment with the given name exists, the method should do nothing.

2. IsOverlapping Method:

- Checks if a new appointment overlaps with any existing appointments. An appointment overlaps if it starts before an existing appointment ends and ends after an existing appointment starts.

3. GetAppointments Method:

- Returns a list of all appointments sorted by their start time.

4. GetAppointmentsByLocation Method:

- Returns a list of all appointments that are scheduled at a specific location.

Code Link

You can fork the source code and implement the methods using this link:

<https://www.mycompiler.io/view/1U3IUWmuCbt>