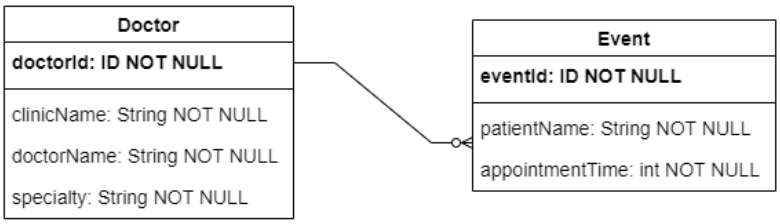
1. **Schema (types) of your GraphQL API (Draw ER or UML class diagram)**

```
type Doctor {
    doctorId: ID!
    doctorName: String!
    clinicName: String!
    specialty: String!
    event: [Event]
}

type Event {
    eventId: ID!
    patientName: String!
    appointmentTime: int!
}
```



2. **Various queries that your API will support (describe the name, inputs, and outputs)**

Q1 (query 1):

- Name: get doctor details
- Inputs: doctorId and requested fields (doctorName, clinicName, and specialty)
- Outputs: doctorId, doctorName, clinicName, and specialty

Q2 (query 2):

- Name: get doctor's available timeslots for today
- Input: doctorId
- Outputs: doctorId and the list of booked appointments ([Event])

{
  doctor
  {
  doctorId
  doctorName
  clinicName
  specialty
  }
}
	{
	  "data":
	  {"doctor":
	  {"doctorId": "1".
	  "doctorName": "Angela",
	  "clinicName": "CMU-clinic",
	  "specialty": "vaccine-department"
	  }
	  }
	}

{
  doctor
  {
  doctorId
  event {
  patientName
  appointmentTime
  }
  }
}
	{
	  "data":
	  {"doctor":
	  {"doctorId": "1",
	  "event": [
	  {"eventId": 1,
	  "patientName": "alex",
	  "appointmentTime": "9:00"
	  },
	  {"eventId": 2,
	  "patientName": "chang",
	  "appointmentTime": "15:30"
	  }
	  ]
	  }
	  }
	}

3. **Mutations that your API will support (describe the name, inputs, and outputs)**

M1 (mutation – create)

- Name: book an appointment with a doctor for today
- Inputs: doctorId, eventId, patientName, and appointmentTime
- Outputs: boolean

```
type Mutation {
    createEvent(input: CreateEventInput!): boolean
}

input CreateEventInput {
    doctorId: ID!
    eventId: ID!
    patientName: String!
    appointmentTime: int!
}
```

M2 (mutation – delete)

- Name: cancel an appointment
- Inputs: eventId
- Outputs: boolean

```
type Mutation {
    deleteEvent(input: eventId): boolean
}
```

M3 (mutation – update)

- Name: update name of the patient for an appointment
- Inputs: doctorId, eventId, patientName, and appointmentTime
- Outputs: boolean

```
type Mutation {
    updatePatientName(input: UpdatePatientNameInput!): boolean
}

input UpdatePatientNameInput {
    eventId: int!
    newPatientName: String!
}
```

4. **Endpoint of your GraphQL API (URL)**

```
Method: POST

URL: https://localhost:4567/graphql

Content-Type: application/json
```

1.2 Testcases design subtask:

Testcase Id	Testcase Description	Inputs	Expected Output	Remarks
Q1-H (happy path)	Check if for a given doctor ID, the right name, clinic he/she is at, and the specialty are well-displayed	Doctor ID	Doctor ID, doctor name, clinic name, and specialty, as Strings	Successfully return the right pieces of information. Consistent doctor ID for input and output.
Q1-E (error condition)	Try to get info given a non-existing doctor ID	Doctor ID	Error message	Returns an error message
Q2-H	Check if for a given doctor ID, can return all the appointments related to this doctor	Doctor ID	Doctor name and a list of appointments linked to him/her	The available slots will be anytime from 9am to 5pm minus the stated appointments. Time should be distinct.
Q2-E	Try to get info given a non-existing doctor ID	Doctor ID	Error message	Returns an error message
M3-H (mutation)	Create a new event and add to the list of appointments for a given doctor (via the doctor ID of the input)	Doctor ID, event ID, patient name, appointment time	Boolean	Returns true in boolean for a successful add of appointment to the event list. Make sure it adds to an available timeslot.
M3-E	Add an existing appointment to the list	Same as above	Boolean	Returns false with an error message
M3-E(2)	Add an appointment to a non-existing doctor	Same as above	Boolean	Returns false with an error message
M4-H	Delete an existing event from the list of appointments	Event ID	Boolean	Returns true for successfully deleted from the list
M4-E	Delete a non-existing appointment	Event ID	Boolean	Returns false with an error message
M5-H	Update the patient's name for an event on the list	Event ID, patient name to be updated	Boolean	Returns true if successfully updated the event on the list
M5-E	Update a patient's name for a non-existing appointment	Event ID, patient name to be updated	Boolean	Returns false with an error message