**Part Two: Designing software**

Imagine you have been asked to design an API similar to this one. It must enable the following:

- full-text search of patient data (e.g. first name, last name, NHS number, address)

**Answer: We will add one more API endpoint (http://patients/find/all) that returns the patient data by using any of the search criteria mentioned above.**

- pageable and orderable results

**Answer: We will add Skip, Take functions in the query. Ideally page size should be 10-20, but it depends on the requirements.**

- patients matching the results come back with a full list of episodes

**Answer: Updating Episodes from Patient entity is simple. Just populate all the episodes in patient object and save them using SaveChanges().**

- response times in the order of 10ms, even at massive scale

**Answer: Performance improvement in EF:**

**1) Disable change tracking**

**2) Use compiled query**

**3) Avoid Views**

**4) Index the database tables**