Kristen Weldon

Princeton HealthCare Business Analyst Test

Questions for the third party vendor managing data:

- What type of database is being used—SQL?

  - If SQL, does the database have any dependencies on using an enterprise edition or would we be able to downgrade if desired?

  - Are any SQL additions currently used in conjunction with the database, such as Full Text Search?

- Constraints

  - Due to FDA regulations for healthcare data, is the database locked into any one version?

  - Is there a dependency for the application and database to be on the same server?

  - Is the database storing any privileged information (credit card, social security, etc) that has regulations pertaining to its secure storage?

  - What are the RAM and CPU requirements--and when were they last tested and against what?

  - Is the database hosted on a shared or dedicated server?

  - Will any other system be making contact with the database, such as an API?

- Database makeup

  - What size is the current database and its projected growth?

  - How many different tables are in the database and what are their relationships-- besides patients and physicians, is there an admin-type user?

- Do a test, development, and/or a Q/A database need to be created and kept for this application?

- In a worst-case-scenario would we need a Full Recovery or a Simple Recovery?

Questions for Princeton HealthCare about the directory and its current usage:

- With what stack is the website created and maintained?

- Are any validations in place to check information submitted by physicians--i.e. current phone number or list of insurances accepted?

    • Can non-physicians submit a change if they notice out of date information?

- What analytics, if any, are already connected to the website's directory search?

    • If analytics are in place, what pages do users spend the most/least amount of time on?

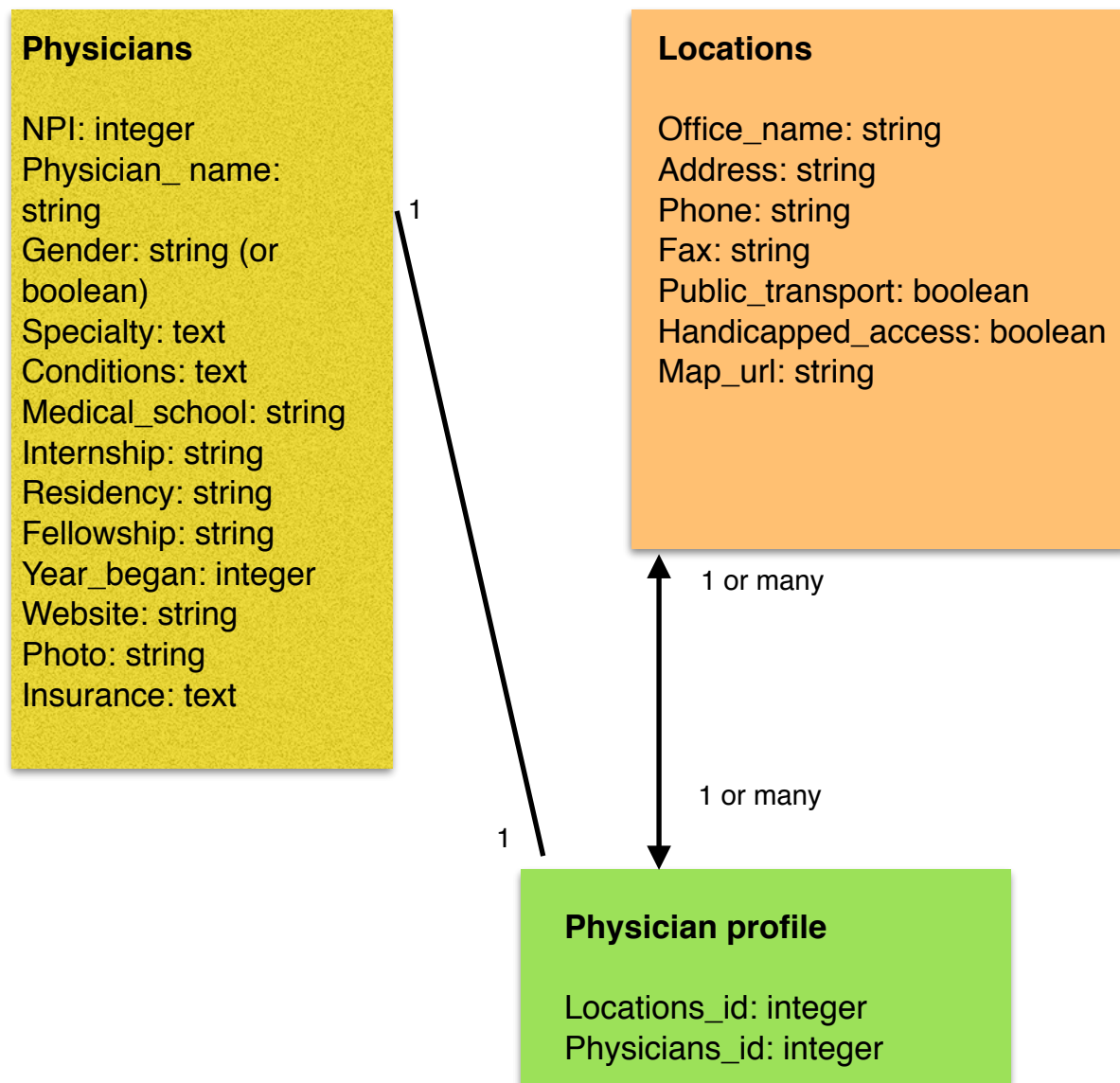   • Have any surveys or comments been collected from users?

Action plan for redesigning the directory.:

- Before redesign we need to document Problem Statements

    • Can come from user surveys, especially Net Promoter Score where users are asked to rate their experience 1-10 and offer some explanations.

    • Sample problem Statements:

        - "Users want to search physicians by risk assessment rating."

        - "*Find a physician* button is too difficult to locate."

        - "Took too long to find phone number for *xyz.*"

    • Proposed solutions:

        - "Create an additional search field that adds a risk assessment rating to the physician search."

        - "Have multiple 'Find Physician' buttons on pages and use similar graphics on each page for the button to allow users to easily find the search form from any page."

        - "Create page of 'Frequently Used Numbers' that will list the twenty most searched for phone numbers, arranged alphabetically by department"

    • In addition to user analytics, client needs must also be taken into account such as desired logos, social media integration, etc.

- Before development can begin, a user story should be implemented. From a simple user story, we can create a more complex user case that has functionality requirements. And from this case, we can outline the technical requirements for developers.
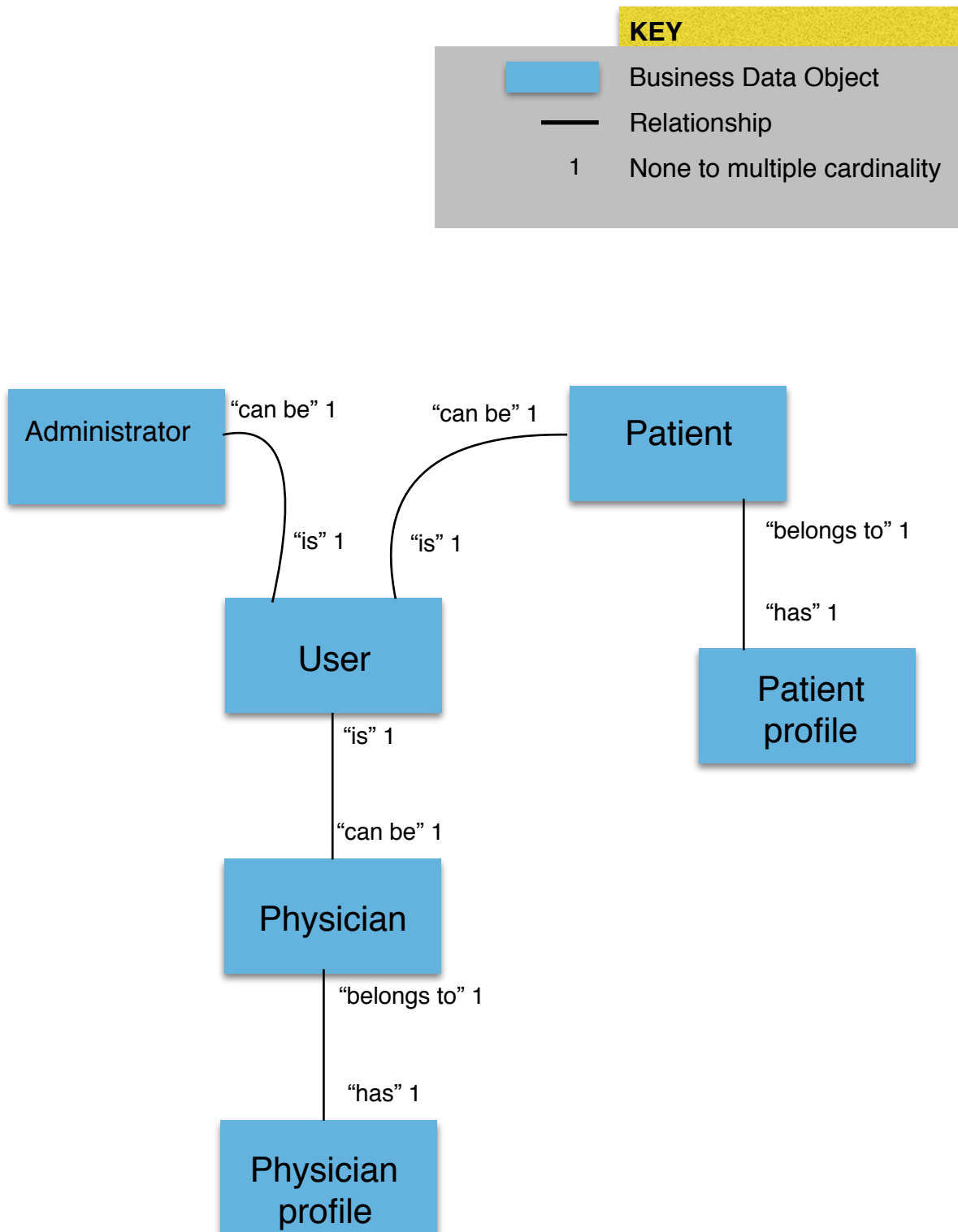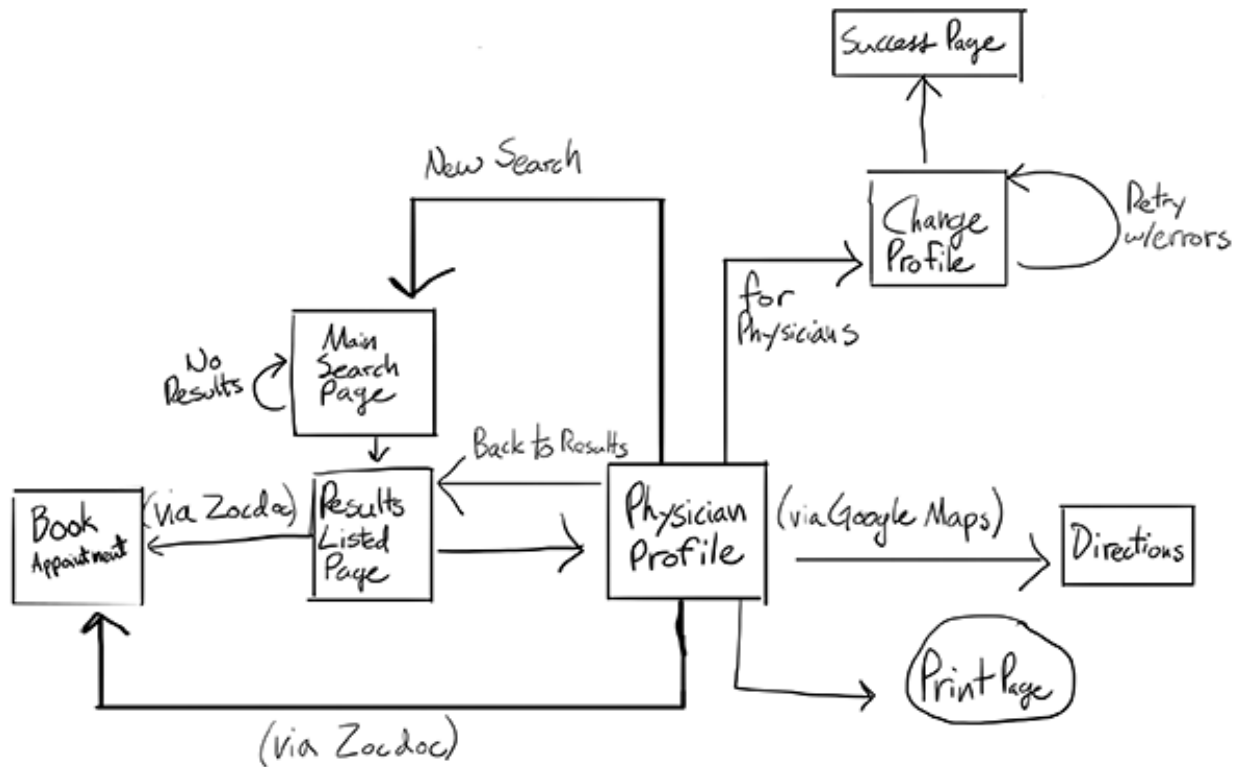
Current State

Hypothetical Database:

- (Should Locations have their own table in database)

Physicians

NPI: integer
Physician_ name: string
Gender: string (or boolean)
Specialty: text
Conditions: text
Medical_school: string
Internship: string
Residency: string
Fellowship: string
Year_began: integer
Website: string
Photo: string
Insurance: text

Locations

Office_name: string
Address: string
Phone: string
Fax: string
Public_transport: boolean
Handicapped_access: boolean
Map_url: string

1

1

1 or many

1 or many

Physician profile

Locations_id: integer
Physicians_id: integer

Business Data Diagram:

KEY

Business Data Object

Relationship

1   None to multiple cardinality

Administrator — "can be" 1 — "can be" 1 — Patient

"is" 1   "is" 1

"belongs to" 1

User

"is" 1

"has" 1

Patient profile

"can be" 1

Physician

"belongs to" 1

"has" 1

Physician profile

Current search navigational flow:

User Story

Physician risk assessment ratings:

- As a *patient*, I want to be able to *search for physicians by their risk assessment rating* so that I can *make an informed decision about my healthcare provider depending on their history*

Epic: Find a physician in the Princeton Healthcare System

Theme: Search by Physician Risk Assessment

Priority

Story:
Search by grade
(A+, B, etc.)

Story:
Sort results by rating

Story:
Search by grade range
(A+ to B-, etc.)

Story:
Add info or context for rating

6