

CMPE321 Introduction to Database
Systems 2016/2017-2

Berk Erol

Hospital Appointment System

Berk Erol

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INTRODUCTION

This project is about making a hospital appointment system. This document explains the database design (with diagrams) and the web interface (with screen shots).

System has three entities: branches, doctors and appointments.

System has two users: administrators and patients.

Administrators can add/edit/remove branches and doctors. They also can view past and future appointments of a branch (or all branches). They can remove appointments of a branch (or all branches) older than a date-time too.

Patients can make/edit/cancel appointments by first choosing a branch then a doctor in that branch and a date-time (appointments are 5 minutes apart from each other).

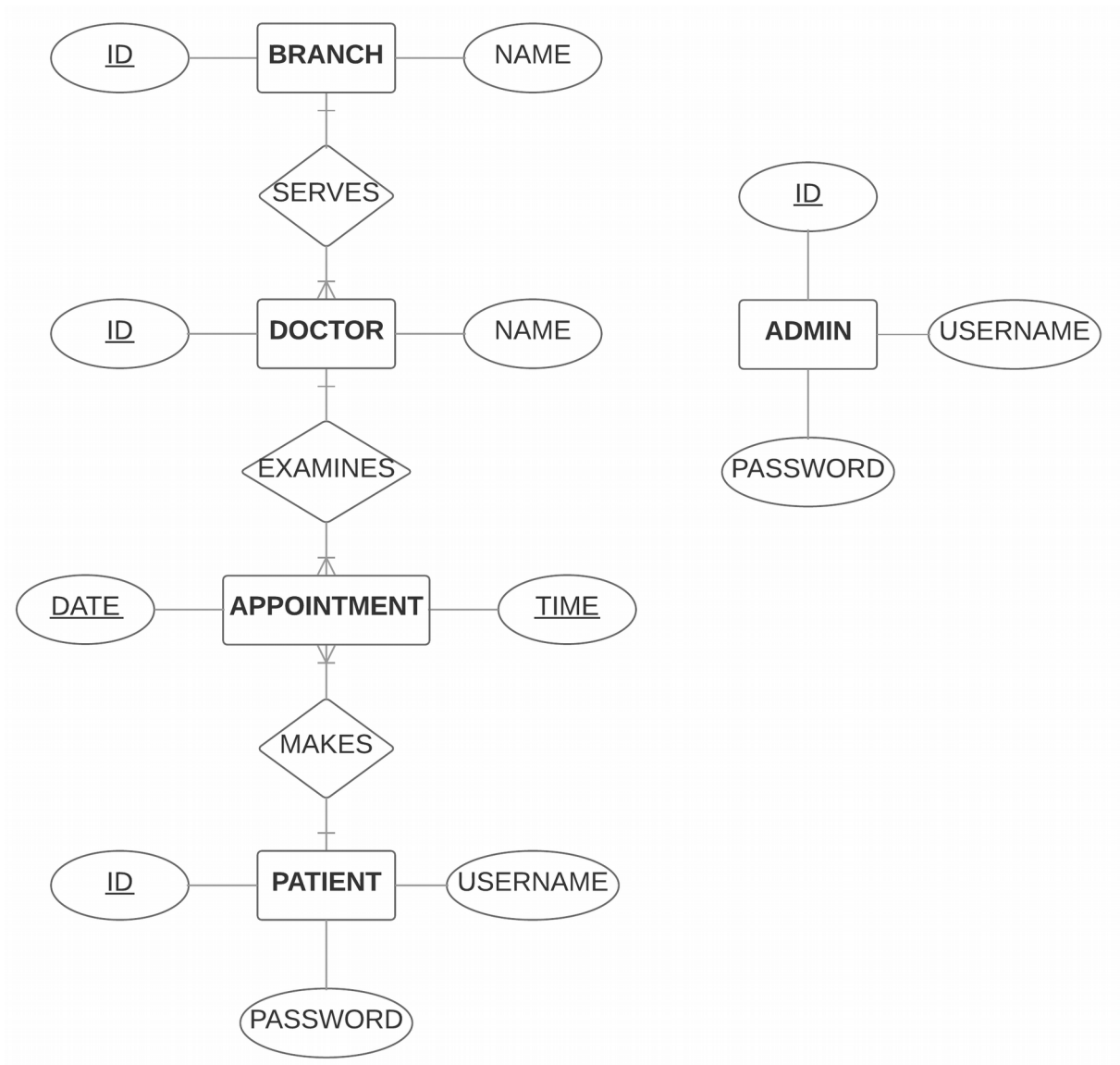
All pages are protected from unauthorized access with session control.

All text fields are protected from SQL Injection.

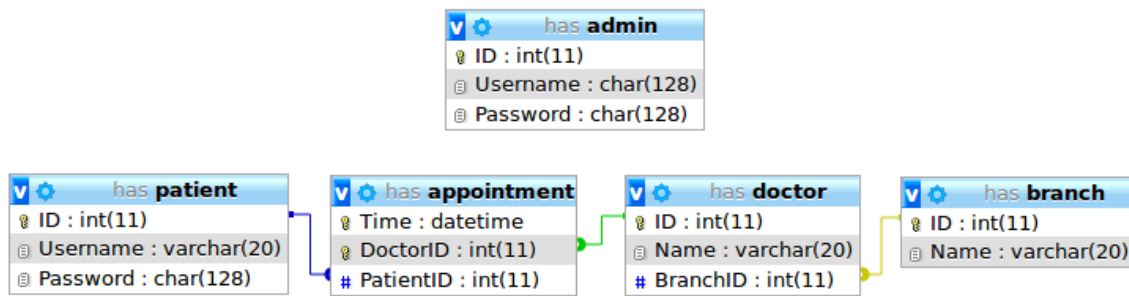
All passwords are stored as SHA-512 hashes.

All foreign key referential integrity rules are RESTRICT.

E-R DIAGRAM



PHYSICAL DATABASE SCHEMA



INTERFACE

Home:

[Admin Page](#)

[Patient Page](#)

Bonuses

Protected from SQL Injection

Interface improvements

Passwords are hashed

Remove appointments older than a time

Administrator Login:

Username:

Password:

[Log In](#)

[Reset](#)

Administrator Home:

Welcome, berkerol.

[Add branch](#)

[View branches](#)

[Add doctor](#)

[View doctors](#)

[View past
appointments](#)

[View future
appointments](#)

[Remove appointments](#)

[Log Out](#)

Add Branch:

Name:

[Add Branch](#)

[Reset](#)

[Home Page](#)

View Branches:

ID	Name	Edit	Remove
1	cardiology	Edit	Remove
2	ent	Edit	Remove
3	gynaecology	Edit	Remove
4	neurology	Edit	Remove
5	oncology	Edit	Remove
6	orthopaedics	Edit	Remove

[Home Page](#)

Edit Branch:

ID:

Name:

Edit Branch

Reset

Home Page

Remove Branch:

Are you sure you want to remove this branch?

ID:

Name:

Remove Branch

Home Page

Add Doctor:

Name:

Branch:

Add Do

Home Page

cardiology
ent
gynaecology
neurology
oncology
orthopaedics

View Doctors:

ID	Name	Branch	Edit	Remove
1	Matthew Manning	cardiology	Edit	Remove
2	April Mosley	ent	Edit	Remove
3	Esteban Morrison	gynaecology	Edit	Remove
4	Harvey Zimmerman	neurology	Edit	Remove
5	Clinton Marshall	oncology	Edit	Remove
6	Kristin Miller	orthopaedics	Edit	Remove

[Home Page](#)

Edit Doctor:

ID:

Name:

Branch:

neurology

cardiology

ent

gynaecology

neurology

oncology

orthopaedics

[Edit Doctor](#) [Reset](#)

[Home Page](#)

Remove Doctor:

Are you sure you want to remove this doctor?

ID:

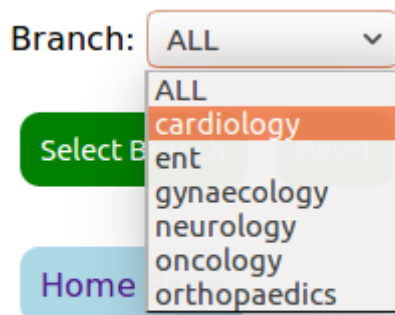
Name:

Branch:

[Remove Doctor](#)

[Home Page](#)

Branch Selection for Viewing and Removing Appointments:



View Past Appointments:

Time	Doctor	Patient
2017-04-29 11:20:00	Matthew Manning	berk
2017-05-03 14:20:00	April Mosley	berk
2017-05-08 14:25:00	Esteban Morrison	berk
2017-05-14 13:00:00	Harvey Zimmerman	berk

[Home Page](#)

View Future Appointments:

Time	Doctor	Patient
2017-05-22 13:00:00	Clinton Marshall	berk
2017-05-30 14:00:00	Kristin Miller	berk

[Home Page](#)

Remove Appointments older than a date-time:

Time	Doctor	Patient
2017-04-29 11:20:00	Matthew Manning	berk
2017-05-03 14:20:00	April Mosley	berk
2017-05-08 14:25:00	Esteban Morrison	berk
2017-05-14 13:00:00	Harvey Zimmerman	berk
2017-05-22 13:00:00	Clinton Marshall	berk
2017-05-30 14:00:00	Kristin Miller	berk

Older than:

Remove Ap

Home Pa

May 2017 ▾

Sun	Mon	Tue	Wed	Thu	Fri	Sat
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3

Patient Sign Up:

Username:

Password:

Sign Up

Reset

Patient Login:

Username:

Password:

Log In

Reset

Patient Home:

Welcome, berk.

[Make appointment](#)

[View appointments](#)

[Log Out](#)

Branch Selection for Making and Editing Appointments:

Branch:

Select B

Home Page

- cardiology
- ent
- gynaecology
- neurology
- oncology
- orthopaedics

Make Appointment:

Doctor:

Time:

Make

Home

May 2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3

View Appointments:

Time	Doctor	Edit	Cancel
2017-04-29 11:20:00	Matthew Manning	Edit	Cancel
2017-05-03 14:20:00	April Mosley	Edit	Cancel
2017-05-08 14:25:00	Esteban Morrison	Edit	Cancel
2017-05-14 13:00:00	Harvey Zimmerman	Edit	Cancel
2017-05-22 13:00:00	Clinton Marshall	Edit	Cancel
2017-05-30 14:00:00	Kristin Miller	Edit	Cancel

[Home Page](#)

Edit Appointment:

Doctor:

Time:

[Edit Appointment](#)

[Home Page](#)

May 2017

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Sun	Mon	Tue	Wed	Thu	Fri	Sat
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3

Cancel Appointment:

Are you sure you want to cancel this appointment?

Doctor:

Time:

[Cancel Appointment](#)

[Home Page](#)

CONCLUSION

I think that the system is well-designed, good-looking, fast, efficient, stable and secure.

This project was very helpful for learning to use databases in real life scenarios thus practicing our knowledge. Also designing a web based interface was very helpful for learning new languages and environments.