

CSC 4350: Software Engineering
Spring 2018
Group Name: Alpha Medical Systems
Project Title: Mednet



Team Members:
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Planning and Scheduling

Hardware requirements: computer

Software resource requirements: Java/MySQL compiler

This single most serious challenge in developing the project on schedule is whether the project may need to add more functions in order to be unique.

Some possible risks are:

- The application may not function as originally desired
- The connection between the database and the interface may not be compatible
- New skills may need to be learned when implementing
- The project topic may need to be slightly altered

Scheduling

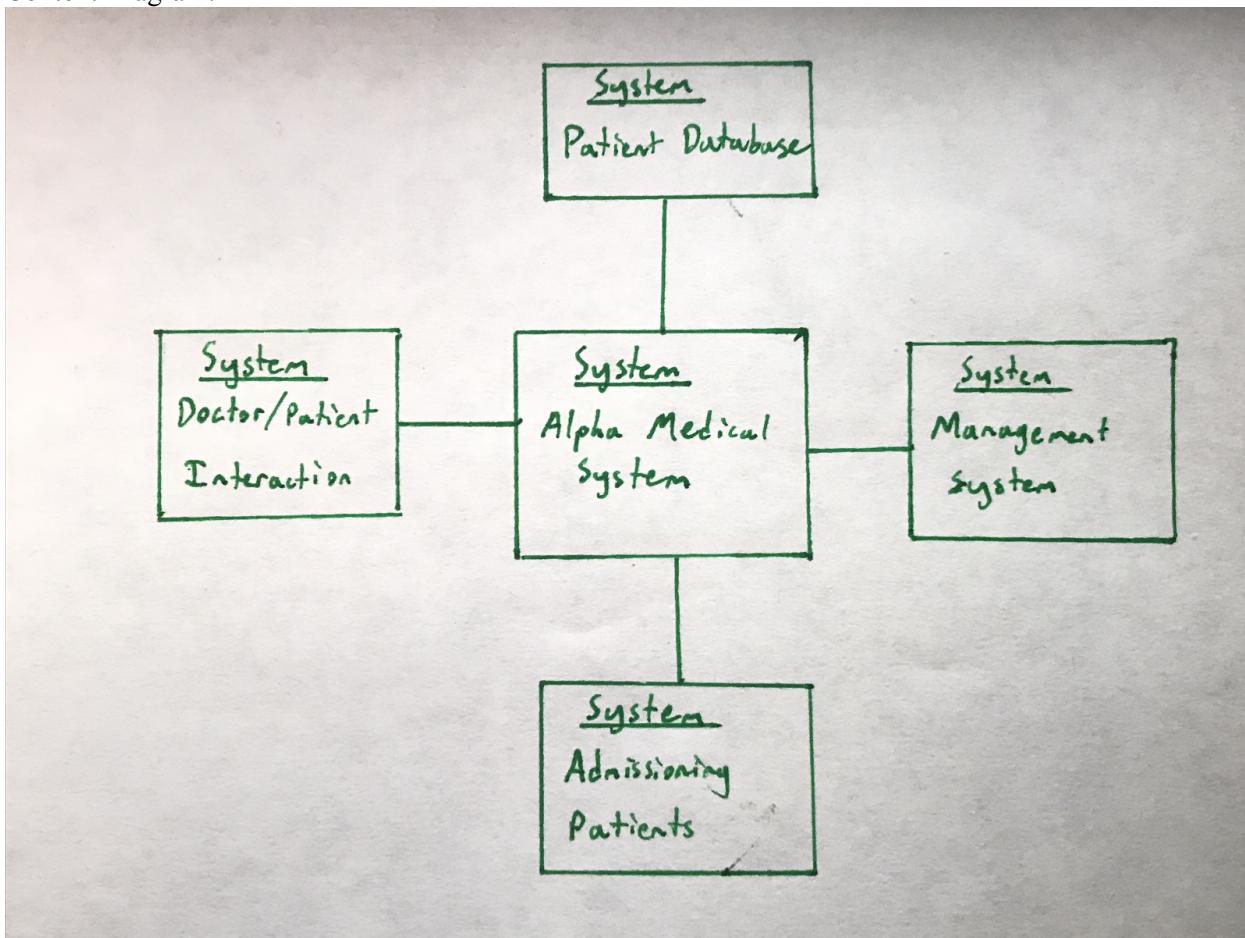
Tasks	Effort(person-days)	Duration(hours/days)	Dependencies
Login page	1	1	
Front-end registration	10	3	
Back-end registration	14	14	Front-end registration
Doctor's home page	10	7	
Patient's home page	10	7	
Patient's ticket submission page	6	1	
Front-end doctor's open tickets page	9	5	
Front-end patient's open tickets page	9	5	
Back-end open ticket's page	14	7	Front-end doctor's open tickets page
Front-end doctors taken tickets page	9	5	
Front-end patients taken tickets page	9	5	
Back-end taken tickets	14	7	Front-end doctors taken tickets page

Problem Statement (User requirements)

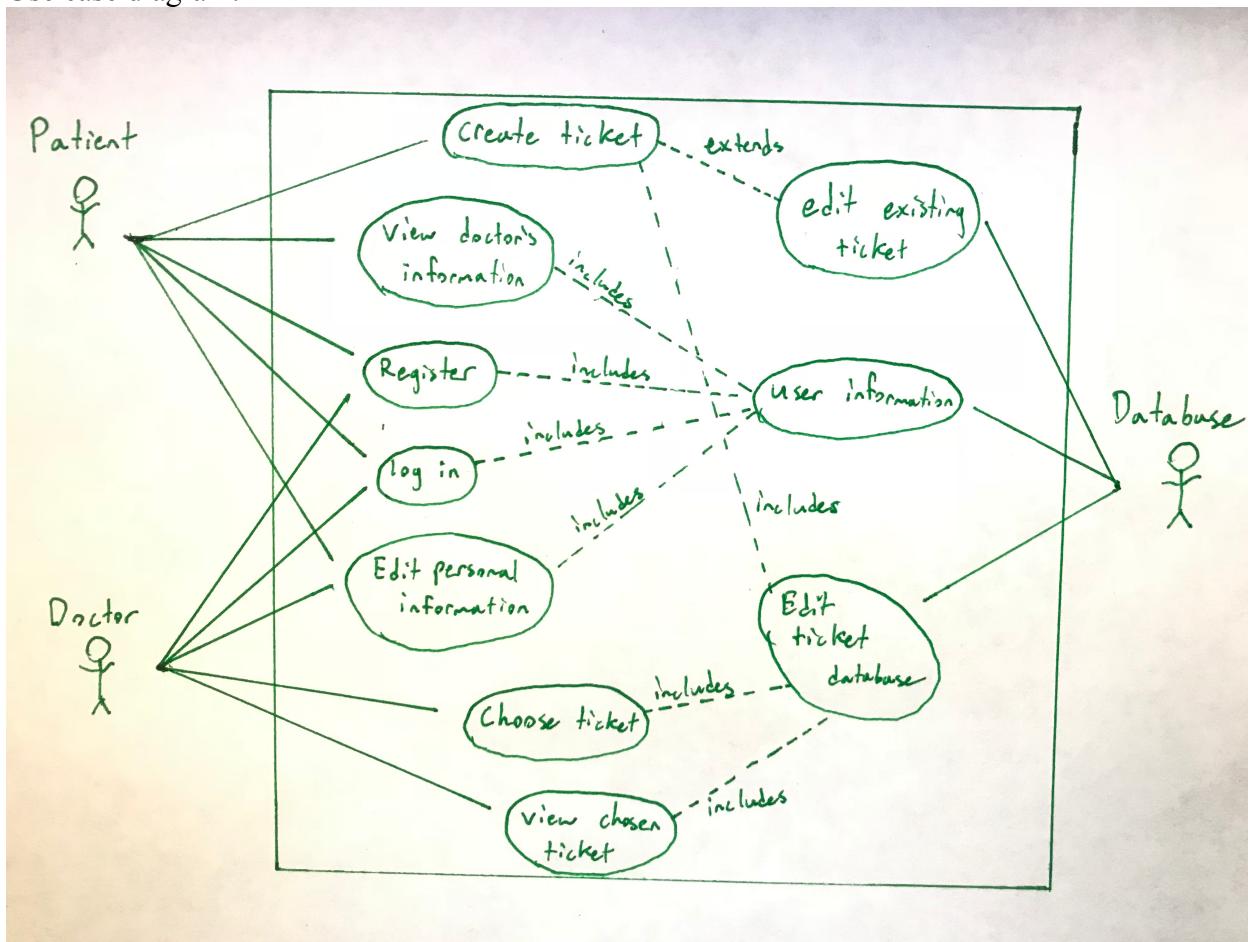
On a high level, our product is an interconnected database for both doctors and patients. It solves the problem of delay when trying to pull up a patient's records, and allows for more convenient methods of information transfer between a patient and doctor. Alternatives to our product is directly going to a hospital and transferring information, or calling the doctors at the hospital. It is compelling and worth developing because it will be really helpful, and there are no other applications like it. The objective of the product is to help out doctors and hospitals along with the patients. Our approach is novel because it includes security and simplicity in a field that is widely needed. Possible competitors to this app would be those such as insight optics, medici, digital pharmacist, aetna, and teladoc. This system is possible because our group members are capable at using databases and designing front-end. From a technical point of view, this project is interesting because it allows for both front-end and back-end developers to show all their skills while also understanding the fields of healthcare.

System Requirements

Context Diagram:



Use case diagram:



Use case description:

- Description: Patient registers an account and enters necessary information. Patient enters their username and password. Database verifies login info. Patient chooses to submit a ticket. Patient enters symptom information on ticket and submits. Doctors register an account and enters necessary information. Doctors enter their username and password. Database verifies login info. Doctors view all patients' submitted tickets. Doctor chooses ticket. Database sends information to doctor and patient.
- Triggers:
 - o Doctor logs in or registers
 - o Patient logs in or registers
- Actors:
 - o Patient
 - o Doctor
 - o Database
- Preconditions:
 - o Registered doctors with contact information
 - o Patients with symptoms
- Goals:
 - o Establish connection between doctors and patients
 - o Inform doctor of patient's medical information
 - o Inform patient of doctor's contact information
- Failed conclusion:
 - o Invalid login information
 - o No patient ticket submission
 - o No registered doctors
- Extensions:
 - o If registration info is not accurate, deny an account
 - o If login information is not accurate 5 times (deny access for 5 minutes)

Requirements

1. User Registers for an account
 - a. Correct information entered will direct user to homepage (number 3)
 - b. Wrong registration information/retry
2. User logs in with username and password
 - a. Correct information entered will direct user to homepage (number 3)
 - b. Wrong log in username and password/retry
3. Goes to home page
 - a. Patient creates ticket to submit
 - b. Patient edits personal information
 - c. Patient edits an existing ticket
 - d. Patient views their doctor
 - e. Doctor chooses ticket
 - f. Doctor edits personal information
 - g. Doctor views chosen tickets
4. Doctor gains access to, and is able to view, patient records
5. Patient gets notified, and gains access to view doctor information

Appendix

Video Link:

<https://www.youtube.com/watch?v=wI3BgF2v99s&feature=youtu.be>

Github:

<https://github.com/LuuChris/HealthcareApp>

The screenshot shows the GitHub repository page for 'LuuChris / HealthcareApp'. The top navigation bar includes links for Features, Business, Explore, Marketplace, Pricing, and a search bar. On the right, there are buttons for 'Sign in or Sign up', 'Watch' (0), 'Star' (0), and 'Fork' (0). Below the header, the repository name 'LuuChris / HealthcareApp' is displayed, along with a 'Code' button, 'Issues 0', 'Pull requests 1', 'Projects 1', and 'Insights' buttons. A dropdown menu for the branch 'master' is open, showing 'HealthcareApp / README.md'. To the right of the file path are 'Find file' and 'Copy path' buttons. A commit history entry from 'LuuChris' is shown, dated '8 days ago' with the commit hash '05974cf'. Below the commit, it says '1 contributor'. At the bottom of the commit section, there are buttons for 'Raw', 'Blame', 'History', and icons for copy/paste and delete. The main content area contains an 'Intro' section with team information: 'Team: Alpha Medical Systems', 'Members: Chris Jakub Justin Daniel Zijie', and a 'Project Topic' description: 'Our project will deal with the area of healthcare. The goal of the software is to create a network that allows doctors and patients to communicate more efficiently and effectively. Different departments of a hospital should have instant access to information, such as appointment schedules, illnesses, insurance, and prescriptions.'

Slack:

<https://alpha-medical.slack.com/messages/C8XBBU09G/>

The screenshot shows the Slack interface for the '#general' channel. On the left is the navigation sidebar for 'Alpha Medical'. The main area displays a conversation between three users: Eric, Christopher, and Jakub (Kuba) Pietrasik. The messages are timestamped and include various emojis like a smiley face and a video camera.

```

#general
Eric 8:48 PM This is the log? Why he need this one...
Christopher 8:49 PM No idea
Eric 8:50 PM 😊
Christopher 8:50 PM I think
I may just link it since he wants it in the appendix section
N then screenshot the main parts
Of both the log n slack chats
Eric 8:51 PM That would be great
Jakub (Kuba) Pietrasik 9:09 PM Video is almost done
all it needs is my part
Christopher 9:15 PM k ill just take this n use it

```

Slack message logs example:

```
[
  {
    "type": "message",
    "user": "U8WNAHGRW",
    "text": "Any1 wanna study?",
    "client_msg_id": "AE99A895-097A-4E5D-9914-0D6F83210C0A",
    "ts": "1518022284.000094"
  },
  {
    "type": "message",
    "user": "U8WMLULSU",
    "text": "I do",
  }
]
```

```
"client_msg_id": "1507728d-0584-48a5-a586-f12b7b7242d4",
"ts": "1518028451.000737"
},
{
  "type": "message",
  "user": "U8WNAHGRW",
  "text": "Reserved n411 from 5-7 if yall wanna discuss afterwards",
  "client_msg_id": "FB6B91EE-B291-4758-8EC1-41597802E97A",
  "ts": "1518031562.000249"
},
{
  "type": "message",
  "user": "U8WNAHGRW",
  "text": "Whatcha doin kuba?",
  "client_msg_id": "CC635DEE-3CA2-4424-9A81-C696B2DEE41B",
  "ts": "1518039058.000352"
},
{
  "type": "message",
  "user": "U8WMLULSU",
  "text": "in the library but I'm hungry and trying to go to chickfila",
  "client_msg_id": "b23b0a6e-efc5-48fd-a115-645d83b78bb8",
  "ts": "1518039263.000495"
},
{
```

```
"type": "message",
"user": "U93P9P7A5",
"text": "the one time... ",
"client_msg_id": "53f13be4-b3b4-4385-92ea-e6f269595b16",
"ts": "1518039902.000814"

},
{

"type": "message",
"user": "U93P9P7A5",
"text": "i just got back from there",
"client_msg_id": "9fb41191-1842-4189-aa88-6c9cad33ad37",
"ts": "1518039910.000490"

},
{

"type": "message",
"user": "U8WMLULSU",
"text": "So are we meeting?",
"client_msg_id": "d8c9443d-4168-4f2b-9225-37ebdcfbc20a",
"ts": "1518040969.000102"

},
{

"type": "message",
"user": "U93P9P7A5",
"text": "eating, not meeting",
"client_msg_id": "288149aa-db20-470b-8351-ab28f479765a",
```

```
"ts": "1518041125.000412"
},
{
  "type": "message",
  "user": "U93P9P7A5",
  "text": "jk\nN411",
  "client_msg_id": "131556cb-b271-43e0-8cef-2614372edbab",
  "ts": "1518041142.000283"
},
{
  "type": "message",
  "user": "U8WNAHGRW",
  "text": "Were done",
  "client_msg_id": "958FC3D8-326A-4B76-9017-1902186E2E10",
  "ts": "1518042446.000383"
},
{
  "type": "message",
  "user": "U8WNAHGRW",
  "text": "Everyone is dispersing",
  "client_msg_id": "C6596CF2-A6C3-4B00-BF5B-A151F2B1237A",
  "ts": "1518042456.000148"
},
{
  "type": "message",
```

```
"user": "U8WNAHGRW",
"text": "No meeting",
"client_msg_id": "F3274549-339D-4C2B-9E94-A69CECBC3842",
"ts": "1518042465.000409"

},
{

"type": "message",
"user": "U8WMLULSU",
"text": "Lol",
"client_msg_id": "cb59796c-0ad3-4e8f-a308-3980cc267133",
"ts": "1518042738.000141"

},
{

"type": "message",
"user": "U8WMLULSU",
"text": "Be there soon",
"client_msg_id": "af841e7b-03b7-4a3c-a374-9341568e446a",
"ts": "1518042743.000314"

},
{

"type": "message",
"user": "U8WMLULSU",
"text": "Oh",
"client_msg_id": "85bcd7a-3d03-40ce-b3d6-8b58c05d1700",
"ts": "1518042747.000036"
```

```
},
{
  "type": "message",
  "user": "U8WMLULSU",
  "text": "Nvm",
  "client_msg_id": "339fad44-2211-4893-8c5b-953aa820285f",
  "ts": "1518042749.000041"
},
{
  "type": "message",
  "user": "U8WMLULSU",
  "text": ":+1:",
  "client_msg_id": "7a0bcdde-e9ab-4e30-91ec-20380c406cbe",
  "ts": "1518042760.000475"
},
{
  "type": "message",
  "user": "U8WNAHGRW",
  "text": "Is there something u wanted to talk about?",
  "client_msg_id": "8EDBAE07-343B-48C1-9E62-A7CCFF9BA84A",
  "ts": "1518042807.000158"
},
{
  "type": "message",
  "user": "U8WMLULSU",
```

```
"text": "Yeah don't we have to have our video recorded by Saturday?",  
"client_msg_id": "8019eb2d-ad18-4064-a171-9f8b7fab994b",  
"ts": "1518044138.000109"  
,  
{  
    "type": "message",  
    "user": "U8WMLULSU",  
    "text": "Are we gonna have another meeting?",  
    "client_msg_id": "9da7f14c-26c4-489c-90d0-cbd75027f35f",  
    "ts": "1518044145.000054"  
,  
{  
    "type": "message",  
    "user": "U8WNAHGRW",  
    "text": "Nah we decided to do it separately",  
    "client_msg_id": "E607CB4E-02A9-4897-92EA-1E1F63F5F6BA",  
    "ts": "1518044275.000199"  
,  
{  
    "type": "message",  
    "user": "U8WMLULSU",  
    "text": "Alright lol, do we have a Google doc for the script?",  
    "client_msg_id": "31756220-0558-4dd8-b992-a8287e8a24a2",  
    "ts": "1518044302.000347"  
,
```

```
{  
    "type": "message",  
    "user": "U8WNAHGRW",  
    "text": "N load it onto google drive n share a link to everyone",  
    "client_msg_id": "285E5203-3C4F-4D46-ACD5-C81ACA2F1F74",  
    "ts": "1518044437.000047"  
,  
{  
    "type": "message",  
    "user": "U8WNAHGRW",  
    "text": "No...",  
    "client_msg_id": "5B78A0BF-0E3C-438C-9F85-EBD9ED75F237",  
    "ts": "1518044544.000081"  
,  
{  
    "type": "message",  
    "user": "U8WNAHGRW",  
    "text": "But we decided on something along the lines of intro\\problem, people\\customer, unique\\reason to develop, and description",  
    "client_msg_id": "C0DF37CA-ADC6-4F45-A181-FEB5D7B0D610",  
    "ts": "1518044596.000220"  
,  
{  
    "type": "message",  
    "user": "U8WNAHGRW",  
    "text": "So each person can talk about one of those n 2 can describe the project",
```

```
"client_msg_id": "35D41E26-A232-4C30-89BC-BF450D457527",
"ts": "1518044651.000432"
},
{
  "type": "message",
  "user": "U8WNAHGRW",
  "text": "Or sum it up",
  "client_msg_id": "85B85000-A852-4B08-80E3-0394BA422A1D",
  "ts": "1518044651.000539"
},
{
  "type": "message",
  "user": "U8WMLULSU",
  "text": "ok well I'mma put it on our doc",
  "client_msg_id": "df3657a1-1669-4f82-b123-303c0fa5922d",
  "ts": "1518045478.000432"
},
{
  "type": "message",
  "user": "U8WNAHGRW",
  "text": "K",
  "client_msg_id": "7F1A2446-E85D-430E-9979-504CBD1E1DCC",
  "ts": "1518049079.000261"
}
]
```