

DESIGN CHALLENGE • CANSU KAYA

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CONTENT

LIFE IN EMERGENCY ROOM

MEET SELMA:
A YOUNG ER NURSE UNDER PRESSURE

BENCHMARKS TO INSPIRE

TO-BE JOURNEY MAP

WIREFRAMES

FINAL WORDS

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LIFE IN EMERGENCY ROOM

- During January - October 2017, 76 million patients have visited emergency rooms in Turkey.
- This means around one-fourth of all polyclinic work has been done by ER.
- This also means it is not possible to spare 20 minute evaluation per patient as proposed by World Health Organization.

Ministry of Health General Directorate of Public Hospitals, 2018

Tablo 4. 2017 (Ocak-Ekim) Muayene Oranlarına Göre Branş Sıralaması

SIRA	BRANŞ ADI	MUAYENE SAYISI	MUAYENE ORANI
1	Acil Tıp	76.834.439	25,97%
2	İç Hastalıkları	26.898.446	9,09%
3	Çocuk Sağlığı ve Hastalıkları	18.210.754	6,16%
4	Kulak Burun Boğaz Hastalıkları	15.068.377	5,09%
5	Göz Hastalıkları	14.969.016	5,06%

Ministry of Health General Directorate of Public Hospitals, 2018

LIFE IN EMERGENCY ROOM

- With all this burden, “burnout” became disruptive among ER nurses.
- According to a study by Adriaenssens, De Gucht, & Maes in 2015, the rate of burnout among nurses is higher than the general population, which ranges from 13% to 27%.
- In their work in 2018, Abellanoza et al. indicate that rate of burnout possibility is amplified for ER nurses due to urgency and stressful situations in emergency services. various workplace stressors are thought to be amplified due to the increased urgency and trauma of emergency situations.
- According to the same study mentioned above, burnout is one of the main reasons why ER nurses quit. Regarding U.S statistics, the average cost to train and replace nursing staff and the time required to replace is quite high. Cost ranges from \$37,500 to \$58,400 and replacement can take 54 to 109 days; which will bring a resource shortage for the hospital.

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LIFE IN EMERGENCY ROOM

MEET SELMA:

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RESEARCH INSIGHTS

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RESEARCH INSIGHTS

What is the reason behind ER nurses to feel burnt-out?

The interviewed nurses in the article “The Evaluation Of The Problems’ Emergency Services From Staff Perspectives” (2017) , emergency service staff describe ER as **the most chaotic, riskiest and most intense workplace.**

Gümüşhane University Journal Of Health Sciences , 2017

This atmosphere in ER is connected to

- Lack of knowledge in public about where to go for what kind of health problems

“We have to treat many people who come to ER due to simple flu or headache complaints. This steals from our time that we should use for truly urgent patients.”

- #1, 45

User words in Italic are from the 5 ER nurses I have interviewed through phone call.

RESEARCH INSIGHTS

- Long waiting time for the consultation of a supervisor/responsible medical doctor

“Sometimes patients need to wait for hours until the responsible medical doctor comes for the consultation. When this happens, we can even face mobbing by the relatives of the patient.”

- #2, 25

- Legally obliged documentation for patient treatments

“Filling a patient file is one of the most time consuming things when we need to check for many other patients. I know it has to be done legally; however, this much of paperwork steals from our time.”

- #2, 25

User words in Italic are from the 5 ER nurses I have interviewed through phone call.

RESEARCH INSIGHTS

- Receiving intense negative emotional/physical response from patients and their relatives

“I don’t remember a day when a patient’s relative doesn’t yell at me.”

- #3, 32

- Lack of practical training and high turnover rate

“Both new graduate doctors and nurses lack practice with real patients. Dealing with too many patients consecutively make them feel suffocated. Therefore, new comers always try to change their departments.”

- #4, 50

“I still need a supervisor to guide me through procedures. It is not easy to remember and apply what I have learned in school when time is not on my side.”

- #5, 21

User words in Italic are from the 5 ER nurses I have interviewed through phone call.

PERSONA

Selma Bodur

22, Istanbul

ER nurse working in
a public hospital

Compassionate

Aspiring

Meticulous

Hard-working

*“I want to learn more but it is hard
when I keep treating people for
regular headaches.”*

Bio

Selma is an ER nurse working in a public hospital in Taksim, Istanbul. After finishing vocational high-school for nursing, she began interning in ER and currently, she is working with a supervisor. She works both during weekdays and weekends. Some days she work during the morning shift and some days she work during the night shift. During the morning shifts, she gets to the hospital early to stock supplies before ER gets busy with many patients. She thinks her education provided her with the theory; however, she is lacking practice. Therefore, she is trying to talk with her supervisor, fellow nurses and medical doctors as much as she can to learn further about how to act in under different situations.

Habits

- Follows up previous day’s patients’ conditions
- Takes coffee breaks with fellow nurses and doctors to discuss cases of the day
- Watches ER related videos to learn more about different cases

Workload

- ☒ Overloaded
- ☐ Balanced
- ☐ Flexible hours

Me-Time

- ☒ No time for herself
- ☐ Work-life balance
- ☐ More time for herself

Tech Background



Goals

- Acting fast under urgent ER situations
- Having autonomy i.e not constantly feeling the need to have her supervisor or a senior colleague around
- Learning how to handle aggressive patient relatives
- Improving skills through different urgent cases

Pain Points

- Lacking practice with real patients and real cases
- Feeling needy of a supervisor to take quick action
- Feeling stressed when she needs to take care of many patients at once. Without her supervisor’s or a senior colleague’s guidance, she has problems deciding about priorities.
- Having problems following her shifts through the hospital’s computer system because it is unorganized
- Feeling uneasy when patients or their relatives get aggressive

CONTENT

LIFE IN EMERGENCY ROOM

MEET SELMA:
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BENCHMARKS TO INSPIRE

SELF-PACED IMPROVEMENT

TO-BE JOURNEY MAP

SCHEDULE OF THE DAY

WIREFRAMES

ACCESSIBLE INFORMATION

FINAL WORDS

S.O.S

SELF-PACED IMPROVEMENT

- Arranging time regarding personal free times without the burden to meet deadlines
- Following progress
- Feeling motivated through rewards for example certificates

The screenshot shows the IDF course interface for 'UX COURSES'. The user, Cansu Kaya, is logged in. The progress bar indicates a score of 26 / 335 (8%) with 30 potential points. The course is divided into 7 lessons, with Lesson 2.3 currently selected. The main content area displays a video of two men, and below it, a section titled 'PLEASE ANSWER THE FOLLOWING QUESTIONS' with 'Question 1' asking 'What is the purpose of a UX wall?' (3 points).

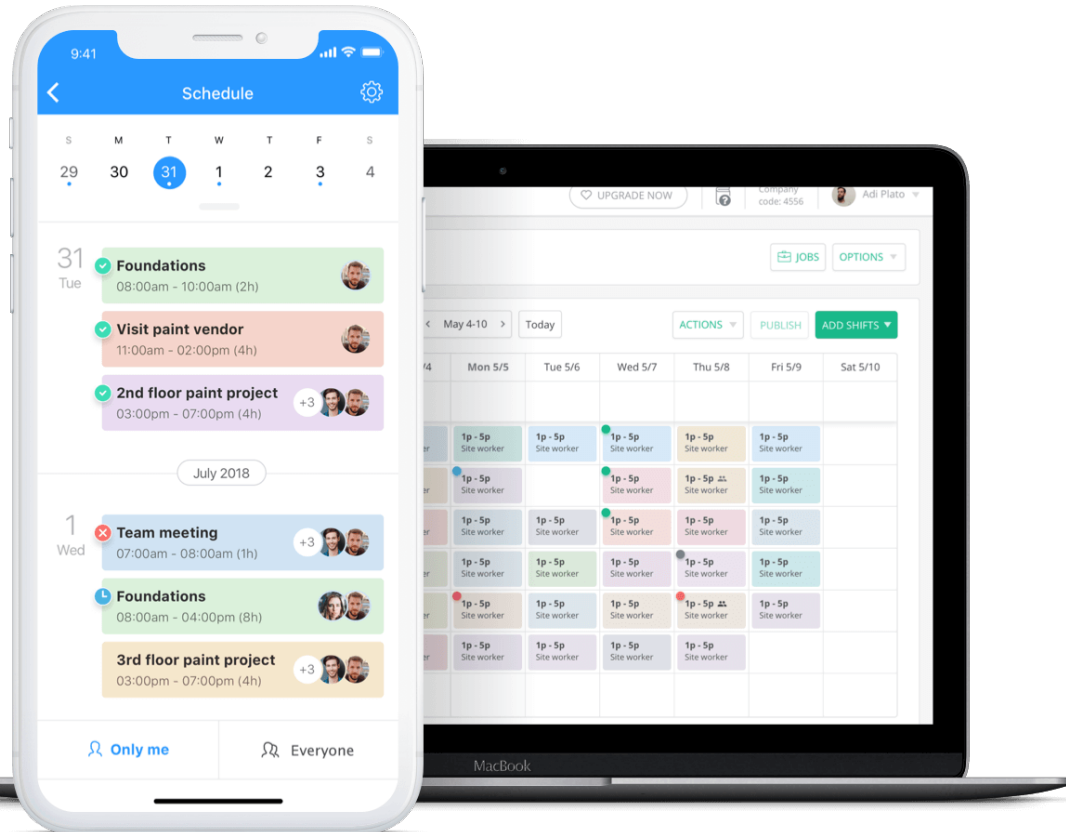
The screenshot shows the 'Google Tag Manager for beginners' course interface. The user has completed 2 lessons of 21 in total, with a progress bar at 10%. The main content area displays the title 'Google Tag Manager for beginners' and a description: 'Google Tag Manager is an essential skill of any technical digital marketer or analyst. Google Tag Manager probably isn't something that keeps you up at night, wondering where you're falling short skillwise. But if you're in digital marketing, maybe it should be. This training program will give you' followed by a list of benefits: 'A knowledge of how to use Google Tag Manager to deploy third-party tracking scripts.' and 'The power to set up tracking without having to rely on a developer.'

Both Interaction Design Foundation and ConversionXL lack deadlines and allow course takers to participate with their own pace.

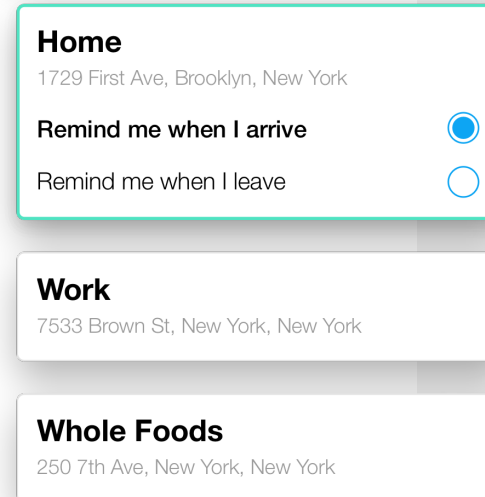
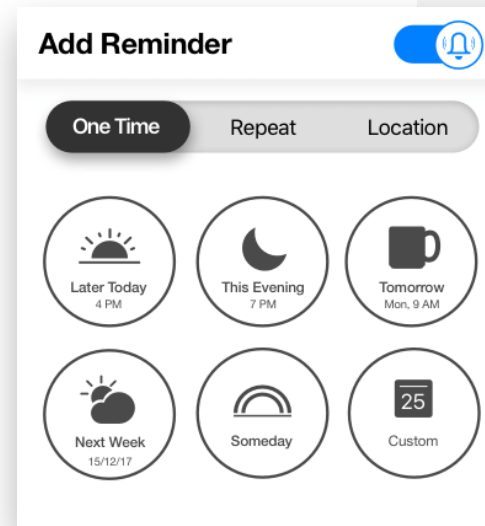
Both also show progress and reward with certificates of completion.

SCHEDULE OF THE DAY

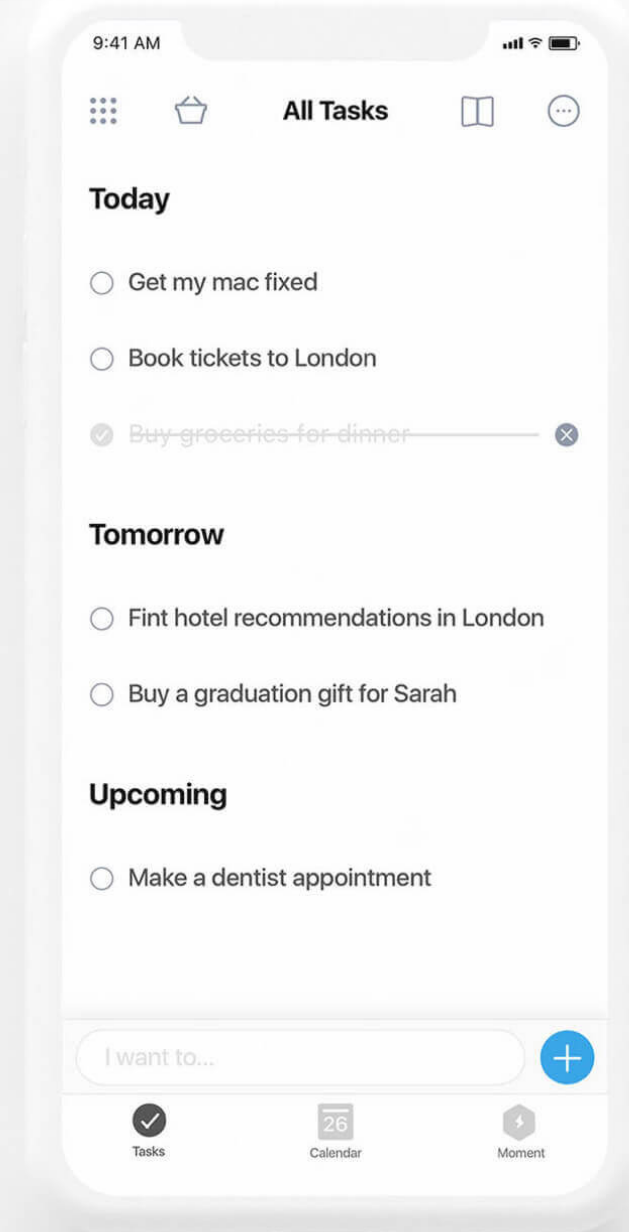
- Keeping tasks of the day in one place
- Differentiating what is done from what is undone
- Setting alarms to remind about important times



Connecteam provides personal and team schedule of employees.

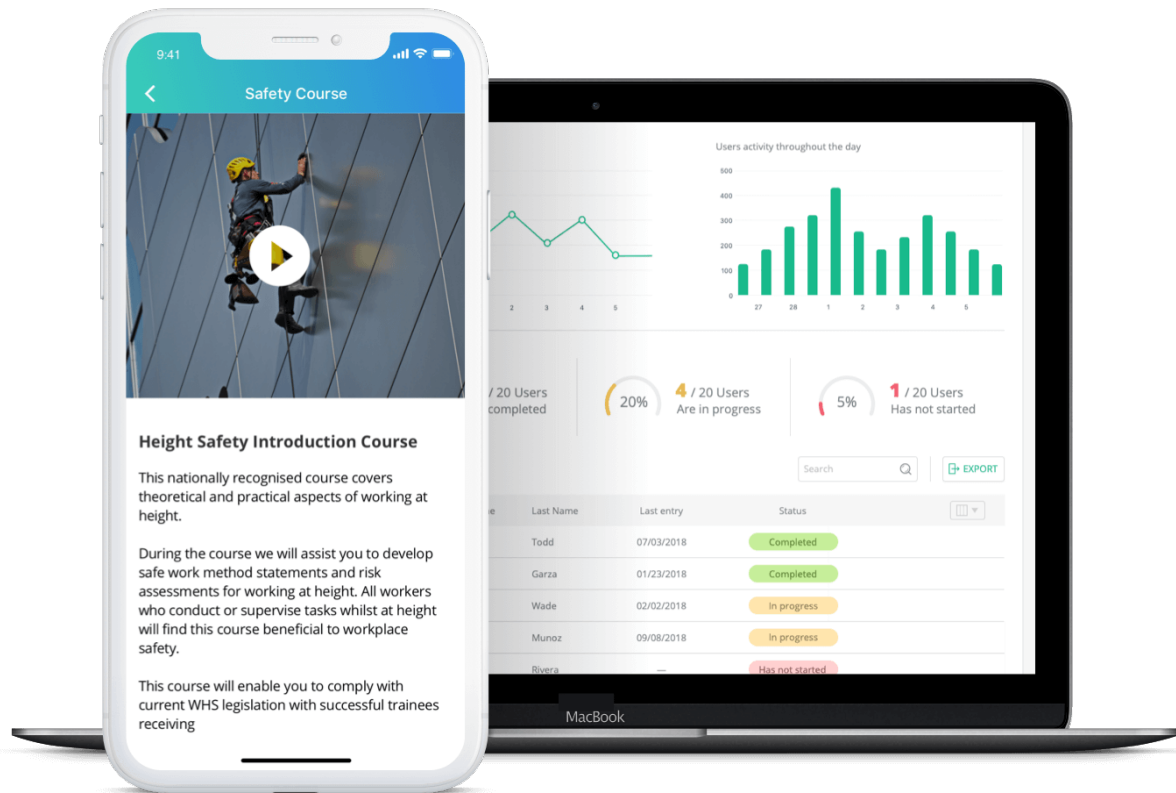


Any.do provides a checklist, calendar and option to set customized reminders. Users can also color code tasks to differentiate the type.

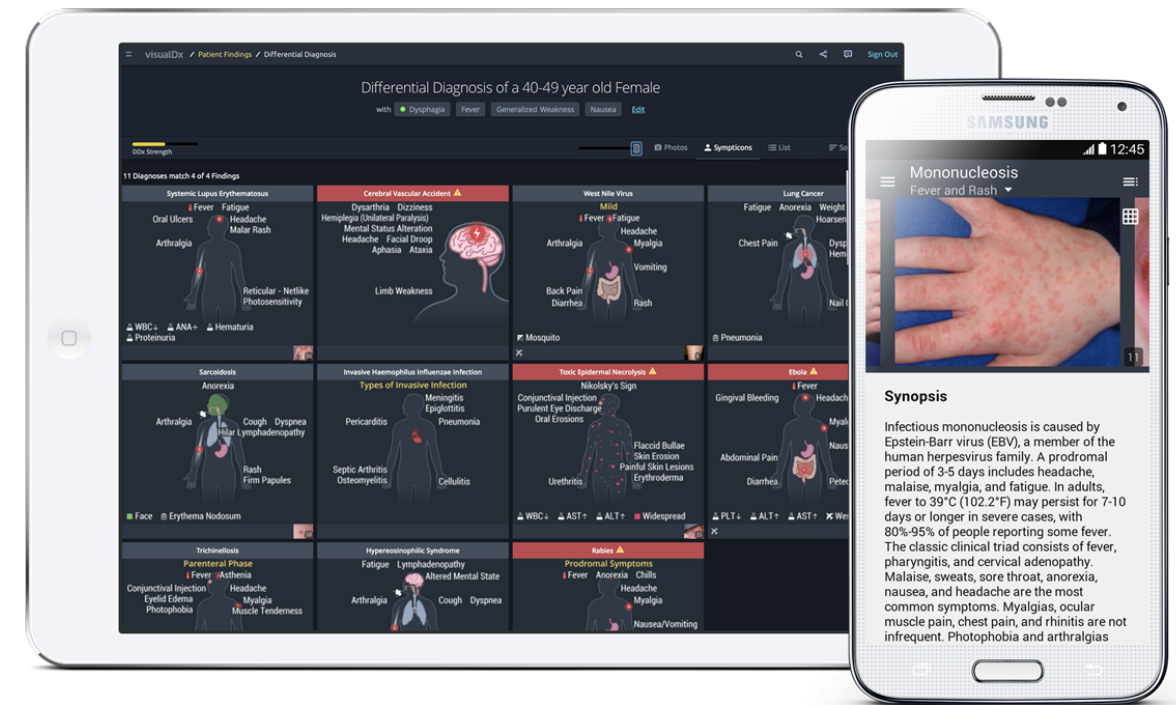


ACCESSIBLE INFORMATION

- Different documentation formats such as text and videos
- Providing search among existing information



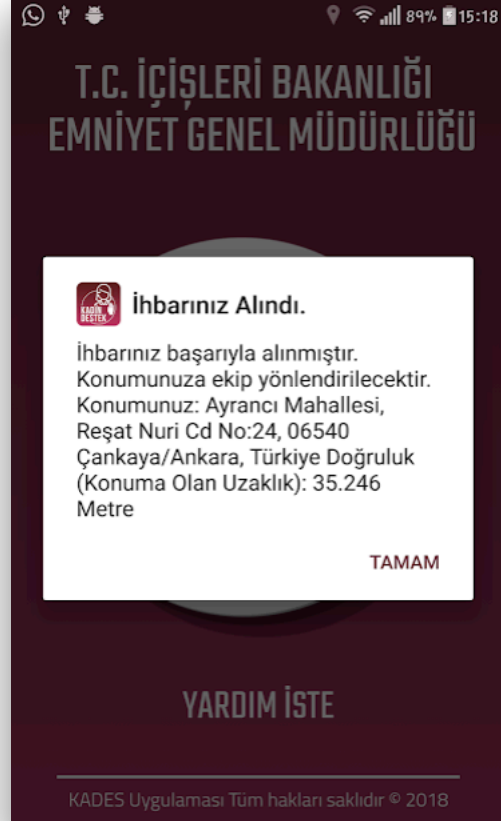
Connectteam contains courses on different topics related to organization domain. It also provides insights about the completion rate of courses.



VisualDX helps to diagnose patients by providing visual images of symptoms. It also allows to add demographic and complaint related information of patients such as female, 50 years old, with lesions on hand.

S.O.S

- One click action
- Quick notice to authorities for example the police in case for possible harassment



Kades allows users to report any harassing behavior to police.



BSafe provides different features to prevent from and report disturbing situations such as alerting friends immediately or by setting timer, sharing location with trusted contacts.

CONTENT

INTRO: A STORMY CHALLENGE

FROM THE CENTER OF THE STORM:
STRUGGLES OF A MAINTENANCE ENGINEER

BENCHMARKS TO INSPIRE

TO-BE JOURNEY MAP

WIREFRAMES

FINAL WORDS

TO-BE JOURNEY MAP

Selma's Journey as ER Nurse



Scenario

Selma is a young nurse working in ER service of a central hospital. She needs to improve her practical skills to decide and act faster. She also needs to feel safe and organized.

Goals and Expectations

- Increasing her knowledge of how to act under different ER cases
- Working in a safe environment
- Keeping track of her plans and progress

AWARENESS

Everyday Selma checks her ERPal App.

ERPal provides features that help Selma to plan and follow-up her day in ER. In addition, it helps her to learn new skills.

PLANNING

Selma can follow her shift schedule from the ERPal App. She can also organize her to-do list for the day while also seeing the tasks assigned to her by her supervisor.

PERFORMING

Selma can access information about different symptoms and treatments whenever she needs to.

She is also feeling safer with the S.O.S button ERPal App provides. She knows she can let the hospital security know if she faces any uncomfortable situation.

FOLLOWING

ERPal App allows Selma to be updated about her day.

She controls her to-do list regularly to check the tasks as "done".

She also receives instant notifications about her shifts and the tasks she identifies as important.

IMPROVING

During her shifts and afterwards, she can take courses to improve her nursing and ER related skills.

She can follow her progress and she can also see the listing of her peers. This way, she feels motivated to complete her courses.



"Finally I am feeling less stressed-out about how to cope with ER!"



"My mind is at ease as ERPal doesn't make me think about my shifts anymore."



"Reaching information and help when I need to makes me feel at ease."



"I am feeling organized and always on track."



"I enjoy my job more as I progress further!"

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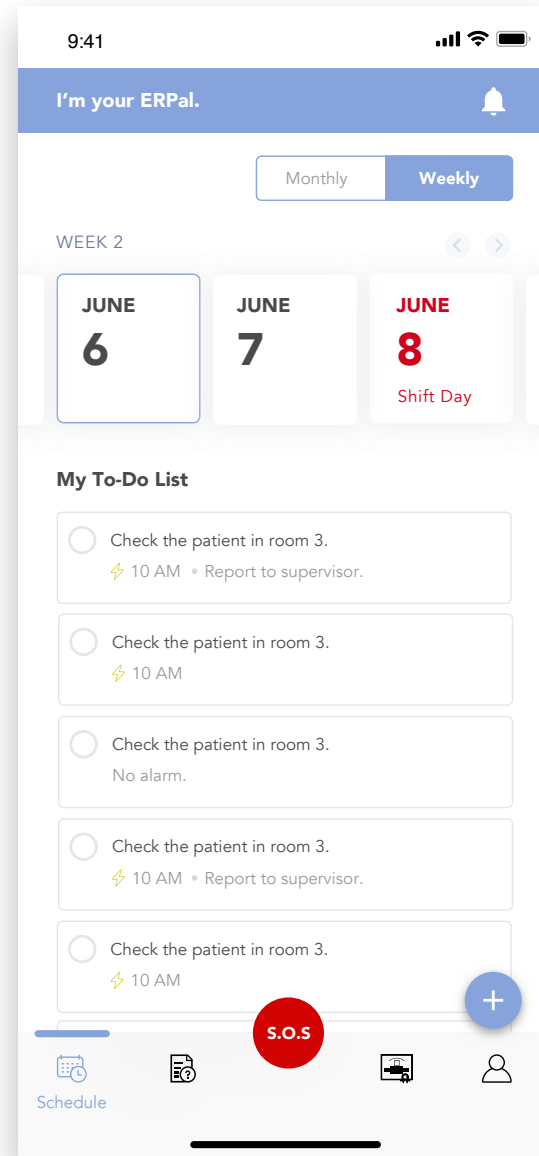
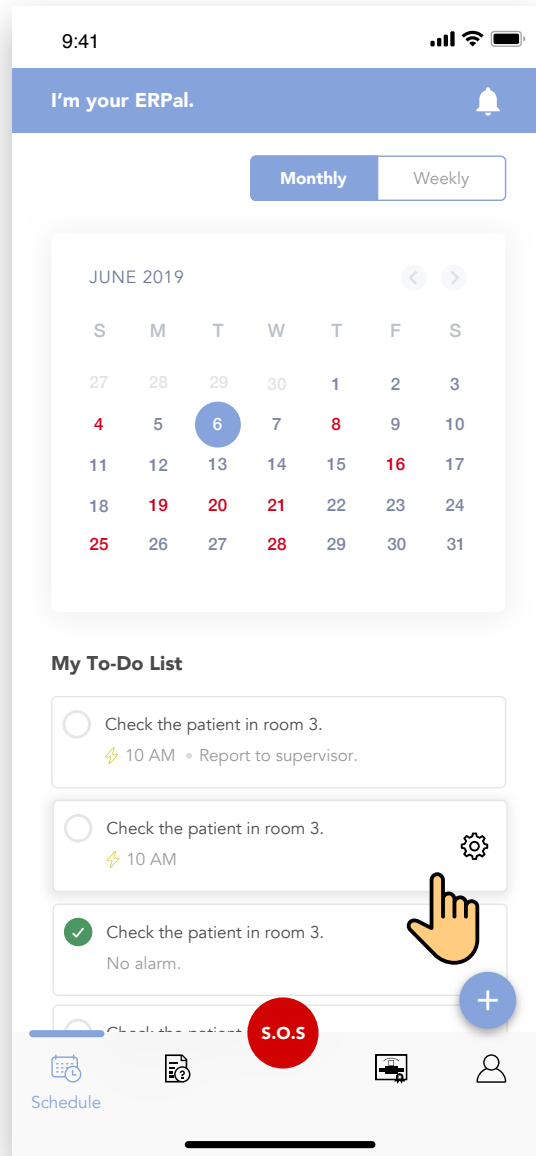
BENCHMARKS TO INSPIRE

“TO-BE” SCENARIO

WIREFRAMES

FINAL WORDS

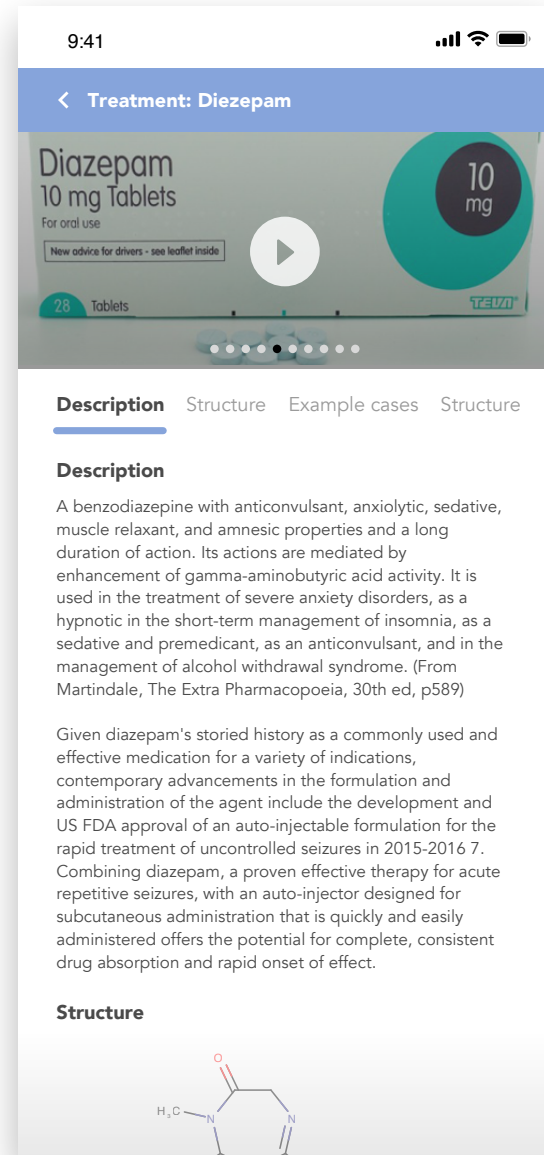
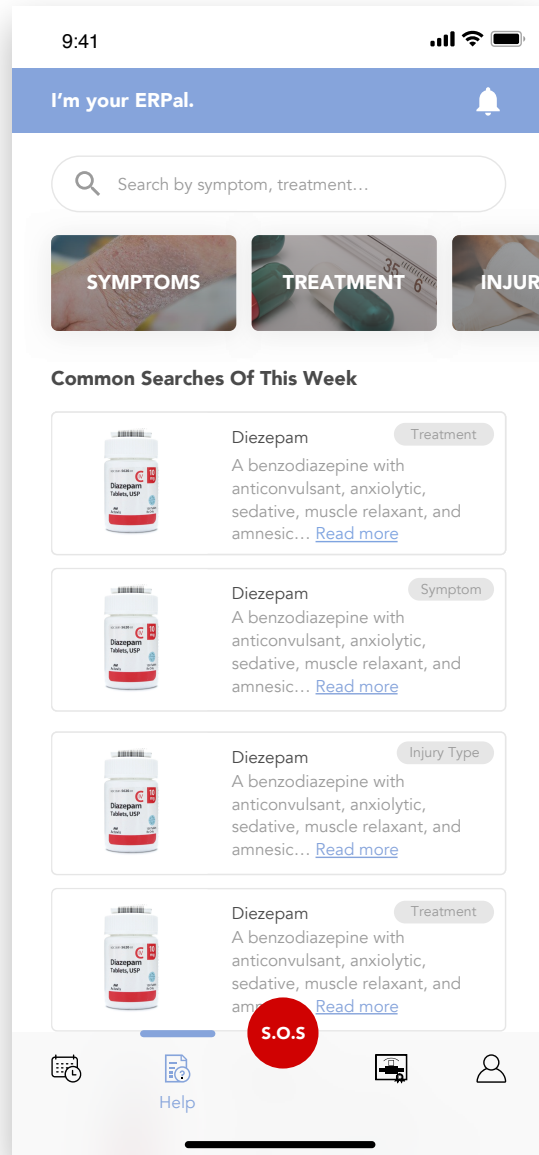
WIREFRAMES



Schedule

- Schedule can be viewed monthly or weekly.
- Red colored days indicate shift days.
- Clicking each day, user can see the daily tasks.
- Tasks can be both added by the user and the supervisor.
- User can set alarms for the tasks.

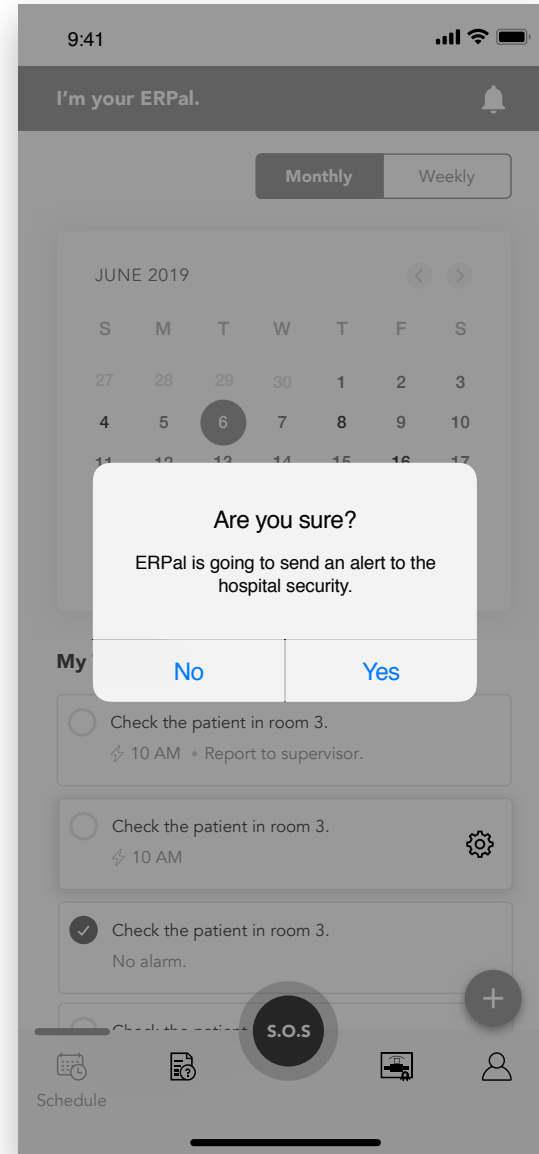
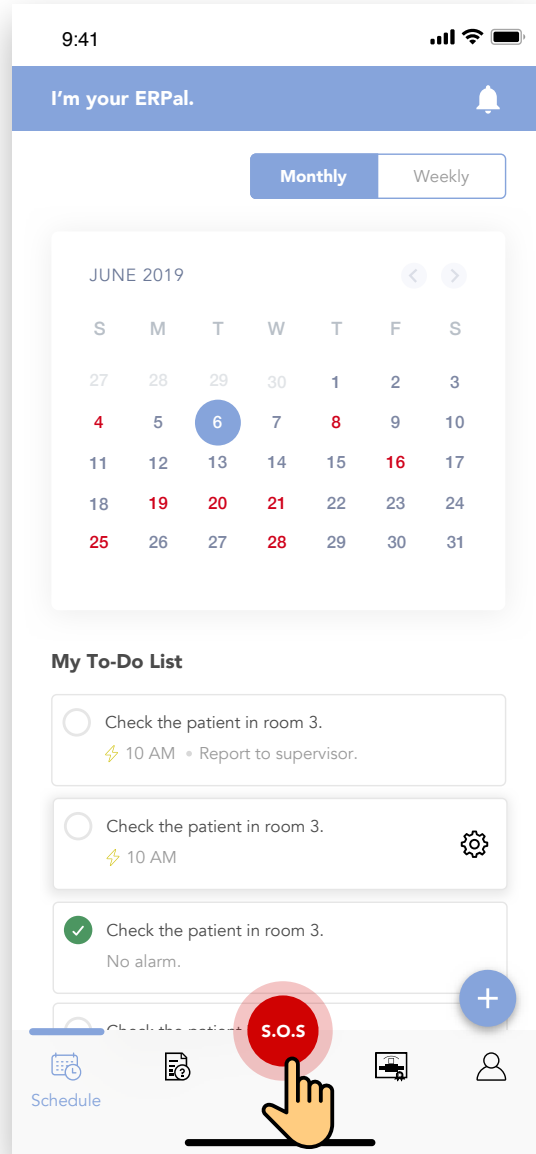
WIREFRAMES



Help

- User can search symptoms, treatments and injury types.
- Common searches of the week are listed to provide user with shortcuts and an overall impression of what are the most common causes for patients to visit ER service.
- Detail pages provide related images and videos as well as medical descriptions, structures, example cases etc.

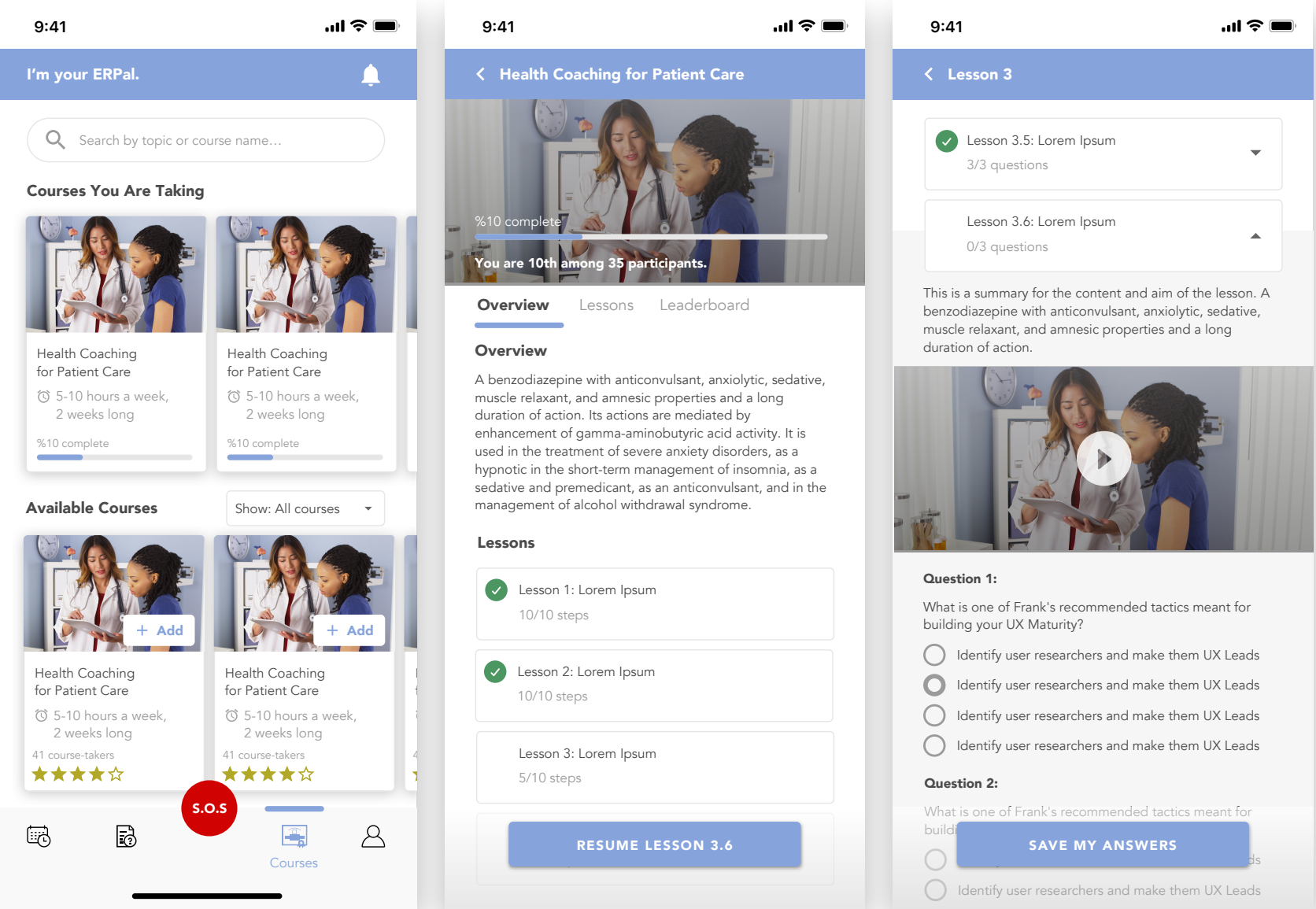
WIREFRAMES



S.O.S

- With a single click, S.O.S button is activated.
- A pop-up appears to check user didn't use the button by mistake.
- An alert is sent to the hospital security.

WIREFRAMES



Courses

- User can follow the progress and place in the leaderboard among other participants in the courses taken.
- Course details include lessons with one or multiple steps.
- Lesson details show further breakdown of the steps which includes videos or written material as well as questions.

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“TO-BE” SCENARIO

WIREFRAMES

FINAL WORDS

FINAL WORDS

This challenge has enabled me to come up with an idea without a definite brief on the solution.

Within the limited time I am content that

- I have managed to conduct primary research with in-depth interviews with ER nurses and secondary research through related articles and reports on the topic.
- Through the research, I believe I have identified pain points which require a solution.
- I have worked on the “to-be” journey map to identify what would be the ideal experience hence to decide which areas to focus in my solution.

FINAL WORDS

What would I do next if this is an on-going project?

- I would work in detail for all the flows to come up with a working prototype.
- I would visit 5 ER nurses in their context for prototype testing and user interview.
- I would analyze the points which need further improvement.
- I would reconsider and redesign the user journey and use flows regarding the insight I have gathered.

THANK YOU FOR YOUR TIME.

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