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# project overview

the project’s main goal is to ease the experience for new coming students and instructors in the university, but that doesn’t our apps audience does not just fall for them. student from any level can use it and it will be beneficial for them. our app provides services that KFUPM does not mainly focus on, such as the heatmap for instructors, calendar, map for students (since there are many buildings inside the campus, virtual student and instructor id, as well as the major flowcharts and many more. this idea was implemented and developed after taking interviews for students about what was missing in KFUPM? what services can KFUPM provide to make the experience for them easier? in our opinion our key highlight feature for our app is the heatmap, which indicates to instructors which day to assign a quiz or an assignment since many students in our university struggle with a lot of tasks in a single day.

# CHALLENGES WE FACES

Since the project was developed in the covid19 pandemic our team has definitely faced some challenges, the first part of the project (SRS and SDD) was a bit hard since communication was stricted and online meeting were just not enough for us. also, we had to do some interviews for our SRS to take requirements, but we managed to find some students who are willing to take the interview remotely. Furthermore, we had some other courses to study and be tested on, so it was a little bit difficult to manage between our senior project and some other courses. going on to coding and testing, our team was hesitant to code the project on flutter since we are not fully prepared and trained to code in flutter and it will be difficult to train, study and work on the senior project but with some time management and some team work we managed to successfully do it.

# how did other courses help US?

Our major courses have indeed helped us to complete the senior project, without them we would be clueless on how to collect requirements or how to pick an applicable architecture for the project due to the fact that it is heavily important to do such thing in the project, one thing stands out though is the database systems course, one of the most enjoyable courses as well as the most helpful one, it helped us to learn how to make a database for our project and how to manage the data and organize them properly. As well as the testing and quality assurance course since there is a whole part for testing In SWE418 we needed to know how to test and what are the correct ways to do so. Again, without those courses we would defiantly have been clueless. Also, during our project sometimes we would consult our instructors for advice for design or testing and even collecting requirements. It would be extremely difficult to complete a fraction of what we did during the timeline of our project if it was not for our majors’ courses.

# TEAM COMMUNICATION PLAN AND MEETING MANAGEMENT

Our team have decided to communicate through MS teams & discord regularly, every Saturday we would meet online and give updates on what we have worked on and what is next, we would document the most important things and check for any missing things if there is a submission coming. This method was first agreed on during the covid19 pandemic and it was carried on after since it was efficient, of course along with in real life meetings.

# Training & extra training

Our team was basically good at everything but coding in flutter so we had to take minor training during SWE417 (since there was no coding in that semester, we took some minor training so we can manage other courses as well) but in SWE418 we had to take extra and intensive training so we can finish the project in time.

# TOOLS AND TECH USED

For open-source software’s our team used multiple things to make the project:

* Lucid charts (using it for charts and UML diagrams)
* Microsoft Word
* Microsoft PowerPoint
* Microsoft Excel
* Figma (for prototypes and UX/UI)

As for licensed software our team used:

* IntelliJ IDEA
* Enterprise Architect

And our team used **Firebase** for database

And **TestFlight** on IOS for testing the app

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| --- | --- | --- | --- | --- | --- | --- | --- |
| Tool/languages | Tool/language name | Level of familiarity (N, B, E)\* | | | | | |
| TALAL BIN RABIAH | SAUD ELABDULLAH | MOHAMMED ALQAHTANI | Ali Bugshan | Mohannad Bawazir | Turki Nasser |
| iOS Platform | Testflight | B | B | B | B | B | B |
| Android Platform |  |  |  |  |  |  |  |
| Web Framework |  |  |  |  |  |  |  |
| Programming languages | Flutter | B | B | B | N | N | N |
| UML Modeling | **Lucid Charts / Enterprise Architect** | E/B | E/B | E/B | B/B | B/B | B/B |
| Development IDE | IntelliJ IDEA | B | B | B | B | B | B |
| Testing |  |  |  |  |  |  |  |
| GUI design | Figma | B | N | N | N | N | B |

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| --- | --- |
| **Factor** | **Response and Evidence** |
| Global:   1. How useful is this product? 2. What is the need of the project? | 1. This project will benefit our stakeholders in multiple ways (KFUPM, instructors, students or even our team), those ways will be reflected in the long-term journey. Our product concerns the mass majority of student, by assessing their most common problems we tend to solve and ease those problems by providing a feature or a service, and that goes for instructors too since easing the college experience have to be dealt with in every aspect that we possibly can. That being said, KFUPM will also have benefits in this regard by taking this apps features into advantage since no other app like this have been developed (properly and up to date) before. Students will be much happier and satisfied since their problems are solved and that will reflect eventually in the university’s reputation. |
| Culture:   1. Have you considered ethical cultural issues in your project (for example the use of inappropriate images, language, etc.)? 2. Explain. | 1. Since our product is going to be developed for a specific type of audience and as a part of those audience (Students), we already know if what we will provide is going to include ethical cultural issues or not, as this product is going to serve an academic purpose for the university only, we tend to keep our product professional and respectful of every part of our culture and society. Of course, our students, instructors and even KFUPM faculty come from different types of cultures and religions, by keeping that in mind we are also making sure that professionality and respectfulness is what our product reflects in terms of ethics and culture. |
| Social:   1. What is your target age group of users? 2. Did you consider different age group? 3. Can users with limited IT experience use your product? 4. Explain. | We, as a team of college students developing an application for the age group of college student and ongoing, considering the different age group aspect was never an issue to us since a college student is more than capable of using an application as students nearly use applications daily. To summarize the different age group problem if the user of our product  knows how to use blackboard or the portal (which is an essential part of being in any education institution) they will be more than capable of using our KFUPM App. |
| Economic factors​:   1. How many open source software did you use in your project? 2. How many freeware software did you use in your project? 3. How many licensed software did you use in your project? | Open source softwares:  - Lucid charts (using It for charts during documentation)  - Microsoft Word  - Microsoft PowerPoint  - Microsoft Excel  - Figma (for Interfaces)  Licensed softwares:  - IntelliJ IDEA  - Enterprise Architect |