

Improving the “My Future” Application

Prepared by:

Bushra A. Dajam

Jouri E. Alghamdi

Rawan A. Almalki

Rose B. Musalli

Wasan M. Alshehri

College of Computer Science and Engineering

University of Jeddah

CCIT 113: Technical Writing

Dr. Waad Alzahrani

December 11, 2021

King Abdelaziz Branch Rd
Jeddah, Mecca region
0738461298

December 2, 2021

Jeddah
Hamzah Ibn Al Qassim St
University of Jeddah

ATTENTION: development team of the “My Future” application

Improving The “My Future” Application

This report was written to suggest some improvements to the "My Future" application. On December 6, 2021, we performed a survey that backs up our recommendations.

This report suggests several improvements to the "My Future" application, which is a highly useful tool. The mentioned recommendations in this report will aid students and the university faculty by providing them with new beneficial features that will help them accomplish their academic work more efficiently.

Thank you for taking the time to look through our suggestions. We hope you find this useful, and we appreciate your efforts.

Best regards,
Wasan Alshehri
Bushra Dajam
Jouri Alghamdi
Rose Musalli
Rawan Almalki

CONTENTS

EXECUTIVE SUMMARY	1
INTRODUCTION.....	2
PROJECT DESCRIPTION	2
SCOPE OF STUDY.....	3
REPORT FORMAT	3
Improving the Security of the Application	4
ENCRYPTION.....	4
INTRUSION DETECTION SYSTEM	4
DATA BACKUP SYSTEM.....	4
Taking Attendance Feature	6
EXCUSES	7
Messaging Feature	8
TIME MANAGEMENT	8
CONVENIENCE AND EASE OF USE.....	9
SPEED	9
EASIER COLLABORATION	9
Sharing CV	11
OFFERS HEAPED	11
DEVELOPMENT OF QUALIFICATIONS AND SKILLS	11
EXPERIENCE.....	12
Announcement Bulletin Board Feature	13
PUBLIC BULLETIN BOARD	14
PRIVATE BULLETIN BOARD	14
BENEFITS	14
Calendar Feature	16
TIME MANAGEMENT	16
ACCESSIBILITY	17
CUSTOMIZATION	17
Conclusion	18
References	20

APPENDICES

A. Survey.....	22
B. Survey.....	23
C. Survey.....	24

ILLUSTRATIONS

Figure 1: The relationship between attendance and average grade..... 6

Figure 2: A bar chart depicting the percentage of students who voted in favor of posting all college announcements in one place. 13

EXECUTIVE SUMMARY

This report recommends multiple features that improve the "My Future" application. Because of the useful characteristics it would provide if the suggested features were implemented the advantage extends not only to the institution but also to students and faculty members.

Using the attendance check tool, which saves time and allows for adjustments between students, and using text and instant messaging instead of email, which is favored by students. The ability to display and share a student's CV with external parties gives the student a one-of-a-kind chance. In addition, there's a calendar and an Announcement Bulletin Board.

We offered features that improve the application's efficiency and make it easier to use. The following are some suggestions that were discussed in the report: Using data encryption, an Intrusion Detection System (IDS), and regular backups to improve application security.

Finally, we intend to integrate the ideas made in order to improve the application's quality and encourage students and faculty to use it. And to make the application more efficient and usable, close the space between them.

INTRODUCTION

Mobile technology is an extremely fast-growing industry that is intimately linked with our work and daily life. Every day, fresh advancements contribute to its expansion, as different patterns of usage. Keeping in view the benefits, this report outlines several features for developing and updating the program to make it more convenient for university students and faculty. This introduction covers the project description, scope of study, and the format of this report

PROJECT DESCRIPTION

This report focuses on the importance of the "My Future" application at the university level, how to keep it up to date for better usage, and how to improve the communication gap among students and university faculty. The "My Future" application has made a significant quantum leap in keeping with the university's goal of digital transformation, which aims to seek high-quality education, and provide an elevated educational experience. This report focuses on the importance of the "My Future" application at the university level, how to keep it up to date for better usage, and how to improve the communication gap among students and university faculty. Furthermore, by adopting the features described in this report, students will be able to stay connected to the university's systems and services and access university resources at any time and from any location, while keeping their private data secure.

SCOPE OF STUDY

The prime purpose of this study is to develop or update the virtual application for better use for university students. It can deliver the following benefits at the university level.

- Improve the Security of the Application.
- Taking Attendance Feature.
- Messaging Feature.
- Sharing CV Feature.
- Announcement Bulletin Board Feature.
- Calendar Feature.

REPORT FORMAT

The report includes the following sections:

1. Features of the said application: It illustrates the various attributes and benefits of the application.
2. Survey: pie charts of the results of the survey
3. Conclusion and Recommendations.

Improving the Security of the Application

The application's security is critical since it holds a significant database of students, making it a target for hackers. Since its beginning, the application has relied solely on a firewall as a line of defense against attacks. However, this is insufficient to secure the application, and it must be combined with various other security practices to provide additional safety.

Encryption

Every piece of data transferred through the app must be encrypted. Encryption is a method of scrambling plain text so that it has no meaning to everyone except those who hold the password. This means that even if data is taken, an attacker will be unable to access and exploit it.

Intrusion Detection System

To prevent these attacks, we will use the Intrusion Detection System (IDS), which, like antivirus software, analyses all network packets and correlates them to a repository of virus definitions. It also alerts the host when an intrusion is detected and replies by blocking cybercriminals or stopping the server.

Data backup system

Establishing a data backup system is a system that copies databases and stores them on another server independent of the main server, where data can be damaged or devices

malfunction, so a fast and safe retrieval of data in the event of loss must be ensured, and the backup is scheduled automatically once a week.

Taking Attendance Feature

Taking attendance might consume up a lot of time during a lecture, especially if there are a lot of pupils in the class. Even if there is enough time, sometimes instructors may forget to take attendance, or some students may cover up for their classmates and mark them as present, which is not fair. Hence, we suggest that you add an attendance check feature to the "My Future" app, where instructors can take attendance by showing a barcode that students can scan with their phones or simply giving them a code to enter in the app's attendance page. After that, they will be marked as present. Therefore, instructors will no longer have to manually mark each student's name; instead, the application will do so. This feature will help instructors in saving time during lectures while also being fair to their students. In addition, it will minimize the number of absent students because they will know they cannot go over their permitted absence days.

It's important to remember that attendance has a significant impact on students' grades. As demonstrated in Figure 1, it indicates that when the average of students' attendance decreases, the average of their grades decreases as well.

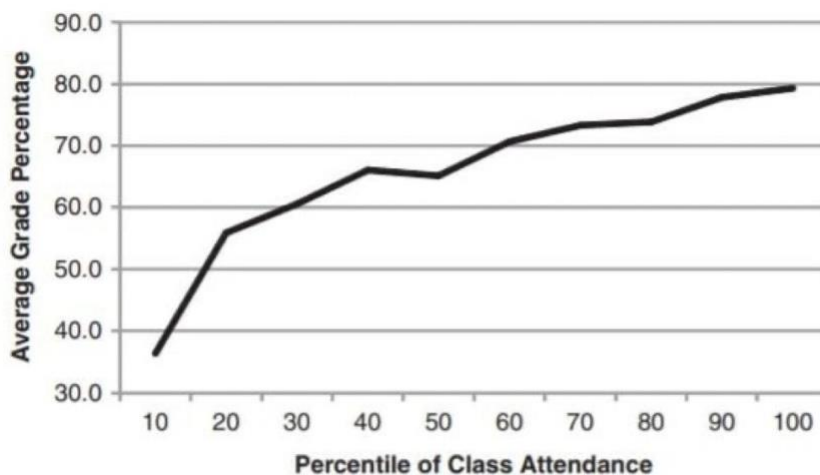


Figure 1: The relationship between attendance and average grade

Excuses

Thus, students will not miss class unless they have a valid excuse. For this reason, we suggest that you add an excuses page where students can submit their excuses and instructors can decide whether to accept them or not. The attendance record will be forwarded to the instructor's email at the end of each class on a sheet that includes the student's name, Id, and whether the student was present, absent, or excused.

Messaging Feature

Instant messaging is a type of mobile communication used extensively in college and university campuses to communicate with peers and instructors. It seems to be the preferred mode of communication nowadays. Therefore, it can be a helpful and viable tool for increasing students' communication among peers and faculty in higher education. Given the popularity of texting and instant messaging, the willingness to adopt the text and instant messaging feature for educational purposes in the "My Future" application will make it so much easier for instructors and students to communicate and discuss assignments, grades, conferences, or issues with their instructors. The main reasons for implementing these features in the application include saving time, convenience and ease of use, Speed, and Easier Collaboration.

Time Management

Because of its immediacy and ubiquity, text messaging is particularly well suited to providing time management support to students. Although the administrative staff may be slow to implement text messaging with students or colleagues, text messaging reminders from faculty can help students develop a time-management strategy. Similarly, text message assignment due dates can be especially beneficial in assisting first-year students with adjusting to academic life. Finally, instant messaging is an excellent way to get a quick response.

Convenience and Ease of Use

Text messaging can be added to your daily schedule easily. From your computer or mobile device, you can reach out and reply to anything and get back to what you were doing. All you have to do now is wait for the other person to respond, then respond when your turn comes. It is highly beneficial for both you and the receiver of the text because it allows you to get the clear context of the conversation and continue the conversation whenever you like.

Speed

Instant messaging allows you to communicate with someone in real-time. It enables you to ask and answer quickly to any of your concerns. It can have an impact on your productivity, making it an excellent reason to implement it in the application.

Easier Collaboration

Chats enable students and instructors to work on assignments and essays from remote areas, regardless of distance. The benefits of real-time collaboration should not be overlooked because it facilitates the consolidation of learning materials and the completion of coursework. By incorporating this feature in the application, student's life will be considerably easier.

Better than Email

It's notable that students consider text messaging to be more "immediate" than email, and that it's the most popular mode of e-communication among students. Text messaging is preferred

to email in the development of social and academic interactions due to its role as a key communication channel.

While email is viable in higher education, the immediacy and ubiquity of communication via text messaging or instant messaging maybe even more significant.

Sharing CV

In the “My Future” application we suggest displaying the student’s CV and sharing it with external parties. This CV will highlight the qualifications and experiences of the student through which it will attract companies and institutions to provide job opportunities that suit their abilities as well as raise their potential.

Offers heaped

When displaying and sharing the CV for everyone and for companies in particular, the latest international achievements and certificates in your specialization, the most important qualifications for work, the skills that a person possesses, and his interests inside and outside the specialty, which makes him qualified for this job.

Development of qualifications and skills

When viewing a CV and after work, new skills are discovered during this work, the development of previous skills, the expansion of the culture of this work, obtaining a huge amount of new information, acquiring relationships and expanding the scope of the person, according to a research study say that Students get the opportunity to try out a potential job while still in high school, which is extremely beneficial to them.

Experience

It is the most important thing that the labor market demands at the present time, and it is one of the indications of the keenness and perseverance of the person and the development of himself in his field. The years of experience may be two or more, and it varies from one country to another. Not only is a university degree capable of employment, but rather the years of experience, qualifications and quality of CV given, in addition to that some of the company's request The existence of volunteer certificates to ensure that this person is flexible and may accept work only to volunteer and improve his skills

Announcement Bulletin Board Feature

Most college-related announcements are scattered across several platforms, including Blackboard, email, the university's website, and even external channels, such as WhatsApp, that are entirely not affiliated with our university. For this reason, many students miss out on potentially beneficial events, become baffled about upcoming exams or assignments deadlines, and ask frequent questions that may annoy other students or lecturers. Moreover, the university faculty and staff might be concerned about whether their notifications have been delivered to all intended targets.

As per the pie chart from a survey we conducted (Appendix B), 99.6% of respondents believed having all college-related announcements in one place would be more convenient. Therefore, we suggest that a bulletin board-like feature is an ideal system to implement in the "My Future" application since they are traditionally used to collectively post public messages, such as upcoming events, special announcements, and relevant information. Next, we will mention the elements and benefits of this feature.

Will it be easier for you if all relevant college announcements are orderly collected in one place?
32 responses

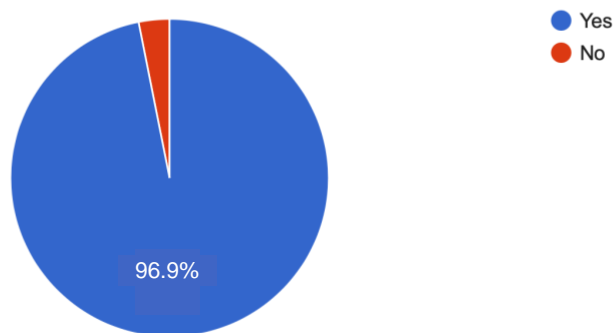


Figure 2: A bar chart depicting the percentage of students who voted in favor of posting all college announcements in one place.

Public Bulletin Board

In this board, only administrators, deans, and authorized personnel can access this board and post on it. This board is divided into three parts. The first section is the *Top Announcements*, which contains all important news that all students should be aware of. The second category is the *Subscription*, which includes posts from channels that the student has subscribed to. Lastly, there's the *Explore* section, where the user may see all the messages from the remaining unsubscribed channels. Furthermore, this board is updated on a weekly basis to assure the quality and novelty of the material posted.

Private Bulletin Board

This board includes posts specifically related to the user of the application. Thus, any individual directly connected to the user can utilize this board. For example, if the user is a student, instructors can post information about their courses, such as the deadline of an assignment or an update regarding an upcoming exam. Likewise, the student might be in a club; thus, the club executives can inform the members of the details of the next meeting. Additionally, users can pin topics that they find interesting to this board.

Benefits

Bulletin boards have been proven to be successful communication tools for sharing critical information since they are likely to attract one's attention due to their creative and structured nature. Thus, the app's virtual bulletin board would display announcements, notices, and other messages more efficiently to students and faculty, allowing them to absorb more

information. Additionally, a message posted on a bulletin board is more likely to be noticed than an email buried among hundreds of others, making it more convenient for the users as well as increasing their productivity.

Calendar Feature

Every university has its own academic calendar, which lists dates for important events such as the start and end of the academic year, breaks or vacations, enrollment, delay, and withdrawal of classes, among other things.

Although the My Future application already provides a calendar, it is empty and does not mark relevant dates. According to a survey we conducted (Appendix C), all responders agreed that the My Future application should be automatically provided with key academic events. Therefore, we recommend linking the University of Jeddah's calendar to the app's calendar. In the following paragraphs, we will go through three reasons why this feature is beneficial.

Time Management

An academic calendar is intensely beneficial and practical since it keeps students, faculty, and staff organized and reminded of important events throughout the academic year. Ideally, they will have a clear picture of how their academic year will unfold and what to expect in the following days. As a result, incorporating this feature will make it easier for users to manage their time effectively.

Accessibility

By implementing this feature, students and faculty don't have to print or save a picture of the academic calendar anymore, as it is just a click away from accessing it. Therefore, users can effortlessly browse and explore the calendar without any difficulties.

Customization

The user of the "My Future" application has the option of adjusting or customizing the calendar however and whenever they desire. They have the ability to add new events to the calendar as well as delete existing ones. They may also personalize the calendar to their preferences by changing the color of the calendar, marking certain dates with symbols, and adding pictures.

Conclusion

In this era of technological advancement, there has been rapid development and expansion in applications. Therefore, software developers should keep up with the evolving changes to succeed in their careers. In this report, we recommended a variety of features that can enhance and upgrade the “My Future” application.

To summarize our report, we first recommended several techniques that improve the safety and security of the "My Future" application to ensure that the users keep their private information such as ID numbers, chats, and tests secure and only accessible by them. We also surveyed UJ students and instructors to support our argument in recommending features that would improve the application.

To begin with, we proposed adding a helpful feature for instructors in which they are able to take students' attendance right away during the class without wasting much time looking for names throughout papers. Next, we discussed adding a messaging attribute and how it would facilitate and ease the life of students and instructors. Then, we talked about a feature where students can add their CVs in the application, and external parties that have access to the application can provide opportunities for students with qualifications that meet their requirements. We also recommended an announcement bulletin board feature that provides effective communication and keeps the students up to date with events, special announcements, and important information. Lastly, we advised adjusting the academic calendar in the application by adding dates such as enrollment, holidays, and delays.

To conclude, we hope that you consider applying some of the features and attributes that have been discussed in this report to benefit all users of the "My Future" application and encourage more students and professors to start using the application more often.

References

- Attendance / Blackboard Help*. (n.d.). Blackboard.
<https://help.blackboard.com/Learn/Instructor/Original/Grade/Attendance>
- Conrad, R. M. (2017, October 29). *Taking Attendance - Must We?* UC Berkeley Center for Teaching & Learning. Retrieved December 10, 2021, from
<https://teaching.berkeley.edu/news/taking-attendance-must-we>
- Cornell, J. (2021, May 17). *The Benefits of Having Live Chat on your Educational Website*. <https://www.proprofschat.com>. <https://www.proprofschat.com/blog/benefits-of-live-chat-for-education-website/>
- Costill, A. (2019, July 25). *The Academic in a Review*. Calendar.
<https://www.calendar.com/blog/academic-calendar-in-a-review/>
- Encryption software (disk encryption, File/Folder encryption, database encryption, communication encryption, cloud encryption) market 2015 - 2019. (2015, Feb 10). *M2 Presswire*. Retrieved from <https://www.proquest.com/wire-feeds/encryption-software-disk-file-folder-database/docview/1652643470/se-2?accountid=142908>
- Engadget is part of the Yahoo family of brands*. (2016, September 30). Engadget.
<https://www.engadget.com/2016-09-30-12-most-used-messaging-apps.html>
- Marcus Credé, Sylvia G. Roch, & Urszula M. Kieszczynka. (2010). Class Attendance in College: A Meta-Analytic Review of the Relationship of Class Attendance With Grades and Student Characteristics. *Review of Educational Research*, 80(2), 272–295.
- School Outfitters. (n.d.). *Bulletin Boards, Cork Boards & Tack Boards*. Sales.
<https://www.schooloutfitters.com/catalog/default/cPath/CAT385>

University of Central Arkansas / UCA. (n.d.). Uca.Edu. <https://uca.edu/cetal/taking-attendance-tips/>

Weon, I., Song, D. H., & Lee, C. (2006). Effective intrusion detection model through the combination of a signature-based intrusion detection system and a machine learning-based intrusion detection system. *Journal of Information Science and Engineering*, 22(6), 1447-1464. Retrieved from <https://www.proquest.com/scholarly-journals/effective-intrusion-detection-model-through/docview/29969887/se-2?accountid=142908>

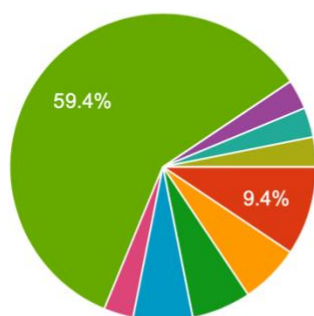
Wyatt, D. (2015, Sep 14). Manufacturing classes help volusia students decide futures and companies fill jobs: Manufacturing classes help students decide futures and companies fill jobs. *Daytona Beach News - Journal, the* Retrieved from <https://www.proquest.com/newspapers/manufacturing-classes-help-volusia-students/docview/1712286605/se-2?accountid=142908>

APPENDIX A

A. Survey

Which faculty do you attend?

32 responses

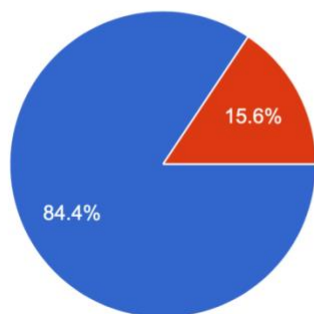


- Faculty of the Holy Quran and Islamic...
- College of Business.
- College of Applied Medical Sciences.
- Faculty of Education.
- Faculty of Science.
- College of Engineering.
- Faculty of Medicine.
- College of Computer Science and Eng...

▲ 1/3 ▼

Do you frequently use the "My Future" app?

32 responses



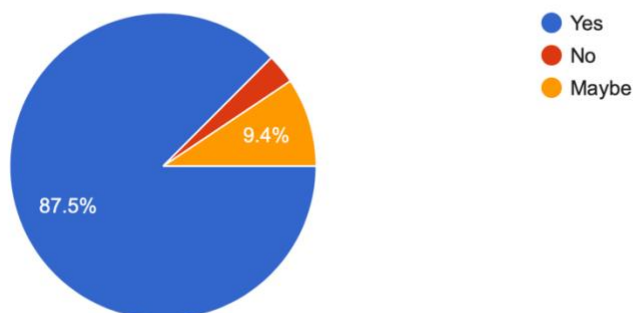
- Yes
- No

APENDIX B

B. Survey

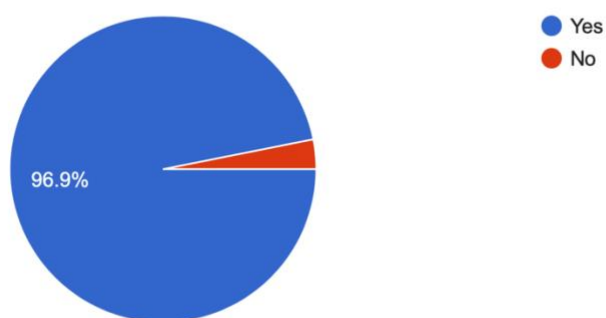
Do you think you would use the "My Future" app more often if it had more features?

32 responses



Will it be easier for you if all relevant college announcements are orderly collected in one place?

32 responses

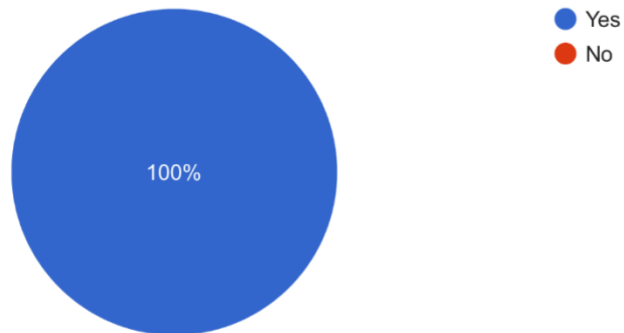


APPENDIX C

C. Survey

Should the application's calendar be automatically provided with important academic events (e.g., the start of a new term, midterm examinations, vacations, etc.) and be editable?

32 responses



Distribution of Tasks:

- Name - ID	Tasks
- Bushra Dajam -2110054	- Abstract -Sharing CV Feature
- Jouri Alghamdi - 2116156	- Messaging Feature - Conclusion
-Rawan Almalki -2110668	- Introduction - Improve the Security of the Application
- Rose Musalli - 2111237	- Announcements Bulletin Board Feature - Calendar Feature
- Wasan Alshehri -2110312	- Memo of Transmittal - Taking Attendance Feature