Conference Scheduler App*

*Note: Sub-titles are not captured in Xplore and should not be used

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***Abstract*—This document outlines the design and creation of an iOS application that informs users of conference information that will take place at our university. Users of the app can check the conference calendar and add items to their own schedules there as well. The app also has a super admin panel that allows super administrators to add and remove admins, as well as an admin panel that allows administrators to create, amend, and delete events. The app offers a convenient and effective way to access and manage conference information and is created to fulfill the demands of both conference attendees and managers. This paper includes comprehensive descriptions of the system architecture and requirements, installation and setup guidelines, user manual, admin manual, and super admin manual in addition to the testing procedures and outcomes.**

I. Introduction

The iOS app presented in this document has been developed from scratch to provide users with information about a conference that will be held at our university. The app offers a range of features, including the ability to view the conference schedule and add events to a personal schedule within the app. The app also includes an admin panel that allows administrators to create, edit, and delete events, and a super admin panel that enables super administrators to manage the list of admins. The app is designed to be user-friendly and efficient, providing a convenient way for conference attendees to access and manage conference information. This document outlines the system architecture and requirements, installation and setup instructions, user guide, admin guide, and super admin guide, as well as the testing methods and results. With this documentation, users will be able to effectively use the app and administrators will be able to manage conference events with ease.

II. Purpose

The iOS conference app's goal is to give customers a quick and easy way to get details about a conference that will take place at our university. Users of the app can check the conference calendar and add items to their own personal schedules. In addition, the app includes an admin panel that allows administrators to create, edit, and delete events, and a super admin panel that enables super administrators to manage the list of admins. The app is designed to meet the needs of conference attendees and administrators alike, providing an easy-to-use and effective way to manage conference information. The app aims to enhance the conference experience by offering a comprehensive and user-friendly platform to access relevant information about the conference.

Identify applicable funding agency here. If none, delete this.

III. Scope

The app will be developed for iOS devices only and will require internet connectivity to function. The app will be designed to meet the needs of conference attendees and administrators alike, providing a user-friendly and efficient way to access and manage conference information. The app will include various modules such as the conference schedule module, the personal schedule module, the admin panel, and the super admin panel. The app will be tested using various testing methods to ensure that it meets the requirements and specifications outlined in this documentation. The project will be completed within the agreed-upon timeline and budget, and any changes to the scope of the project must be approved by the project stakeholders.

IV. Abbreviations and Acronyms

A. Definitions:

iOS: A mobile operating system developed by Apple Inc. for its hardware devices. Firestore: A flexible, scalable, and serverless NoSQL document database offered by Firebase. NoSQL: A type of database that uses a non-tabular data model, allowing for flexible and scalable data structures. Admin: A user with privileged access to the app's administrative functions. Super

Admin: A user with higher-level administrative access, capable of managing the list of admins.

B. Abbreviations and Acronyms:

IDE: Integrated Development Environment UI: User Interface UX: User Experience API: Application Programming Interface SDK: Software Development Kit QA: Quality Assurance MVP: Minimum Viable Product CRUD: Create, Read, Update, Delete (a commonly used acronym for the basic operations of a database system)

V. General Description

A. Product Perspective

The iOS conference app is a standalone product designed to provide users with a comprehensive and user-friendly platform to access and manage conference information. The app utilizes the Firebase Cloud Firestore database to store and retrieve data, providing a scalable and flexible solution for managing conference events and user schedules. The app is designed to be intuitive and easy to use, with a clean and modern user interface. The app is developed using Swift and Xcode and is compatible with iOS devices. The app is designed to be extendable, allowing for future updates and enhancements to be added easily. The app is a client-server application, with the client running on the user's device and the server running on Firebase's cloud infrastructure. The app communicates with the server via Firebase's API, ensuring efficient and reliable data transfer. The app is developed using best practices for software development, ensuring a high level of code quality and maintainability. Overall, the iOS conference app is designed to be a valuable tool for conference attendees and administrators, providing a convenient and efficient way to access and manage conference information.

B. Product Function

The iOS conference app is designed to provide a range of functions that enable users to access and manage conference information. The main functions of the app include:

Viewing the conference schedule: Users can view a comprehensive schedule of conference events, including details such as time, location, and session type.

Adding events to a personal schedule: Users can add conference events to a personal schedule within the app, enabling them to keep track of the events they plan to attend.

Editing personal schedule: Users can edit their personal schedules, enabling them to modify or remove events they have added.

Admin panel: Administrators can create, edit, and delete conference events using an admin panel within the app.

Super admin panel: Super administrators can manage the list of admins, enabling them to add or remove administrators from the app.

Secure authentication: The app uses secure authentication mechanisms to ensure that only authorized users have access to sensitive features, such as the admin panel and the super admin panel.

Push notifications: Users can receive push notifications about upcoming events or changes to the schedule, ensuring that they are always up to date with the latest information.

Search functionality: Users can search for specific conference events or speakers, enabling them to find information quickly and easily.

Overall, the iOS conference app is designed to provide a comprehensive range of functions that meet the needs of both conference attendees and administrators. The app is easy to use and intuitive, with a range of features that enhance the conference experience.

C. User Characteristics

The iOS conference app is designed to meet the needs of a diverse range of users, including conference attendees and administrators. The primary characteristics of these users include:

Attendees: The primary users of the app are conference attendees, who may range from students and professionals to industry leaders and researchers. Attendees may have varying levels of technical expertise, and the app is designed to be intuitive and easy to use for users of all skill levels. Attendees may also have varying schedules and preferences, and the app is designed to be flexible and adaptable to meet these needs.

Administrators: The app is also designed to meet the needs of conference administrators, who may be responsible for managing conference events and schedules. Administrators may have a higher level of technical expertise, and the app includes features such as an admin panel and super admin panel to meet their needs.

Mobile users: The app is designed for use on iOS devices, including iPhones and iPads. Users may be familiar with using apps on their devices and expect a modern and user-friendly interface.

Busy schedules: Conference attendees and administrators may have busy schedules and limited time to manage conference information. The app is designed to be efficient and easy to use, enabling users to access and manage information quickly and easily.

Overall, the iOS conference app is designed to meet the needs of a diverse range of users, including attendees and administrators with varying levels of technical expertise and busy schedules. The app is designed to be easy to use and efficient, providing a modern and user-friendly platform for accessing and managing conference information.

- Use either SI (MKS) or CGS as primary units. (SI units are encouraged.) English units may be used as secondary units (in parentheses). An exception would be the use of English units as identifiers in trade, such as "3.5-inch disk drive".
- Avoid combining SI and CGS units, such as current in amperes and magnetic field in oersteds. This often leads to confusion because equations do not balance dimensionally. If you must use mixed units, clearly state the units for each quantity that you use in an equation.

- Do not mix complete spellings and abbreviations of units: "Wb/m^2" or "webers per square meter", not "webers/m^2". Spell out units when they appear in text: ". . . a few henries", not ". . . a few H".
- Use a zero before decimal points: "0.25", not ".25". Use "cm^3", not "cc".)

D. Equations

Number equations consecutively. To make your equations more compact, you may use the solidus (/), the exp function, or appropriate exponents. Italicize Roman symbols for quantities and variables, but not Greek symbols. Use a long dash rather than a hyphen for a minus sign. Punctuate equations with commas or periods when they are part of a sentence, as in:

$$a + b = \gamma \tag{1}$$

Be sure that the symbols in your equation have been defined before or immediately following the equation. Use "(1)", not "Eq. (1)" or "equation (1)", except at the beginning of a sentence: "Equation (1) is . . ."

E. LaTeX-Specific Advice

Please use "soft" (e.g., `\eqref{Eq}`) cross references instead of "hard" references (e.g., `(1)`). That will make it possible to combine sections, add equations, or change the order of figures or citations without having to go through the file line by line.

Please don't use the `{eqnarray}` equation environment. Use `{align}` or `{IEEEeqnarray}` instead. The `{eqnarray}` environment leaves unsightly spaces around relation symbols.

Please note that the `{subequations}` environment in LaTeX will increment the main equation counter even when there are no equation numbers displayed. If you forget that, you might write an article in which the equation numbers skip from (17) to (20), causing the copy editors to wonder if you've discovered a new method of counting.

BibTeX does not work by magic. It doesn't get the bibliographic data from thin air but from .bib files. If you use BibTeX to produce a bibliography you must send the .bib files.

LaTeX can't read your mind. If you assign the same label to a subsubsection and a table, you might find that Table I has been cross referenced as Table IV-B3.

LaTeX does not have precognitive abilities. If you put a `\label` command before the command that updates the counter it's supposed to be using, the label will pick up the last counter to be cross referenced instead. In particular, a `\label` command should not go before the caption of a figure or a table.

Do not use `\nonumber` inside the `{array}` environment. It will not stop equation numbers inside `{array}` (there won't be any anyway) and it might stop a wanted equation number in the surrounding equation.

F. Some Common Mistakes

- The word "data" is plural, not singular.
- The subscript for the permeability of vacuum μ_0, and other common scientific constants, is zero with subscript formatting, not a lowercase letter "o".
- In American English, commas, semicolons, periods, question and exclamation marks are located within quotation marks only when a complete thought or name is cited, such as a title or full quotation. When quotation marks are used, instead of a bold or italic typeface, to highlight a word or phrase, punctuation should appear outside of the quotation marks. A parenthetical phrase or statement at the end of a sentence is punctuated outside of the closing parenthesis (like this). (A parenthetical sentence is punctuated within the parentheses.)
- A graph within a graph is an "inset", not an "insert". The word alternatively is preferred to the word "alternately" (unless you really mean something that alternates).
- Do not use the word "essentially" to mean "approximately" or "effectively".
- In your paper title, if the words "that uses" can accurately replace the word "using", capitalize the "u"; if not, keep using lower-cased.
- Be aware of the different meanings of the homophones "affect" and "effect", "complement" and "compliment", "discreet" and "discrete", "principal" and "principle".
- Do not confuse "imply" and "infer".
- The prefix "non" is not a word; it should be joined to the word it modifies, usually without a hyphen.
- There is no period after the "et" in the Latin abbreviation "et al.".
- The abbreviation "i.e." means "that is", and the abbreviation "e.g." means "for example".

An excellent style manual for science writers is [7].

G. Authors and Affiliations

The class file is designed for, but not limited to, six authors. A minimum of one author is required for all conference articles. Author names should be listed starting from left to right and then moving down to the next line. This is the author sequence that will be used in future citations and by indexing services. Names should not be listed in columns nor group by affiliation. Please keep your affiliations as succinct as possible (for example, do not differentiate among departments of the same organization).

H. Identify the Headings

Headings, or heads, are organizational devices that guide the reader through your paper. There are two types: component heads and text heads.

Component heads identify the different components of your paper and are not topically subordinate to each other. Examples include Acknowledgments and References and, for these, the correct style to use is "Heading 5". Use "figure caption" for your Figure captions, and "table head" for your table title. Run-in heads, such as "Abstract", will require you

to apply a style (in this case, italic) in addition to the style provided by the drop down menu to differentiate the head from the text.

Text heads organize the topics on a relational, hierarchical basis. For example, the paper title is the primary text head because all subsequent material relates and elaborates on this one topic. If there are two or more sub-topics, the next level head (uppercase Roman numerals) should be used and, conversely, if there are not at least two sub-topics, then no subheads should be introduced.

I. Figures and Tables

a) Positioning Figures and Tables: Place figures and tables at the top and bottom of columns. Avoid placing them in the middle of columns. Large figures and tables may span across both columns. Figure captions should be below the figures; table heads should appear above the tables. Insert figures and tables after they are cited in the text. Use the abbreviation "Fig. 1", even at the beginning of a sentence.

TABLE I
TABLE TYPE STYLES

Table Head	**Table Column Head**		
	Table column subhead	***Subhead***	***Subhead***
copy	More table copy[a]		

[a]Sample of a Table footnote.

Fig. 1. Example of a figure caption.

Figure Labels: Use 8 point Times New Roman for Figure labels. Use words rather than symbols or abbreviations when writing Figure axis labels to avoid confusing the reader. As an example, write the quantity "Magnetization", or "Magnetization, M", not just "M". If including units in the label, present them within parentheses. Do not label axes only with units. In the example, write "Magnetization (A/m)" or "Magnetization {A[m(1)]}", not just "A/m". Do not label axes with a ratio of quantities and units. For example, write "Temperature (K)", not "Temperature/K".

ACKNOWLEDGMENT

The preferred spelling of the word "acknowledgment" in America is without an "e" after the "g". Avoid the stilted expression "one of us (R. B. G.) thanks ...". Instead, try "R. B. G. thanks...". Put sponsor acknowledgments in the unnumbered footnote on the first page.

REFERENCES

Please number citations consecutively within brackets [1]. The sentence punctuation follows the bracket [2]. Refer simply to the reference number, as in [3]—do not use "Ref. [3]" or "reference [3]" except at the beginning of a sentence: "Reference [3] was the first ..."

Number footnotes separately in superscripts. Place the actual footnote at the bottom of the column in which it was cited. Do not put footnotes in the abstract or reference list. Use letters for table footnotes.

Unless there are six authors or more give all authors' names; do not use "et al.". Papers that have not been published, even if they have been submitted for publication, should be cited as "unpublished" [4]. Papers that have been accepted for publication should be cited as "in press" [5]. Capitalize only the first word in a paper title, except for proper nouns and element symbols.

For papers published in translation journals, please give the English citation first, followed by the original foreign-language citation [6].

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