KSU Alumni Contact Management System
Requirements Analysis

Team 2: Project Phase 1 Report v.2

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1. Introduction

1.1 Purpose of the System

The purpose of this system is to support the efforts and activities of the Kennesaw State University (KSU) employees in tracking and managing alumni contacts by increasing efficiency and data quality, with the ultimate goal of building and maintaining strong relations between KSU and KSU alumni. The contact data collected and maintained by this software system will be analyzed and used to assist KSU efforts in development, school promotion, recruitment for graduate and postgraduate programs, reporting for accreditation audits, as well as to promote collaboration/cooperation with industries seeking to hire. With the proposed KSU Alumni Contact Management System (KSU ACMS), the problem of not having a single, synchronized system of record for important and confidential alumni information will be eliminated.

1.2 Scope of the System

The KSU Alumni Contact Management System (KSU ACMS) application will provide a single, synchronized, secure system of records for KSU alumni contact and vocational information. Authorized KSU employees from multiple departments of the school, such as Alumni Relations, Career Planning & Development, KSU Foundation, Marketing, and Graduate Admissions may enter, update and access alumni contact information from this system.

System owner:
The ACMS shall be under the direct ownership of the Alumni Relations department and the University Information Technology Services (UITS) department shall provide the technical operation of the system.

System user:
Users of the KSU ACMS shall be KSU employees from any of the aforementioned departments who have been approved by the respective departments, whose names and employee ID will be forwarded to Alumni Relations to grant privileges to view and update alumni contact information as listed below in this document.

Scope limits:
Financial information of alumni donations involving the KSU Foundation and academic information involving the Office of the Registrar are outside the scope of this KSU ACMS, and will not be incorporated into this system. In the future, with the implementation of ORM

(Object-Relational Mapping) tools, the data tracked and managed from ACMS may be used to query alumni data based on relevant factors such as graduates employed according to each major, age, gender, and year of graduation, for reporting and analysis by KSU.

1.3 Objectives and Success Criteria of the Project

- The objectives and success criteria of the KSU Alumni Contact Management System are as follows:
- Alumni career development in wide-ranging career pathways
- Maintain relationships and foster friendships between the Alumni and Kennesaw State University through the contact information in ACMS
- Alumni involvement in creating the school's legacy
- Better community responsiveness of the school
- Better alumni commitment to the school and its community
- Enables authorized users of different KSU departments convenient access to view and update alumni contact info, while ensuring security of data
- Provides a central, synchronized system to access alumni contacts, freeing employee resources to focus on more productive activities than data entry and reconciliation
- Provides ease of use with an intuitive interface that does not require an instructional manual
- Ensures data integrity with data types and encapsulation
- Assist in the identification and cultivation of prospective graduate/postgraduate students from undergraduate alumni

The data collected by this software will be analyzed and used to enable KSU in development, school promotion, recruitment for graduate and postgraduate programs, reporting for accreditation, as well as to promote collaboration/cooperation with industries seeking to hire. The success of the project will enable KSU to increase alumni engagement and establish a stronger relationship within the Alumni Association.

1.4 Definitions, Acronyms, and Abbreviations

Important terms and concepts are listed here:

System	Any interactions performed by the application are considered to be performed by the system; refers to the ACMS in this document

Software	General term for the various kinds of programs used to operate computers and related devices; refers to the ACMS in this document
Alumni	Graduates of Kennesaw State University from undergraduate, graduate and postgraduate degree programs
System Analyst	Developers participating in writing software requirements
System Designers	Developers participating in designing and implementing the software
ACMS	Alumni Contact Management System
SSL	Secure Sockets Layer, a standard encryption method to encrypt data traveling between client and server
UITS	University Information Technology Services, a department of Kennesaw State University
Cold Backup	Type of database backup during which the system is shut down/offline and not accessible to update
Data Integrity	Maintenance of, consistency of, and the assurance of the accuracy of data over its entire life-cycle
Data Backup	Data obtained through ACMS shall be backed up using a cold backup on a weekly basis during a scheduled maintenance
Two-factor authentication scheme	A reliable authentication technique that requires two factors; something the user has (employee ID number) and something the user knows (PIN)
Employee ID number	KSU issued unique employee ID number that will be used in the user authentication process to grant access to ACMS

RAM	Random Access Memory, which is the memory used by the computers for storing data during computing process
Processor	Electronic chip that processes information based on the inputs
Disk Space	Informal term for the amount of computer data storage available on one or more storage devices

1.5 References

Problem with existing alumni contact management:
The problem with prior manual methods of tracking and managing alumni contacts was that employees in many departments would come in contact with the latest data on a graduate in the course of their departmental duties, but lacked a unified, synchronized, efficient and secure system in which to update that data. Such data needed to be manually delivered or emailed to particular departments with access to student records like the Registrar's Office to be updated, which was inefficient and full of potential data compromises. Without the benefit of a central system, data types/domains were not enforced; so, inconsistent contact data fields required manual reconciliation to unify the data types. The existing method not only left vulnerabilities with the data itself, but also could not manage who could or would view/access private alumni information.

Proposed solution:
The KSU ACMS will provide a centralized point of entry for the alumni data and yield a unified picture of alumni contact information, while ensuring that only authorized personnel would have access. The ACMS will also allow valuable employee resources to focus on more productive activities rather than focusing on data entry and data reconciliation.

1.6 Overview of Current Document

This software is designed to assist Kennesaw State University (KSU) employees in tracking and managing alumni contacts. This requirements analysis document (RAD) will analyze the automation requirements to design a new software to consolidate data from various sources into a centralized system. The audience for this RAD includes: the users (employees from Alumni Relations, Career Planning & Development, KSU Foundation, Marketing, Graduate Admissions, and the Office of the Registrar), system analysts, system designers, and project manager(s).

This RAD encompasses 3 activities including:

1. Preparing to conduct the RAD: Users, system analysts, system designers, reach an agreement on the project scope, objectives and success criteria.
2. Eliciting business and technical requirements: Conduct fact finding and develop functional and nonfunctional requirements.
3. Implementation: Application software coding and testing before going to a live environment.

This document will provide a brief overview of the system including its purpose, scope, and objectives, summarize what the system will do, then list both the functional and nonfunctional requirements.

2. Proposed System

2.1 Overview of the System

The core functionality of the ACMS is tracking alumni contact records and making the information available to Alumni Relations, Career Planning & Development, KSU Foundation, Marketing, Graduate Admissions and the Office of the Registrar. The software provides the following features:

- The system will have a main menu to process the users' selection of tasks.
- The list of tasks is a catalog provided to the users on the main menu.
- To add a new alumnus/alumna, the user selects "Create New Contact." The user will be prompted to complete the following fields in order to create a new contact: full name, address, phone number, email, gender, marital status, date of birth, graduation date, degree obtained, field of study, field of employment.
- The users can look up an alumnus/alumna and have the information displayed on the screen.
- The user interface will be easy to navigate with simple headings and instructions to follow.
- The system will be available for users to access 24/7.
- The software is compatible with Windows 10, Windows 7, Vista SP2, Windows Server 2008, and Windows Server 2008.

2.2 Functional Requirements

Section	Functional Requirement Definition

2.2.1	The system shall have information about alumni and their data including full name, address, phone number, email, gender, marital status, date of birth, graduation date, degree obtained, field of study, field of employment (if employed).
2.2.2	The system shall have a main menu to process the user's selection of task to perform. The tasks will include: • Look up an alumnus/alumna and have the information displayed on screen as text. • Add/update alumni entries; when the change is completed the result will be displayed on screen as text. • Print complete listing of all alumni stored in the ACMS.
2.2.3	The system shall output the results of the user's query on screen as text. • After add alumus entry has been completed, system shall output confirmation that alumnus data has been saved. • After print all alumni has been selected, system shall output lines of complete information on all alumni stored in the ACMS. • After look up alumnus by a certain field of information has been executed, system shall output complete information on an alumnus or all alumni who meet the search criteria. • After exit has been selected, system shall output confirmation of logout as a goodbye message. • If user's input is outside of permitted type/format/option, error message shall be printed accordingly on screen as text.
2.2.4	The system shall not have any external communication interface other than the executable file.

2.3 Nonfunctional Requirements

2.3.1 Usability	The interface is easy to navigate; headings and error messages are simple to understand. The users should be able to perform all tasks and use all features without reading an instruction manual.
2.3.2 Reliability	Access Availability: The application should be available for users to access 24/7, except in cases of scheduled/unscheduled system maintenance. Scheduled Maintenance: The application shall be monitored at regularly scheduled intervals (Saturdays at 11:59 pm) to detect potential system errors and to ensure

	proper performance levels are maintained. Service Interruption: Scheduled maintenances shall be coordinated and scheduled outside of business hours during holidays and breaks, so as to minimize the service interruption. Security of Access: The application shall employ a two-factor authentication scheme using an employee ID number from the employee ID card and a PIN to ensure security of access, so that confidential data of alumni are not vulnerable to unauthorized users. Security of Network: The application shall use SSL (Secure Sockets Layer), a standard encryption method to encrypt data traveling between client and server. Data Integrity: The application shall employ encapsulation and integrity controls to protect data from unauthorized use and update. Data Backup: Data obtained through this software system shall be backed up using a cold backup on a weekly basis during a scheduled maintenance. System Failure: In the event of a system failure where components of the system fails, but database is not damaged, data from backups shall be used to recover functions. In the event of a software failure where the application is not functioning, the user shall contact the provider and report the issue for immediate service.
2.3.3 Performance	This ACMS will keep track of the most current alumni contact information. Managing alumni contacts will be smoother and easier with this software. The system requires authorized users to enter their ID and password to better manage data access and updates.
2.3.4	A user guide shall be documented.

Supportability	Any changes to the production code shall be logged. The system shall be upgraded if necessary with a new, updated version of the program. The code will be annotated with comments to facilitate understanding of each class. The system shall run in any system with minimum requirements (Java Applet): • Processor: Minimum Pentium 2 266 MHz processor • Disk space: 124 MB for JRE • RAM: 128 MB • Windows 10 (8u51 and above)/ Windows 8.x (Desktop)/ Windows 7/ Windows Vista SP2/ Windows Server 2008 R2 SP1 (64-bit)/ Windows Server 2012 and 2012 R2 (64-bit)

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