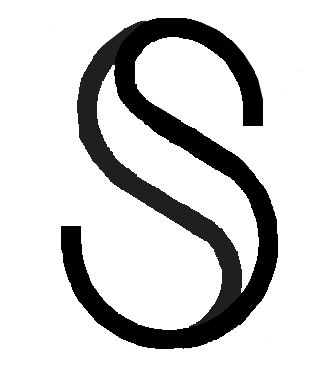
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**Software Requirements Specification Document**

For the CSUS Hornet CardGen System

2017/05/07

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| --- | --- | --- |
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Table of Contents

[1. Introduction 4](#_Toc482391709)

[1.1 Purpose 4](#_Toc482391710)

[1.2 Document conventions 4](#_Toc482391711)

[1.3 Project scope 4](#_Toc482391712)

[1.4 References 4](#_Toc482391713)

[2. Overall description 5](#_Toc482391714)

[2.1 Product perspective 5](#_Toc482391715)

[2.3 Operating environment 5](#_Toc482391716)

[2.4 Design and implementation constraints 5](#_Toc482391717)

[2.5 Assumptions and dependencies 6](#_Toc482391718)

[Assumptions 6](#_Toc482391719)

[Dependencies 6](#_Toc482391720)

[3. System features 7](#_Toc482391721)

[3.1 Create a Semester 7](#_Toc482391722)

[3.1.1 Description 7](#_Toc482391723)

[3.1.2 Functional requirements 7](#_Toc482391724)

[3.2 Import Registrar Data 7](#_Toc482391725)

[3.2.1 Description 7](#_Toc482391726)

[3.2.2 Functional requirements 7](#_Toc482391727)

[4. Data requirements 8](#_Toc482391728)

[4.1 Logical data model 8](#_Toc482391729)

[4.2 Data dictionary 8](#_Toc482391730)

[4.3 Reports 8](#_Toc482391731)

[4.4 Data acquisition, integrity, retention, and disposal 8](#_Toc482391732)

[5. Interface requirements 8](#_Toc482391733)

[5.1 User interfaces 8](#_Toc482391734)

[5.2 Software interfaces 10](#_Toc482391735)

[5.3 Hardware interfaces 11](#_Toc482391736)

[5.4 Communication interfaces 11](#_Toc482391737)

[6. Quality attributes 11](#_Toc482391738)

[6.1 Usability 11](#_Toc482391739)

[6.2 Performance 11](#_Toc482391740)

[6.3 Security 11](#_Toc482391741)

[6.4 Safety 12](#_Toc482391742)

[6.5 Availability 12](#_Toc482391743)

[6.6 Robustness 12](#_Toc482391744)

[6.x [more] 12](#_Toc482391745)

[7. Internationalization and localization requirements 12](#_Toc482391746)

[8. Other requirements 12](#_Toc482391747)

[Appendix A: Glossary 12](#_Toc482391748)

[Appendix B: Analysis models 13](#_Toc482391749)

# 1. Introduction

The Computer Science department office makes Faculty Information Cards each semester, which are then put up outside each faculty member’s office, as well as in full outside the department office. These cards display course information taught by the professor, as well as office location, office hours, and contact information for the faculty member. This card is to inform students and others of availability for faculty members. Currently, the information is collected from the faculty members and then manually put into Microsoft Word templates by the office clerk. They are then formatted and printed out individually.

## 1.1 Purpose

This SRS describes the functional and nonfunctional requirements for software release 1.0 and expected subsequent releases of Hornet CardGen. This document is intended to be used by the members of the project team who will implement and verify the correct functioning of the system. Unless otherwise noted, all requirements specified here are committed for release 1.0.

## 1.2 Document conventions

No special typographical conventions are used in this SRS.

## 1.3 Project scope

Hornet CardGen will permit Office Administrators and Office Clerks to create and print faculty information cards. A detailed description is available in the features that are scheduled for full or partial implementation in this release.

## 1.4 References

Fletter, Dale. (2017, Jan 23 - May 12). *Software Specifications and the Business Analyst: An industry’s perspective*. Lecture at Brighton Hall, California State University, Sacramento, CA.

Wiegers, Karl and Beatty, Joy. (2014, April). *Software Requirements* (3rd ed.). Redmond, WA: Microsoft Press.

# 2. Overall description

# 2.1 Product perspective

Hornet CardGen is a new software system that replaces the current manual processes for creating FICs in the Computer Science Department of California State University, Sacramento. The system is expected to evolve over several releases, ultimately providing multiple department’s access to our FIC printing services.

2.2 User classes and characteristics

|  |  |
| --- | --- |
| **User Class** | **Description** |
| Office Administrator | An Office Administrator is an office employee who organizes course and faculty information of their assigned department. The Office Administrator is expected to create Faculty Information Cards (FICs) every semester, or when changes in information occurs. |
| Office Clerk | An Office Clerk is an office employee who requests and inputs faculty office hours for their assigned Department. The Office Clerk is expected to provide any new or changed faculty member’s office hours prior to the start of each semester. |

## 2.3 Operating environment

1. Hornet CardGen shall correctly operate using any version of the Google Chrome web browser.
2. Hornet CardGen shall permit user access from authenticated intranet and internet connection.

## 2.4 Design and implementation constraints

1. The system shall use a standard MYSQL database engine.
2. All HTML code shall conform to the HTML 5.0 standard.

## 2.5 Assumptions and dependencies

### Assumptions

1. This first iteration of the system will primarily be used by the office administrator and office clerk in the Computer Science department. See Stakeholders section for more details.
2. In a future iteration, where more departments are considered to use the product, more analysis will have to be done to decide if any changes will be needed to accommodate them. For now, it is best to assume that there will be some amount of change needed. At bare minimum, time will need to be spent to train more people to use the product.
3. Appropriate resources will be provided for the system to be a success. These resources may include hardware and software that is required for everything from development to running and serving the application.
4. The external Registrar’s system will be assumed to be up and running, and the exported file given to Office Administrators does not change after Hornet CardGen undergoes development. This assumption should be followed up on and verified, should this project undergo actual design and development.
5. The system will require some level of maintenance for the Database Management System and possibly maintenance for a machine that will serve the application (pending application development and implementation).

### Dependencies

1. This system requires the external Registrar's system to be operational and accessible to Office Administrators for manual data export.
2. The format of the data exported from the Registrar system must be unchanged from the development phase of Hornet CardGen. If the format changes at all on the Registrar’s end, it is likely that the data import process in Hornet CardGen will be broken.
3. This system requires a database to store appropriate information and remove extraneous information imported from the registrar's import file.
4. This system requires an active printer to be accessible for the final task of printing the Faculty Information Cards.
5. This system requires an Office Administrator or Office Clerk to print the Faculty Information Cards and manage the information.
6. The system will export to a file that can be printed from most PCs. That file will be formatted to print on Avery 5689 Cardstock.

# 3. System features

## 3.1 Create a Semester

Add a new semester to the system, with the option of importing previous semesters professor data.

### 3.1.1 Description

An Office Administrator who has been authenticated can add a new semester to the system. The Office Administrator has the option of importing professor data from a previous semester, up to two semesters back (ie: if you are adding Fall 2017, you can import data from Spring 2017 and Fall 2016).

### 3.1.2 Functional requirements

From the Semester List page, an Office Administrator will be able to add a new semester.

The option of importing professor data (everything except courses) from one of the last two semesters will be made clearly available to the Office Administrator during this process.

## 3.2 Import Registrar Data

Update the courses in a selected semester from a file that is generated by the Registrar.

### 3.2.1 Description

An Office Administrator who has been authenticated can replace all course information in the semester from a newly created registrar import file. It is assumed that the new file from the Registrar is 100% up to date, and all existing course data for that semester will be wiped upon import. Due to this, there is an extra confirmation step.

### 3.2.2 Functional requirements

From the Semester Detail view, an Office Administrator will be able to import course data from a file generated by the Registrar.

Upon selecting the import option, the Office Administrator is shown the following prompt and asked to confirm: “All existing course data for this semester will be deleted. If there were any manual changes to courses that are not reflected in the registrar import, they will need to be re-added.”

When the Office Administrator confirms, the System will parse the import file. Only if the file is valid, the System wipes the current course data and runs the import. If the file is invalid, the system should not delete existing course data, and alerts the Office Administrator that the file was not in the right format.

# 4. Data requirements

## 4.1 Logical data model

Text

## 4.2 Data dictionary

Text

## 4.3 Reports

Text

## 4.4 Data acquisition, integrity, retention, and disposal

Text

# 5. Interface requirements

## 5.1 User interfaces

The table below outlines different screens that an Office Administrator or Office Clerk will see and interact with in the system. The left column contains a rough sketch of what the page might look like. The column on the right explains the page and the anticipated behaviors on that screen.

LEGEND:

|  |  |
| --- | --- |
| [ Button Text ] | The square braces indicate a clickable button. |
| >> List Item << | The double guillemets pointing inwards indicate an item in a list (what is shown will depend on data). |
| < Header / Detail View > | The single guillemets pointing outwards indicate a displayed field, that will be populated pending on who is logged in or what page they are viewing. |
| { item 1, item 2, … } | The curly braces indicate options in a select list. |

|  |  |
| --- | --- |
| ***Suggested Screen Options*** | ***Detailed Description*** |
| Hornet CardGen Login  Username: .  Password: .  [ Login ] | *Log in page*  An Office Administrator or Office Clerk will use this page to log in. They should enter their username and password, and then hit the Login button. |
| Hornet CardGen  <Department> Home  Semester List  >> Fall 2016 <<  >> Spring 2017 <<  [ Add Semester ]  [ View Users ]  [ View Departments ]  [ Reset my password ] | *Department Home Page*  After being logged in, it should be clear which department the user is managing.  This page shows a list of semesters. Only the two most recent semesters are shown. Clicking on a semester will take the user to that semester’s detail view.  An Office Administrator will see options to Add a Semester, View Users, and View Departments.  Both Office Administrators and Office Clerks will see the option to Reset their password. |
| Hornet CardGen  Password Reset for <username>  New Password: .  Confirm Password: .  Current Password: .  [ Submit ] | *Reset PW Screen*  After hitting the option from the Department Landing Page to reset their password, the user is taken to a screen similar to this.  They must enter their new password twice to confirm the correct password, as well as their current password to authorize the change.  Clicking Submit will change the user’s password. |
| Hornet CardGen  <Department>  Add Semester  Semester Type: { Fall, Spring }  Semester Year: .  Import faculty data from a previous semester? { Yes, No }  {If yes, list last two semesters }  [Add Semester] | *Add Semester*  Upon choosing “Add Semester” from the Department Home page, an Office Administrator is presented with a screen that has these options.  You must select if the new semester is a Fall or Spring semester.  You must indicate the calendar year that the semester will be.  You can choose to import faculty data (office location, email, phone, office hours, but not classes) from one of the previous two semesters.  When the Office Administrator clicks Add, the new semester is added. |
| Hornet CardGen  <Department>  <Semester>  Not Done Faculty List  >> Dr. Buckley <<  >> Dr. Radimsky <<  >> more… <<  Done Faculty List  >> Dr. Gordon <<  >> Dr. Lee <<  >> more… <<  [ Add a Faculty Member ]  Course Section List  >> CSC 1-01 <<  >> CSC 10-02<<  >> CSC 10-01 <<  >> CSC 10-02 <<  >> CSC 10-03 <<  >> more… <<  [ Add a Course Section ]  [ Import Registrar File ]  [ Generate Card Report ] | *Semester Detail View*  The Detail view of a semester shows the Faculty list split into two sections – those that have been marked Done, and those that are Not Done. This is to allow an Office Administrator or Office Clerk to easily see if all Office Hour details have been collected. Clicking on a professor from either list will take them to the Professor Detail View for that Semester. An Office Administrator will see the option to add a new faculty member.  The Course Section list shows all of the course sections that are a part of this semester. Clicking one of the course sections will take them to the Course Detail And Edit Page.  Office Administrators will see an option to Import the Registrar CSV File.  Both Office Administrators and Office Clerks will see options to Add a Course Section and to Generate the Faculty Information Card report. |
| Hornet CardGen  <Department>  <Semester>  <Faculty>  Salutation: { Dr., Mr., Mrs., Ms. }  First Name:  Last Name:  Office:  Phone:  Email:  Office Hours:  ⌧ Done/Complete?  Courses Taught:  >> CSC 10-01 <<  >> CSC 15-01 <<  [ Submit ] | *Faculty Member Add/Detail/Edit View*  After clicking a Faculty Member from the Semester Detail view, or choosing to add a new one, you are taken to the detail and edit view for that professor (or a blank form for a new one).  Here, you can edit basic information for the professor (including name and salutation). Other big details include office location, their email and office phone, and their office hours.  There is also a checkbox to mark this professor’s information as done. This will be used to dictate where they appear in the Semester Detail View.  For convenience, a list of course/sections taught by the faculty member (if any) are listed at the bottom. Clicking one of these classes will take you to the Course Detail and Edit View for that course. |
| Hornet CardGen  <Department>  <Semester>  <Course-Section>  Course:  Section:  Days:  Start time:  End time:  Room:  Faculty: { list department faculty }  [ Submit ] | *Course Add/Detail/Edit View*  After clicking a Course-Section from the Semester list, or from a professor, or choosing to add a new one, you are taken to a form similar to this.  Here you can view or edit information related to the course section, including who is teaching that course. |
| Hornet CardGen  <Department>  <Semester>  Registrar Import  Choose File… [ button to upload ]  NOTE: Importing this file from the Registrar assumes that the Registrar’s information in this file is 100% up-to-date. This will wipe all current course-section data for this semester.  [ Submit ] | *Import Registrar File Screen*  After choosing to Import a File from the Registrar from the Semester Detail view, you will see this screen. |
| Hornet CardGen  Department List  >> Computer Science <<  >> Math <<  [ Add a Department ] | *Department List*  After choosing View Departments from the Department Home Page, you will be shown a list of the departments.  Clicking one of them takes you to the detail/edit view with details loaded.  Choosing add takes you to a blank version. |
| Hornet CardGen  <Department>  Department name:  [ Submit ]  User List  >> Admin Person <<  >> Clerk Person << | *Department Add/Detail/Edit View*  After choosing a Department from the Department List, you will be taken to this view.  You can update the department name, and see a filtered list of related users. |
| Hornet CardGen  User List  >> ECS Admin <<  >> ECS Clerk <<  >> Math Admin <<  >> Math Clerk <<  [ Add a User ] | *User List*  After choosing View Users from the Department Home Page, you will be shown a list of the users in the system.  Clicking one of them takes you to the detail/edit view with details loaded.  Choosing add takes you to a blank version. |
| Hornet CardGen  <User>  Username:  Department: { department list }  [ Submit ] | *User Add/Detail View*  After choosing a User from the User List, you will be taken to this view.  You can change the username and change the department. |

## 5.2 Software interfaces

The only other pieces of software that Hornet CardGen will interface with is the Registrar’s system. An Office Administrator to log in to the Registrar system and download a CSV file with course details for their department. This CSV file is what will be uploaded and parsed by Hornet CardGen to populate a semester.

## 5.3 Hardware interfaces

No Hardware is necessarily required to interact with the Hornet CardGen system. Hornet CardGen will generate a report file that the Office Clerk or Office Admin can print on their printer of choice. That report is formatted to be printed on Avery 5689 Cardstock, although it can be printed on any paper and cut up without the perforated edges.

## 5.4 Communication interfaces

In the case that a password has been forgotten, that user will need to contact an Office Administrator (any department) to have their password reset. The process of resetting a password includes Hornet CardGen creating a password reset link and emailing that link to the user that forgot their password. Clicking that link allows for a one-time password reset of their account.

# 6. Quality attributes

## 6.1 Usability

1. Hornet CardGen shall allow an Office Administrator or Office Clerk to print all of their department’s FICs in a single interaction.
2. Hornet CardGen shall allow an Office Administrator or Office Clerk to print individually selected FICs in a single interaction.
3. Hornet CardGen shall allow an Office Administrator to change the faculty information.

## 6.2 Performance

1. The system shall display changes made to faculty information within 5 seconds after the user submits the change request.

## 6.3 Security

1. Users shall be required to log on to Hornet CardGen to perform all operations.
2. Only Office Administrators shall be permitted to change the faculty information of their own department.
3. The Office Clerk shall only be permitted to change faculty office hours of their own department.
4. Office Administrators and Office Clerks shall be limited to viewing information of their own department.

## 6.4 Safety

There are no safety requirements.

## 6.5 Availability

1. Hornet CardGen shall be available during standard department office hours between 9:00 A.M. and 5:00 P.M. local time, excluding scheduled maintenance windows.

## 6.6 Robustness

Text

## 6.x [more]

Text

# 7. Internationalization and localization requirements

There are no internationalization or localization requirements for this project.

While it is not required for use that the output report for FICs be printed on Avery 5689 cardstock, it should be noted that the output report will be formatted as such. This will allow for the report to be printed and separated easily.

# 8. Other requirements

This area of the document is reserved for any requirements not captured in other sections. There are no other requirements at this time.

# Appendix A: Glossary

Text

|  |  |
| --- | --- |
| word/acronym | definition/meaning |
| Avery 5689 Cardstock | A type of printable card templates |
| FIC(s) | Faculty Information Cards |
| Hornet CardGen | Name of the software |
| SRS | Software Requirements Specifications |

# Appendix B: Analysis models

Text