
Software Requirements Specification

for

Class Rank & Sort System (CRSS)

Version 0.4 approved (draft)

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CSCI 5801

9 February 2020

Table of Contents

Revision History	3
1. Introduction	4
1.1 Purpose	4
1.2 Document Conventions	4
1.3 Intended Audience and Reading Suggestions	4
1.4 Product Scope	4
1.5 References	4
2. Overall Description	5
2.1 Product Perspective	5
2.2 Product Functions	6
2.3 User Classes and Characteristics	7
2.4 Operating Environment	8
2.5 Design and Implementation Constraints	8
2.6 User Documentation	8
2.7 Assumptions and Dependencies	8
3. External Interface Requirements	9
3.1 User Interfaces	9
3.2 Hardware Interfaces	18
3.3 Software Interfaces	18
3.4 Communication Interfaces	19
4. System Features	19
4.1 Create New Account	19
4.2 Log In	20
4.3 Log out	21
4.4 Administrator/Assistant Inputs Class Information	22
4.5 Administrator/Assistant Updates Course Information	23
4.6 View Class Information	24
4.7 Camper Ranks the Available Classes	24
4.8 Administrator Creates Camper Schedules	25
4.9 Administrator Adds Camper Into Class Manually	26
4.10 Administrator Deletes Camper From Class Manually	27
4.11 Administrator Analyzes Classes for Enrollment	28
4.12 Administrator Analyzes Student Need	29
4.13 Camper Views Their Class Schedule Online	29

4.14 Campers Print Their Class Schedule	30
4.15 Instructor Views a Camper's Schedule Online	31
4.16 Instructor Views Online Report of a Current Class List	31
4.17 Instructor Prints Report of a Current Class List	32
5. Other Nonfunctional Requirements	33
5.1 Performance Requirements	33
5.2 Safety Requirements	33
5.3 Security Requirements	33
5.4 Software Quality Attributes	33
5.5 Business Rules	34
6. Other Requirements	34
Appendix A: Glossary	35
Appendix B: Analysis Models	35
Appendix C: To Be Determined List	35

Revision History

Name	Date	Reason for Change	Version
CRSS	3 February 2020	SRS Draft Creation	0.0
CRSS	4 February 2020	Addition of introduction section information and System features	0.1
CRSS	4 February 2020	Structuring of document to have consistent formatting throughout	0.2
CRSS	8 February 2020	Added use cases, diagrams, and questions that need to be answered before a final version of the SRS can be approved	0.3
CRSS	9 February 2020	Final formatting and revisions before SRS can be approved	0.4

1. Introduction

1.1. Purpose

The purpose of this document is to present a detailed description of the Class Rank & Sort System (CRSS). It will explain the purpose and features of the system, the interfaces of the system, what the system will do, the constraints under which it must operate and how the system will react to external stimuli. This document is intended for both the stakeholders and the developers of the system.

1.2. Document Conventions

This Document was created based on the IEEE template for System Requirement Specification Documents.

1.3. Intended Audience and Reading Suggestions

The materials of this document provide instructions and guidance for typical users of this software system. Such users could be campers, who want to use CRSS to rank their desired classes. In addition, instructors who need to offer classes and administrators who need to run the software for class placements will use this document for additional insights. Furthermore, any programmers who might be interested in working on the CRSS by further developing it or fixing existing bugs may find this document useful.

1.4. Product Scope

This software system will be a Class Rank and Sort System (CRSS) that will assist Camp Voyager staff with their administrative processes. This system will provide methods for the ranking, sorting, scheduling, and attendance documentation needs that are required for each session that Camp Voyager provides during the summer months. The CRSS will allow campers to rank the classes that they desire to take during each session and thus increase the camper engagement during summer camp.

More specifically, this software will provide a method for campers, teachers, and administrators to interact in an efficient and productive manner to coordinate the activities and placements of campers in classes during each camp session. This system will provide a way for campers to rank their preferred classes, up to ten, for each session provided. In addition, the teachers will be able to use this system to provide a timeline for when their classes will be provided and administrators will be able to run the placement algorithm and manually make adjustments to the session schedules.

1.5. References

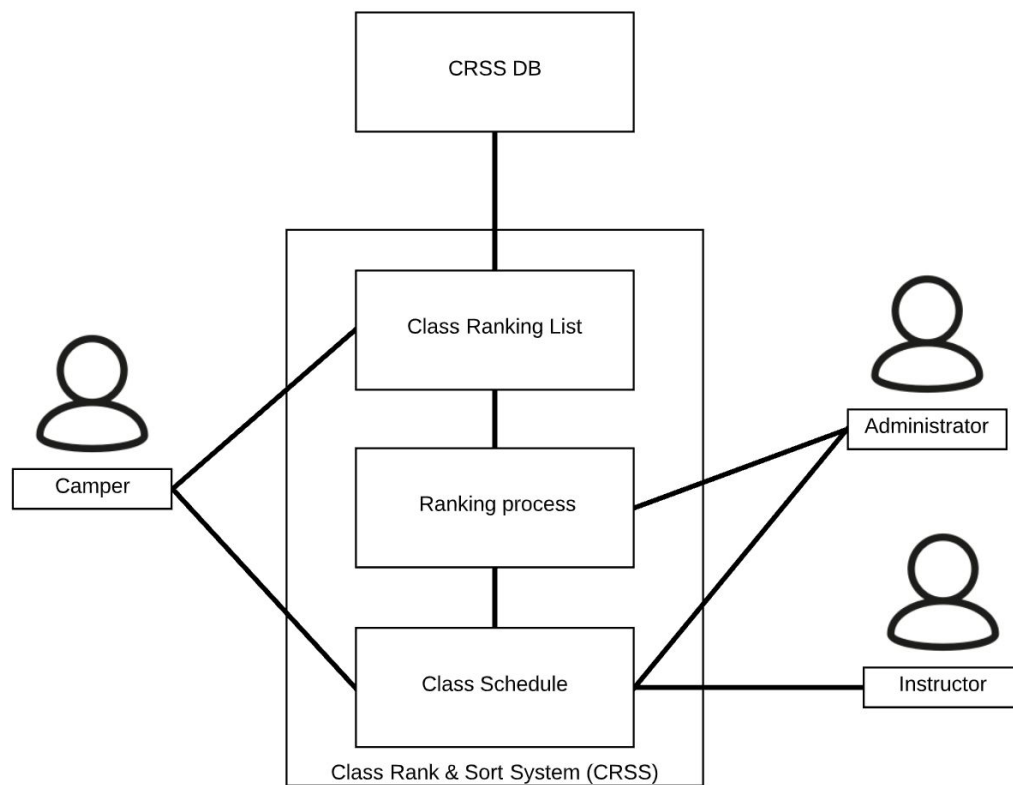
IEEE Template for System Requirement Specification Documents: <https://goo.gl/nsUFwy>

Project Write Up

SRS Example (webapp)

2. Overall Description

2.1. Product Perspective



The Class Rank and Sort System is developed to build a class schedule for each camper in a summer camp. The instructors need to upload/offer class information including class name and class session number to database. The campers need to rank at least 10 different classes. The camp director/administrator needs to run the system to generate a class schedule for each student. Both the campers and instructors are able to view the class schedules.

2.2. Product Functions

Camper Level:

- View classes: Campers can view all class names offered by instructors.
- Create ranking list: Campers can create a new ranking list that can contain at least and at most 10 classes. No two classes can have the same ranking, and no class has more than one ranking. If a saved ranking list already exists in the system, creating a new ranking list is not allowed.
- Is the camper allowed to save/submit their rankings more than once or is there a precondition that they haven't submitted their rankings before ?
- Submit ranking list: Campers can submit filled ranking list.
- View class schedule: Campers can view their generated class schedules online.
- Print class schedule: Campers can print their generated class schedules.

Instructor Level:

- View class schedule: Instructors can view any camper's generated class schedule online.
- View report: Instructors can view an online report of a current class.
- Print report: Instructors can print an online report of a current class.

Administrator Level:

- View class information: Administrator can view detailed information of any class.
- Run ranking process: The camp director can run the ranking process and generate a report of each class and class schedule for each camper.
- Lock rankings: The camp director can lock the rankings so that no changes other than manual entries will be allowed for this term of class.
- Add class: The camp director can add a new class offering with its name, session number and a unique identifier to the system.
- Remove class: The camp director can remove an existing class offering in a certain session.
- Add class information: The camp director can add time slot and number of seats to an existing class offering.
- Analyze class enrollment: The camp director can view the enrollment, in terms of low or high, of each class.
- Analyze student need: The camp director can view empty blocks, duplicates, etc. in each student's class schedule.
- Add camper to an existing class: The camp director can add a camper to an existing class that is not completely filled.
- Remove camper from an existing class: The camp director can remove a camper from an existing class.
- View class schedule: Administrators can view any camper's generated class schedule online.
- View report: Is the administrator allowed to view the generated report online?

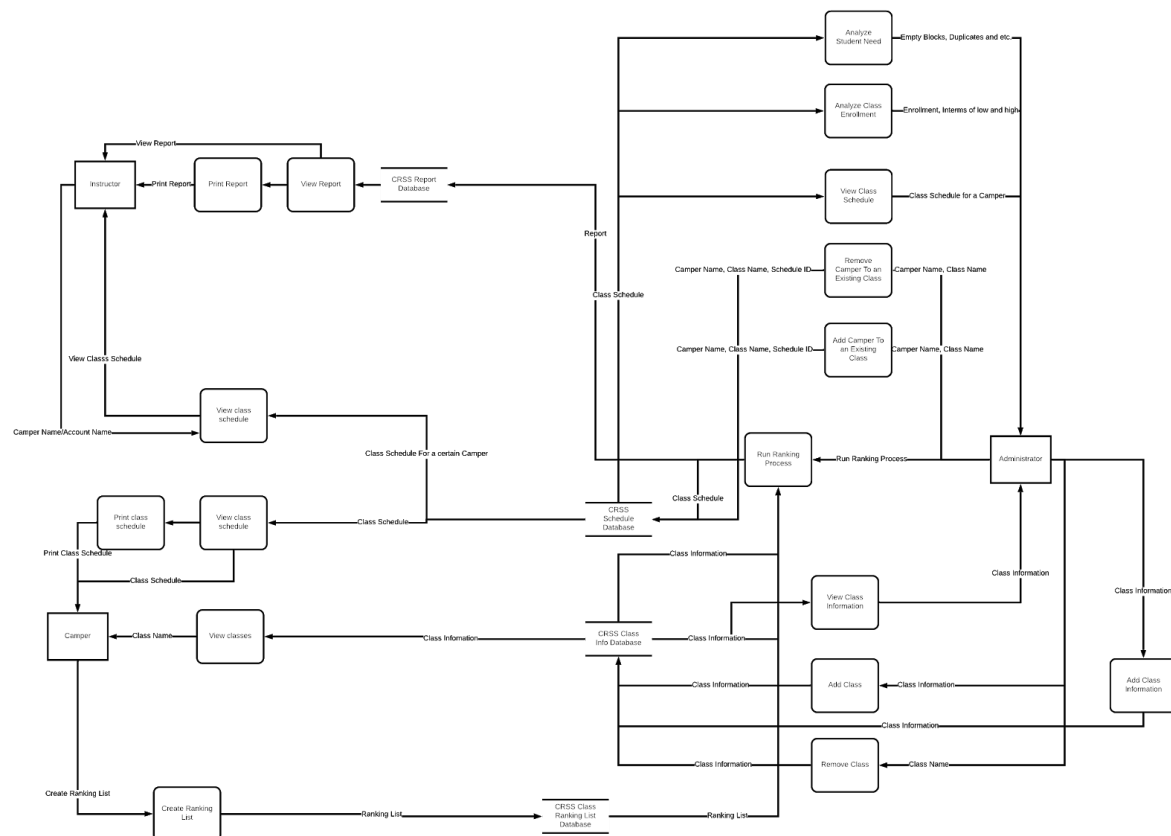
- Print report: Is the administrator allowed to print the generated report?

All Users Level:

- **Generate account:** A generated account contains username and password. Does each user generate their own account for the system? Or someone generates all accounts for all users? Is an account generated for a user in a certain camper session, or for a user all the time?
- **Log in:** Each user can log in to the CRSS with their own username and password.

Questions:

- Delete account: If a camper has ended all their camp sessions, will their account be deleted? If so, will the deletion be done by themselves or by an administrator?



2.3. User Classes and Characteristics

The reader of this document is expected to be familiar with the internet and able to use a simple menu system and search engine. The main page of the system will display a menu that the user can use to navigate.

The campers are expected to be familiar with the internet and able to use a menu system and search engine.

The administrators and instructors are expected to be able to use pull down menus and buttons, and other similar tools.

2.4. Operating Environment

The CRSS should be a cross-platformed system that can work on at least one MacOS, one Windows OS, and one Linux OS.

- Are there certain past operating systems that the CRSS will not function on? What will be the cutoff for compatibility?
- Are there certain browsers that the CRSS website will be expected to work on? Will certain browsers not be supported?
- It is assumed that an internet connection is required to use the site, but are there any offline components to the site that would still be functional in an internet outage?
- Is CRSS a web app or a desktop app?

2.5. Design and Implementation Constraints

- Are there specific technologies that are not allowed? (they violate certain non-functional requirements or protocols the system needs to adhere to)
- Are we constrained by anything the business requires of us such as time or budget constraints?
- Are we constrained by the stakeholders we have access to to test the system design and the system functions?

2.6. User Documentation

- What form of documentation will be provided along with the system? Will it be a hard copy manual? Will there be a Help/FAQ section of the system?
- Will documentation be different for the different users of the system?

2.7. Assumptions and Dependencies

- Should this system in fact not be a website at all, but rather a downloadable software package/app that requires an internet connection to use?

- Is there any software that will be reused or repurposed for this project? Will this cause issues if this software doesn't meet some of the protocols that are required to be adhered to? Can it be refactored to adhere to these protocols?

3. External Interface Requirements

3.1. User Interfaces

- How will these user interfaces be created? Will there be a design team responsible for wireframing the design? What stakeholders will be involved in the design of these interfaces?
- Are there certain protocols or styles that need to be adhered to in these interfaces so that requirements are met, such as ADA compliance?

1. Log in. Users should log into the system with their username and password before having access to the main page of the CRSS.(Assumption)

CRSS

Username:

Password:

[Create New Account](#)

2. Main page. The main page varies for different users.(Assumption)

Campers:

View the Class	Rank the Classes	View/Print Schedule	Log Out

Instructors:

View the Class	View Camper's Schedule	View/Print Class List	Log Out

Administrators:

View the Class	Create the Class	Update the Class	Create Class Schedule	View Camper Schedule	Manual Entry	Analyze	Log Out
						Student Need	
						Class Enrollment	

Assistants:

View the Class	Create the Class	Update the Class	Log Out
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3. Input Class Information:

View the Class	Create the Class	Update the Class	Log Out
Session:	Option 1	▼	
Time Block:	Option 1	▼	
Number of Student:	Option 1	▼	
Course Name:	Text		
Instructor:	Text		
Course Info:	Text		
Submit			

4. Update Course Information:

View the Class	Create the Class	Update the Class	Log Out
Session:	Option 1	▼	
Time Block:	Option 1	▼	
Number of Student:	Option 1	▼	
Course Name:	Text		
Instructor:	Text		
Course Info:	Text		
Submit			

5. View Class Information:

<input type="button" value="View the Class"/>	<input type="button" value="Create the Class"/>	<input type="button" value="Update the Class"/>	<input type="button" value="Log Out"/>
Session: Session 1			
Time Block: Friday 1:00-3:00			
Number of Student: 20			
Course Name: Swimming			
Instructor: ABC			
Course Info: This class teaches you how to swim.			

6. Rank Classes:

<input type="button" value="View the Class"/>	<input type="button" value="Rank the Classes"/>	<input type="button" value="View/Print Schedule"/>	<input type="button" value="Log Out"/>
No. 1	Class Names <input type="button" value="▼"/>	<input type="button" value="▲"/> <input type="button" value="≡"/> <input type="button" value="▼"/>	
No. 2	Class Names <input type="button" value="▼"/>		
No. 3	Class Names <input type="button" value="▼"/>		
No. 4	Class Names <input type="button" value="▼"/>		
No. 5	Class Names <input type="button" value="▼"/>		
<input type="button" value="Submit"/>			

7. Create Camper Schedule:

View the Class	Update the Class	Create the Class	Create Class Schedule	Manual Entry	Analyze	Log Out
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Student Need

Class Enrollment

Select Session:

Session 1

Session 2

Session 3

Session 4

Lock Ranking

Create Schedule

Warning⚠

The system is not locked. Please lock the system and try again!

OK

8. Manual Entry:

View the Class

Update the Class

Create the Class

Create Class Schedule

Manual Entry

Analyze

Log Out

Student Name/User Name

Q

Click Time Slot to Edit

Mon	Tues	Wdnes	Thurs	Fri
Class A	Add	Class C	Class E	Class F
Add	Class B	Class D	Add	Add

Delete

Are you sure to delete [courseName] from [studentName/UserName]'s Schedule?

Cancel

Yes

Add

Select Class: Class Name

Cancel

Add

Warning

Selected class is filled!

OK

9. Analyze Statistics:

View the Class
Update the Class
Create the Class
Create Class Schedule
Manual Entry
Analyze
Log Out

Student Need
Class Enrollment

Mon	Tues	Wdnes	Thurs	Fri
Class A	Empty	Class C	Class E	Class F
Empty	Class B	Class D Class G	Empty	Empty

View the Class
Update the Class
Create the Class
Create Class Schedule
Manual Entry
Analyze
Log Out

Student Need
Class Enrollment

Class Name	Registered	Capacity	Enrollment
Swimming	40	67	MEDIAN
Tennis	55	56	HIGH
Math	25	80	LOW
...
...
...

10. View/Print Schedule (camper):

View the Class	Rank the Classes	View/Print Schedule	Log Out
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Select Week:	Option 1	▼	Print
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Schedule

11. View/Print Current Class List (Instructor):

View the Class	View Camper's Schedule	View/Print Class List	Log Out
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Select Session:	Option 1	▼	Print
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Class List

12. Instructor Views a Camper's Schedule:

View the Class	View Camper's Schedule	View/Print Class List	Log Out
Camper's Username: <input type="text" value="Text"/> <input type="button" value="Submit"/>			
<div>Camper's Schedule</div>			

3.2. Hardware Interfaces

- Will this system need to interface at all with the hardware on a user's local computer?
- If so, what are the characteristics of this interfacing and how should this be handled? Are there protocols the system would need to adhere to?

3.3. Software Interfaces

The CRSS needs to be connected to an online database system to import class information, generated class schedules, generated reports and offer login service.

- Will this product need to interface with any existing software or is this a stand alone product that only relies upon itself and the internet?
- If software is required that was not designed by our organization, how will this software be vetted and how will it be paid for if access is needed before the CRSS is billed to Camp Voyager?

3.4. Communication Interfaces

A stable internet connection is required when using CRSS.

- What protocols will this system need to adhere to? Specifically the internet protocols?
- How will the system communicate with servers and the database?

4. System Features

4.1. Create New Account

Name	Create New Account
ID	CRSS_001
Description	An account is created for a new user of the CRSS
Actors	<ul style="list-style-type: none"> • Who is responsible for creating accounts? • It seems like accounts should be created by administrators and assigned when an instructor or camper registers but is this the right approach? • Or does an assistant/instructor/camper create an account and before they can use it an administrator has to approve the account and assign privileges?
Organizational Benefits	This allows the organization to track who has access to the content of the online system
Frequency of Use	<ul style="list-style-type: none"> • Once per new user of the system • Or should it be once per new user of the system for each session?
Triggers	Is the trigger for this the user registering for a camp session or is it the user selects that they would like to create an account on a landing page?
Preconditions	<ul style="list-style-type: none"> • The user does not already have an account • The user is attending a session of the camp
Postconditions	An account is created for the user that gives them certain access to the CRSS
Main Course	<p><i>The main course will depend on how accounts should be created. I will write the main course as if administrators create all accounts for the system once an instructor/camper signs up to teach/attend a session but these will all be assumptions that would need to be further clarified by interviewing stakeholders.</i></p> <ol style="list-style-type: none"> 1. Administrator creates a username and temporary password for the new user, assigning the account the necessary privileges 2. Email sent to new user with temporary account info and password reset link

	<ol style="list-style-type: none"> 3. User resets password (this would be a use case in it of itself) 4. User logs in to confirm account (see Log In use case)
Alternate Courses	Depending on how accounts are created there could be many or few alternate courses
Exceptions	Exceptions will be hard to define without knowing the exact flow for how accounts should be created.

4.2. Log In

Name	Log In
ID	CRSS_002
Description	The user logs into the CRSS.
Actors	Instructor/Administrator/Assistant/Camper
Organizational Benefits	Allows for quick access to the system and provides a way to filter what the user sees based on their account privileges
Frequency of Use	Everytime the user wants to use the CRSS in some capacity
Triggers	The user navigates to the CRSS website
Preconditions	The user has not logged in
Postconditions	The user is logged into the system
Main Course	<ol style="list-style-type: none"> 1. The system directs the user to the page where they can log in. 2. The user enters their username and password and selects the button to log in. 3. The system checks that required fields are not blank (see EX1). 4. The system checks whether the username and password are correct (see EX2). 5. The user is logged in and is directed to the main landing page for the CRSS
Alternate Courses	<ul style="list-style-type: none"> • Are there alternative ways that a user could log into the system? • Can a user be auto logged in from a recent closed session that hasn't timed out yet? (using browser cookies for example)
Exceptions	<p>EX1: The required fields are blank.</p> <ol style="list-style-type: none"> 1. The system notifies the user of the failure. 2. Return user to Main Course step 1. <p>EX2: The username or the password is incorrect.</p> <ol style="list-style-type: none"> 1. The system notifies the user of the failure.

	2. Return user to Main Course step 1.
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4.3. Log out

Name	Log out
ID	CRSS_003
Description	The user logs out of the CRSS
Actors	Instructor/Administrator/Assistant/Camper
Organizational Benefits	Gives the users the ability to log out that way no one can gain access their account while they are away from their computer
Frequency of Use	Are users automatically logged out of the system when they close the website or will they remain logged in for a period of time unless they forcibly log out?
Triggers	<ul style="list-style-type: none"> The user selects to log out from the menuing system Can they also be logged out by a timer or by closing the website window?
Preconditions	The user is logged in to the CRSS
Postconditions	The user is logged out of the CRSS
Main Course	<p>The main course for this use case is assuming a forced log out initiated by the user but there are other potential ways the user could be logged out which are mentioned above</p> <ol style="list-style-type: none"> The user selects the menu item to log out The system prompts the user to confirm that they want to log out The user confirms they want to log out (see EX1) The system logs out the user and goes to the log in landing page (see Log In use case)
Alternate Courses	<ul style="list-style-type: none"> Can the user be logged out due to inactivity? Can the user log out by simply closing the CRSS browser window?
Exceptions	<p>EX1: The user decides they don't want to log out.</p> <ol style="list-style-type: none"> The system cancels the log out process and the user remains logged in

4.4. Administrator/Assistant Inputs Class Information

Name	Administrator/Assistant inputs the class information
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ID	CRSS_004
Description	The user adds classes into the system
Actors	Administrator/assistant
Organizational Benefits	Allows for classes to be added to the system for campers to take/instructors to teach in an efficient and controlled manner
Frequency of Use	Every time a new class is approved to be added for a session by an administrator
Triggers	User navigates to the add classes area from the menu.
Preconditions	The user is verified as an administrator/assistant.
Postconditions	The course information is stored in the system.
Main Course	<ol style="list-style-type: none"> 1. The system presents the form to input class information. 2. The user enters the information. 3. The system prompts user to confirm the submission 4. The user confirms the submission(see EX1). 5. The system checks that required fields are not blank (see EX2). 6. The system checks whether the information meets the requirements(see EX3): <ul style="list-style-type: none"> - The same class is not offered in the same time slot. 7. System stores the class information. 8. System redirects the user to view the added class information.
Alternate Courses	
Exceptions	<p>EX1: The user decides not to submit the form.</p> <ol style="list-style-type: none"> 1. The system cancels the submission. 2. Return user to Main Course step 2. <p>EX2: The required fields are blank.</p> <ol style="list-style-type: none"> 1. The system notifies the user of the failure. 2. Return user to Main Course step 2. <p>EX3: The information fails to meet the requirements.</p> <ol style="list-style-type: none"> 1. The system notifies the user of the failure. 2. Return user to Main Course step 2.

4.5. Administrator/Assistant Updates Course Information

Name	Administrator/Assistant Updates Course Information
ID	CRSS_005

Description	User updates the course information.
Actors	Administrator/Assistant
Organizational Benefits	Allows for additional times and instructor changes to be updated regarding course information
Frequency of Use	Will this be allowed to be modified after the system is locked and schedules made?
Triggers	User navigates to the update course information area from the manu.
Preconditions	The user is verified as an administrator/assistant.
Postconditions	The course information is updated.
Main Course	<ol style="list-style-type: none"> 1. The system displays a list of courses on the page. 2. The user selects the course that needs to be updated. 3. The system directs the user to the edit information page of that course. 4. The user enters the new information. 5. The system prompts the user to confirm the submission. 6. The user confirms the submission(see EX1). 7. The system checks that required fields are not blank (see EX2). 8. The system checks whether the information meets the requirements(see EX3): <ul style="list-style-type: none"> - The same class is not offered in the same time slot. 9. System stores the updated class information. 10. System redirects the user to the update course information area.
Alternate Courses	
Exceptions	<p>EX1: The user decides not to submit the update.</p> <ol style="list-style-type: none"> 1. The system cancels the submission. 2. Return user to Main Course step 4. <p>EX2: The required fields are blank.</p> <ol style="list-style-type: none"> 1. The system notifies the user of the failure. 2. Return user to Main Course step 4. <p>EX3: The information fails to meet the requirements.</p> <ol style="list-style-type: none"> 1. The system notifies the user of the failure. 2. Return user to Main Course step 4.

4.6. View Class Information

Name	View Class Information
ID	CRSS_006

Description	The user views the class information.
Actors	Instructor/Administrator/Assistant/Camper
Organizational Benefits	Allows instructors, administrators, and campers all to see the available sections offered for each class for a given session.
Frequency of Use	As desired? No limitations?
Triggers	The user selects to view the class information
Preconditions	<ul style="list-style-type: none"> • Users must be logged in. • Class must be offered for the session.
Postconditions	The class information is displayed on the page.
Main Course	<ol style="list-style-type: none"> 1. User navigates to course option on menu 2. The system displays a list of courses on the page. 3. The user selects the course that they want to view. 4. The system displays the course information on the page.
Alternate Courses	
Exceptions	EX1: System fails to show available classes <ol style="list-style-type: none"> 1. System notifies the administrator. 2. User returns to step 1 of Main Course

4.7. Camper Ranks the Available Classes

Name	Camper ranks the available classes
ID	CRSS_007
Description	Camper ranks the classes and submits the ranking form.
Actors	Camper
Organizational Benefits	Allows the organization to better place campers in classes they will enjoy, that way they enjoy the camp session more
Frequency of Use	Are campers allowed to update their rankings before the system locks?
Triggers	Camper navigates to the class ranking area of the system via the menu
Preconditions	<ul style="list-style-type: none"> • All the class names offered in the current session are provided in the system. • Should a camper be logged in already before they can go through this use case? • The camper is registered in the current session

	<ul style="list-style-type: none"> Is the camper allowed to save/submit their rankings more than once or is there a precondition that they haven't submitted their rankings before (see frequency of use question)?
Postconditions	The form is saved in the system and visible to the user after successful submission.
Main Course	<ol style="list-style-type: none"> The system directs the user to the page where he can see the class. information and work on the ranking form. The user fills in the form. The system prompts the user to confirm the submission. The user confirms the submission (see EX1). The system checks whether the form meets the requirements (see EX2): <ul style="list-style-type: none"> At least 10 different classes are ranked No two classes can have the same ranking No class has more than one ranking The system stores the ranking form The system redirects the user to his saved form to view the full ranking list.
Alternate Courses	
Exceptions	<p>EX1: The user decides not to submit the ranking form.</p> <ol style="list-style-type: none"> The system cancels the submission. Return user to Main Course step 2. <p>EX2: The form fails to meet the requirements.</p> <ol style="list-style-type: none"> The system notifies the user of the failure. Return user to Main Course step 2.

4.8. Administrator Creates Camper Schedules

Name	Admin creates camper schedules
ID	CRSS_008
Description	Administrator runs CRSS to place campers in classes based on their rankings for the upcoming session
Actors	Administrator
Organizational Benefits	<ul style="list-style-type: none"> Allows for the creation of fair schedules based on both camper interest and when they registered for the camp/ranked their class preferences Speeds up the process considerably from doing this manually
Frequency of Use	Once per session
Triggers	Administrator navigates to program running area from menu

Preconditions	<ul style="list-style-type: none"> • The system is locked • All instructors have classes/class size approved • Program hasn't been run yet • The administrator has an account and is logged in • The administrator is connected to the internet
Postconditions	<ul style="list-style-type: none"> • A report is generated with the schedules filled out. • This cannot be run again for this session
Main Course	<ol style="list-style-type: none"> 1. Admins runs program (see EX1 and EX2) 2. Report generated
Alternate Courses	
Exceptions	<p>EX1: Report has already run.</p> <ol style="list-style-type: none"> 1. See "Manual changes" use case <p>EX2: Program errors (can't generate the report).</p> <ol style="list-style-type: none"> 1. System notifies administrator 2. System unlocks 3. Go to step 1 of Main Course

4.9. Administrator Adds Camper Into Class Manually

Name	Admin adds campers into classes manually
ID	CRSS_009
Description	The administrator adds campers into the classes after the software has been run.
Actors	Administrator
Organizational Benefits	Allows for class movements to be accomplished after registration has been closed and the system been run
Frequency of Use	Do we allow this to be used before the software has been run?
Triggers	The user enters the manual entry for adding campers to classes.
Preconditions	The software has been run.
Postconditions	The camper is added into the class.
Main Course	<ol style="list-style-type: none"> 1. The system presents the page to add campers into class. 2. The user enters the information of the camper and the class. 3. The system checks that required fields are not blank (see EX1).

	<ol style="list-style-type: none"> 4. The system checks whether the information meets the requirements(see EX 2): <ul style="list-style-type: none"> - The time of the added class shouldn't conflict with other classes the camper already has. 5. System stored the updated information.
Alternate Courses	
Exceptions	<p>EX1: The required fields are blank.</p> <ol style="list-style-type: none"> 1. The system notifies the user of the failure. 2. Return user to Main Course step 2. <p>EX2: The information fails to meet the requirements.</p> <ol style="list-style-type: none"> 1. The system notifies the user of the failure. 2. Return user to Main Course step 2.

4.10. Administrator Deletes Camper From Class Manually

Name	Admin deletes campers from classes manually
ID	CRSS_010
Description	Administrator deletes campers from the classes after the software has been run.
Actors	Administrator
Organizational Benefits	Allows Admin to modify campers from the classes after the software has been run
Frequency of Use	Is this allowed before the software has been run?
Triggers	The user enters the manual entry for deleting campers to classes.
Preconditions	The software has been run.
Postconditions	The camper is deleted from the class.
Main Course	<ol style="list-style-type: none"> 1. The system presents the page to delete campers from class. 2. The user enters the information of the camper and the class. 3. The system checks that required fields are not blank (see EX1). 4. The system checks whether the information meets the requirements(see EX 2): <ul style="list-style-type: none"> - The camper is in the class. 5. System stored the updated information.
Alternate Courses	

Exceptions	<p>EX1: The required fields are blank.</p> <ol style="list-style-type: none"> 1. The system notifies the user of the failure. 2. Return user to Main Course step 2. <p>EX2: The information fails to meet the requirements.</p> <ol style="list-style-type: none"> 1. The system notifies the user of the failure. 2. Return user to Main Course step 2.
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4.11. Administrator Analyzes Classes for Enrollment

Name	Administrator Analyzes Classes for Enrollment
ID	CRSS_011
Description	Administrator is able to analyze the enrollment of classes (high/low).
Actors	Administrator
Organizational Benefits	Allows admin to look at the number of campers enrolled in each class during a given session
Frequency of Use	As needed
Triggers	The administrator navigates to the analyze class area from the menu.
Preconditions	<ul style="list-style-type: none"> • The user has an administrator's credential and is logged in. • The enrollment of classes is finished.
Postconditions	The analysis of the classes for enrollment is displayed on the page.
Main Course	<ol style="list-style-type: none"> 1. User maneuvers to Enrollment Statistics section of menu 2. The system displays the analysis of the classes for enrollment.
Alternate Courses	
Exceptions	

4.12. Administrator Analyzes Student Need

Name	Administrator Analyzes Student Need
ID	CRSS_012
Description	Administrator is able to analyze the student's needs (empty blocks/duplicates/etc.).

Actors	Administrator
Organizational Benefits	Administrator is able to analyze the student's needs (empty blocks/duplicates/etc.).
Frequency of Use	No limitations
Triggers	The administrator navigates to the analyze student area from the menu.
Preconditions	<ul style="list-style-type: none"> • The user has an administrator's credential and is logged in • The student schedule has been created.
Postconditions	The analysis of student need is displayed on the page.
Main Course	The system displays the analysis of student need.
Alternate Courses	
Exceptions	

4.13. Camper Views Their Class Schedule Online

Name	Camper Views Their Class Schedule Online
ID	CRSS_013
Description	The camper is able to view their class schedule online after the schedule has been created.
Actors	Camper
Organizational Benefits	The camper is able to view their class schedule online after the schedule has been created.
Frequency of Use	No limitations
Triggers	The camper navigates to the view schedule area from the menu.
Preconditions	The camper has been assigned the classes for the week by the administrators.
Postconditions	The class schedule is displayed on the page.
Main Course	<ol style="list-style-type: none"> 1. The user selects a specific week to see the schedule for that week. 2. The system checks whether the class schedule is available(see EX1). 3. The system displays the class schedule.
Alternate Courses	

Exceptions	EX1: The class schedule is not available. 1. The system notifies the user of the failure. 2. Return user to Main Course step 1.
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4.14. Campers Print Their Class Schedule

Name	Campers print their class schedule.
ID	CRSS_014
Description	Camper views and prints his class schedule online after being assigned his classes for the week by the administrator.
Actors	Campers
Organizational Benefits	Camper views and prints his class schedule online after being assigned his classes for the week by the administrator.
Frequency of Use	No limitations
Triggers	The user navigates to the area where they can view and print the schedule.
Preconditions	The classes have been assigned.
Postconditions	The system displays the class schedule and prints it
Main Course	1. The system checks whether the class schedule is available. 2. The system displays the class schedule. 3. The user clicks the print button. 4. The system prompts the user to confirm the printing request. 5. The user confirms the printing(see EX1). 6. The system prints the schedule out.
Alternate Courses	
Exceptions	EX1: The user decides not to submit the printing request . 1. The system cancels the printing. 2. Return user to Main Course step 2.

4.15. Instructor Views a Camper's Schedule Online

Name	Instructor Views a Camper's Schedule Online
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ID	CRSS_015
Description	Instructor is able to view the camper's schedule online
Actors	Instructor
Organizational Benefits	Instructor is able to view the camper's schedule online
Frequency of Use	No Limitations
Triggers	Instructor navigates to the area where they can view the camper's schedule.
Preconditions	<ul style="list-style-type: none"> • The camper's schedule has been created. • The user has an instructor's credential.
Postconditions	The system displays the camper's schedule on the page.
Main Course	<ol style="list-style-type: none"> 1. The system presents a page where the user can enter the camper's username. 2. The user enters a camper username. 3. The system checks whether the username is correct (see EX1). 4. The system displays the camper's schedule on the page.
Alternate Courses	
Exceptions	EX1: The username is incorrect. <ol style="list-style-type: none"> 1. The system notifies the user of the failure. 2. Return user to Main Course step 2.

4.16. Instructor Views Online Report of a Current Class List

Name	Instructor Views Online Report of a Current Class List
ID	CRSS_016
Description	The instructor is able to view their current class list.
Actors	Instructor
Organizational Benefits	Allos the instructors to reference when they will be teaching classes for a given session of camp.
Frequency of Use	No limitations on the number of times this can be done.
Triggers	The instructor navigates to the view schedule area from the menu.
Preconditions	The user has an instructor's credential and is logged in.

Postconditions	The current class list is displayed on the page.
Main Course	<ol style="list-style-type: none"> 1. User navigates the menu to find the current class list. 2. The system displays the class schedule.
Alternate Courses	ALT1: The user does not have a current class list <ol style="list-style-type: none"> 1. See Use Case 4.4 “Administrator/Assistant inputs class information”
Exceptions	EX1: The class schedule is not available. <ol style="list-style-type: none"> 1. The system notifies the user of the failure. 2. Return user to Main Course step 1.

4.17. Instructor Prints Report of a Current Class List

Name	Instructor Prints Report of a Current Class List
ID	CRSS_017
Description	Instructor views and prints their class schedule online.
Actors	Instructor
Organizational Benefits	Allows the instructor to obtain a hard copy of their current class list. Can an instructor print a report that is not theirs?
Frequency of Use	When Instructor desires to print schedule
Triggers	User navigates to viewing and printing class list area from menu
Preconditions	The user has an instructor's credential and is logged in.
Postconditions	The system displays the class list and prints it
Main Course	<ol style="list-style-type: none"> 1. The system displays the current class list. 2. The user clicks the print button. 3. The system prompts the user to confirm the printing request. 4. The user confirms the printing(see EX1). 5. The system prints the schedule out.
Alternate Courses	ALT1: The user does not have a current class list <ol style="list-style-type: none"> 1. See Use Case 4.4 “Administrator/Assistant inputs class information”
Exceptions	EX1: The user decides not to submit the printing request . <ol style="list-style-type: none"> 1. The system cancels the printing. 2. Return user to Main Course step 1.

5. Other Nonfunctional Requirements

5.1. Performance Requirements

- Is there a certain amount of space the software is allowed to consume?
- Is there a certain speed that the software must run at?

5.2. Safety Requirements

- Are there any user safety requirements we need to adhere to?
- Are there any child safety requirements that are necessary due to the nature of the product?

5.3. Security Requirements

- Are there any security regulations that this software needs to adhere to?
- Will sensitive user data be stored in this software?
- Does the login procedure need some form of 2-factor authentication?
- Can anyone create an account or will a master administrator have to set up accounts for people who need one?

5.4. Software Quality Attributes

- Will this software be held to any quality standards?
- Does this software need to pass a certain level of testing before it can be released?

5.5. Business Rules

- Will the software require different views based on who is logged in?
- Will the software restrict access to certain parts of the product based on who is logged in?

6. Other Requirements

<Define any other requirements not covered elsewhere in the SRS. This might include database requirements, internationalization requirements, legal requirements, reuse objectives for the project, and so on. Add any new sections that are pertinent to the project.>

Appendix A: Glossary

Term	Definition
Camper	Attendees of Camp Voyager
Instructor	Person who will be teaching at least one class at Camp Voyager
Administrator	Person who has the most privilege in the CRSS. Camp directors at Camp Voyager are administrators, but who is considered an administrator beyond that is ultimately decided by administrators of the system.
Assistant	Person whose role is to assist an administrator. Less privileged than an administrator in the CRSS

Appendix B: Analysis Models

<Optionally, include any pertinent analysis models, such as data flow diagrams, class diagrams, state-transition diagrams, or entity-relationship diagrams.>

Appendix C: To Be Determined List

<Collect a numbered list of the TBD (to be determined) references that remain in the SRS so they can be tracked to closure.>