

Use cases in order of spec doc plus a few more based on context diagram and notes from class

- Campers rank classes - UC_1 (all)
- User logs in - UC_7 (Colin)
- Administrators enroll students in classes - UC_5 (Bryan)
- View camp schedules - UC_2 (Hailin)
- Print camper class schedule - UC_11 (Colin)
- Administrators analyze class enrollment - UC_3 (Hailin)
- Manually add/remove students to classes - UC_6 (Colin)
- Administrators adjust class offerings and class info - UC_8 (Josh)
- Administrators analyze student needs - UC_9 (Josh)
- Administrators create class offering schedule - UC_4 (Bryan)
 - Set blocks
 - Set camp sessions
- Instructors view class enrollment - UC_10 (Josh)
- Administrator lock ranking - UC_12 (Bryan)
- Print report of a current class list - UC_13 (Josh)
- System generates username and password - UC_14 (Hailin)

UC_1:

Name	Rank classes
ID	UC_1
Description	Camper rank 10 different classes based on their preferences
Actors	Campers
Organizational Benefits	Allow the system to take camper's preference into enrollment consideration.
Frequency of Use	1 per camper or 1 per lock down <Q - Can campers change ranking before lock down?>
Triggers	Camper starts class ranking function (e.g. click a button)
Preconditions	Camper logged in Class listing is available Camper has not submitted ranking before <Q - This condition depends on the answer to the previous question>
Postconditions	A camper has a ranked class list satisfying following conditions: <ul style="list-style-type: none"> • 10 classes • No 2 classes have the same ranking • No class has more than 1 ranking Camper ranking is locked <Q - Does the system allow camper to re-rank classes with new priority>
Main Course	<ol style="list-style-type: none"> 1. Camper successfully logged in 2. Camper select classes and choose rankings 3. Camper save or submit selections
Alternate Courses	AC_1: Camper is logged out before completing ranking <ol style="list-style-type: none"> 1. Camper is sent to login screen 2. Go back to main course step 1 AC_2: Camper selected less or more than 10 courses <ol style="list-style-type: none"> 1. Prompt camper to select 10 courses 2. Go to main course step 2 AC_3: Camper ranked two classes with the same ranking <ol style="list-style-type: none"> 1. Prompt camper to change rankings of those courses 2. Go to main course step 2 AC_4: Camper ranked same classes more than once <ol style="list-style-type: none"> 1. Prompt camper to select different courses

	2. Go to main course step 2
Exceptions	EX_1: Course information has not been put in the system EX_2: Camper ranked two courses offered at the same time <Q - Are the schedules already created when the campers are ranking their classes?>

UC_2:

Name	View camper class schedule
ID	UC_2
Description	Camper schedule will show the time blocks, the class enrolled in that block, the location of the class, any special instructions for the class and the instructor(s) names
Actors	Campers, instructors, administrators
Organizational Benefits	Camper needs to be able to see his/her schedule Instructors need to be able to see a camper's schedule Administrators need to be able to see all enrolled camper's schedules
Frequency of Use	Once every few days to multiple times a day
Triggers	Camper runs 'view camper class schedule' Instructor, or system administrator run 'view camper schedule' after selecting a camper.
Preconditions	A user must log in successfully. Class assignments have been run.
Postconditions	Specific camper's class schedule displays on requester's screen
Main Course	MC_1: Camper view class schedule 1. Camper logged in 2. Camper click on view class schedule 3. Camper class schedule displays MC_2: Instructor/administrator view a camper's class schedule 1. Instructor/administrator logged in 2. Instructor/administrator select camper 3. Instructor/administrator click on view class schedule 4. Chosen camper's class schedule displays
Alternate Courses	AC_1: Camper/Instructor/administrator is not logged in 1. Camper/Instructor/administrator sent to login screen 2. Go to main course MC_1/2 step 1 AC_2: Instructor/Administrator did not choose camper 1. Prompt Instructor/Administrator to choose camper before view class schedule 2. Go to main course MC_2 step 2
Exceptions	EX_1: Camper is not enrolled 1. No schedule is displayed

	EX_2: Camper has not been assigned classes 1. No schedule is displayed
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UC_3:

Name	Analyze class enrollment
ID	UC_3
Description	Administrators analyze class enrollment to get statistics of enrollment (low/high)
Actors	Administrators
Organizational Benefits	Administrators are able to see how many people are enrolled in each class, so that they can fill less popular classes so class sizes are more evenly distributed, or make adjustments to offerings in the next session based on demand <Q - Need more information on when classes in next session are scheduled>
Frequency of Use	Once after enrollment ends. Then run as needed.
Triggers	Administrators run 'analyze class enrollment' program
Preconditions	Administrators logged in with administrator rights. Class assignments have been run.
Postconditions	Record access. Report generation.
Main Course	<ol style="list-style-type: none"> 1. Administrator logged in (authentication) 2. Administrator select session 3. Administrator runs 'analyze class enrollment'
Alternate Courses	<p>AC_1: Administrator does not select session</p> <ol style="list-style-type: none"> 1. Pop up window alert 'No session was selected' 2. Go to step 2 in main course <p>AC_2: Administrator did not log in or active session expired</p> <ol style="list-style-type: none"> 1. Pop up window alert 'Need to log in as an administrator' 2. Go to step 1 in main course
Exceptions	<p>EX_1: Class assignments has not been run</p> <ol style="list-style-type: none"> 1. Pop up window alert 'Enrollment is not complete'

UC_4:

Name	Create class offering schedule
ID	UC_4
Description	<p>Create class schedule based on manual input from administrator with following rules:</p> <ul style="list-style-type: none"> • Instructors can teach the same class multiple times during a given camp session • A session can contain several sections of the same class. • Classes can be offered multiple times and on multiple days.
Actors	Administrators
Organizational Benefits	The course schedule must be set up to provide classes and times for campers to choose from and to rank their preferences.
Frequency of Use	<p>1 time per summer session at most, if all classes are established prior to the summer for all sessions then may need to run only one time.</p> <p><Q - Will classes need to be set up for each summer session independently or will all session schedules be set up at once?></p>
Triggers	Administrator validates that they have all course information.
Preconditions	Administrators consult with instructors to establish class information including number of sessions for a class and the enrollment number allowed for each class session.
Postconditions	The class schedules will be created for a given summer session or for all summer sessions.
Main Course	<ol style="list-style-type: none"> 1. An administrator is logged into the system. 2. The administrator validates that they have all of the class information. 3. The administrator manually creates the class offering schedule. 4. The class offering schedule is saved.
Alternate Courses	<p>AC_1: An instructor is double booked</p> <ol style="list-style-type: none"> 1. The instructors and classes will be highlighted. 2. The administrator must fix scheduling issue 3. Continue updating the class schedule.
Exceptions	<p>EX_1: No slot exists to place class</p> <ol style="list-style-type: none"> 1. Classes with conflicts are highlighted. 2. Administrator manually adjusts the class schedule.

	<p>EX_2: Not all classes have been entered into the system</p> <ol style="list-style-type: none">1. The administrator must manually input the class information and schedule the class. <p>EX_3: The class offering schedule cannot be saved.</p> <ol style="list-style-type: none">1. Administrator must fix the issue.2. Begin this use case again.
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UC_5:

Name	Enroll campers in classes
ID	UC_5
Description	Campers will be placed in classes based on their ranks using a first-come-first-serve process.
Actors	Administrators
Organizational Benefits	Allow campers to enroll in classes according to rules provided by the customer. This helps campers stay happy with their placement and sets up the camp experience.
Frequency of Use	1 time per summer session at most, if all classes are established prior to the summer for all sessions then may need to run only one time. <Q - Will this be run once per summer session?>
Triggers	Administrators will run the enrollment program. <Q - How will administrators know? Set up deadline for rank placements? Random otherwise?>
Preconditions	Class time schedules are established, camper rankings have been completed, and the rankings have been locked.
Postconditions	Campers are enrolled in unique classes in non-overlapping time slots based on input from each camper's ranking. Instructors can see their schedules. Campers can see their schedules.
Main Course	<ol style="list-style-type: none"> 1. An administrator is successfully logged into the system. 2. An administrator runs the enrollment program. 3. The system places campers into classes according to placement rules. 4. All camper schedules are saved.
Alternate Courses	AC_1: Administrator did not log in or active session expired <ol style="list-style-type: none"> 3. Pop up window alert 'Need to log in as an administrator' 4. Go to step 1 in main course
Exceptions	EX_1: There are no open classes to complete a student's enrollment <ol style="list-style-type: none"> 1. Students with incomplete schedules are highlighted. 2. Administrator manually adjusts the class schedule. EX_2: Not all campers have been enrolled in classes

	<ol style="list-style-type: none">1. The administrator must manually add the non-enrolled campers to classes. <p>EX_3: The camper schedules can not be saved.</p> <ol style="list-style-type: none">1. Administrator must fix the issue.2. Begin this use case again.
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UC_6:

Name	Manually add students to classes
ID	UC_6
Description	An administrator can add students to a class after the schedule has already been generated
Actors	Administrators
Organizational Benefits	Simplifies the process of adding a student to a class after the schedule has been generated
Frequency of Use	Used when necessary to add/change a camper's enrollment
Triggers	User selects an option to edit a courses enrollment
Preconditions	User must be logged in as a director/administrator Class assignments have been run.
Postconditions	The camper has been enrolled in the class
Main Course	<ol style="list-style-type: none"> 1. An administrator is logged into the system. 2. Administrator selects the class that they would like to modify the enrollment of 3. Administrator adds camper to the section 4. The camper's new schedule is saved.
Alternate Courses	<p>AC_1: User is not logged in</p> <ol style="list-style-type: none"> 1. User sent to login screen 2. User sent to main course step 2 <p>AC_2: User tries to add a camper to a section that is full</p> <ol style="list-style-type: none"> 1. Alert user that the class is full 2. User sent to main course step 2 <p>AC_3: User tries to add a camper who isn't enrolled in the current session to a class</p> <ol style="list-style-type: none"> 1. Alert user that the camper is not enrolled in the session 2. User sent to main course step 2 <p>AC_4: User tries to enroll a camper in a section that would create a schedule conflict for the student</p> <ol style="list-style-type: none"> 1. Alert user that the camper is currently enrolled in another class at that time, let the user know what the other class is 2. User sent to main course step 2
Exceptions	EX_1: The camper's schedule can not be saved.

	<ol style="list-style-type: none">1. Administrator must fix the issue.2. Begin this use case again.
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UC_7:

Name	User logs in
ID	UC_7
Description	Allow users to access the system.
Actors	Administrators, Instructors, Campers
Organizational Benefits	Only authorized users can access the Class Rank & Sort System
Frequency of Use	Used whenever a user needs to access the system
Triggers	User navigates to login screen
Preconditions	User must have valid username and password
Postconditions	A user will be able to log in and out of the system.
Main Course	<ol style="list-style-type: none"> 1. User enters username and password 2. User submits credentials 3. User is logged in
Alternate Courses	AC_1: User enters incorrect username or password <ol style="list-style-type: none"> 1. User is alerted that their username or password is incorrect 2. User is sent back to main course step 1
Exceptions	EX_1: User doesn't have a username and password <ol style="list-style-type: none"> 1. Contact system administrator 2. Go to main course step 1 EX_2: User doesn't remember username and password <ol style="list-style-type: none"> 1. Contact system administrator 2. Go to main course step 1 <p><Q - Will we be required to implement a password recovery feature that doesn't require contacting the administrator? ></p>

UC_8:

Name	Adjust class offerings and class info
ID	UC_8
Description	Administrators are able to manually add or remove class offerings, as well as adding class information to the system
Actors	Administrators
Organizational Benefits	Administrators are able to have full control over what classes are offered when, and able to edit availability as needs arise
Frequency of Use	At minimum, as many times as there are different classes offered for each session in order to approve instructor listings, before campers have access to ranking system As often as needed before and toward beginning of session for last minute changes to instructor/class availability or to cancel classes or class sessions due low enrollment
Triggers	Instructors have submitted class offering proposals and availability Instructor availability or other need necessitates changing class availability A class adjustment need has been identified
Preconditions	User must be logged in as administrator
Postconditions	Course proposals are approved, canceled, or edited
Main Course	<ol style="list-style-type: none"> 1. Administrator logs in 2. Administrator adds course details to camp session offering list 3. Administrator saves changes <p><Q - How do instructors communicate class proposals to administrators?></p>
Alternate Courses	<p>AC_1: User is not logged in</p> <ol style="list-style-type: none"> 1. User sent to login screen 2. User sent to main course step 2 <p>AC_2: Approved course requires details changed</p> <ol style="list-style-type: none"> 1. Administrator selects edit option 2. Administrator edits class details 3. Administrator saves new class details
Exceptions	<p>EX_1: Administrator edits or approves class so that instructor is teaching 2 classes at same time</p> <ol style="list-style-type: none"> 1. Administrator is alerted edit cannot be made

	2. Details reverted to original
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UC_9:

Name	Analyze student needs
ID	UC_9
Description	Administrators are shown all cases in which a student does not have a full and valid schedule, such as having empty blocks, double booked blocks, or duplicate classes in different blocks
Actors	Administrators
Organizational Benefits	Administrators are able to see logical errors in student schedules in order to manually fix them
Frequency of Use	As often as needed - likely several times after running ranking system and before/at the beginning of each camp session
Triggers	Camper schedules have been set by the class preference ranking system
Preconditions	User must be logged in as administrator
Postconditions	Student(s) have no logical errors in their schedules, 15 unique classes per week
Main Course	<ol style="list-style-type: none"> 1. Administrator logs in 2. Administrator views list of student schedule conflicts/errors 3. Administrator manually edits student schedules (UC_6) to remove duplicate courses, add student into open courses in empty blocks 4. Administrator saves schedule changes
Alternate Courses	<p>AC_1: No open, non-duplicate classes remain to enroll student in to fill schedule with unique courses</p> <ol style="list-style-type: none"> 1. Administrator edits capacity details for otherwise valid class (UC_8) 2. Administrator adds student to non-duplicate class <p>AC_2: User is not logged in</p> <ol style="list-style-type: none"> 1. User sent to login screen 2. User sent to main course step 2
Exceptions	<p>EX_1: Administrator adds class creating another logical error</p> <ol style="list-style-type: none"> 1. Administrator is alerted additional conflict created 2. Details reverted to original

UC_10:

Name	View a class' enrollment list
ID	UC_10
Description	Instructors or administrators are able to view report of enrollment for each class
Actors	Instructors, administrators
Organizational Benefits	Instructors are able to easily verify who is registered for their course(s) Administrators are able to oversee who should be in each course
Frequency of Use	Used as necessary to view class list, verify attendance
Triggers	Class ranking system has been run, classes are provisionally enrolled with campers
Preconditions	User is logged in as an instructor or administrator
Postconditions	User is shown report of class enrollments for classes they teach (instructor) or any class (administrator)
Main Course	<ol style="list-style-type: none"> 1. Instructor, administrator logs in 2. User selects to show class list for given class they teach (instructor) or any class (administrator) 3. User is shown report of currently enrolled campers for given class selected
Alternate Courses	<p>AC_1: Class enrollment has been manually updated by admin</p> <ol style="list-style-type: none"> 1. Instructor told enrollment has been updated, refresh to view <p>AC_2: User is not logged in</p> <ol style="list-style-type: none"> 1. User sent to login screen 2. User sent to main course step 2
Exceptions	<p>EX_1: Class has been deleted</p> <ol style="list-style-type: none"> 1. User told class no longer exists <p>EX_2: Instructor has been removed from class</p> <ol style="list-style-type: none"> 1. Instructor told no longer has access to class, cannot rerun report

UC_11:

Name	Print camper class schedule
ID	UC_11
Description	Campers are able to print their class schedules
Actors	Campers <Q - Do administrators or instructors also need the ability to print schedules?>
Organizational Benefits	Lets campers get a hard copy of a schedule so they don't need to log in to the CRSS every time they need to view a schedule
Frequency of Use	As often as they want
Triggers	User is viewing schedule and wishes to print it
Preconditions	User is logged in. Class assignments have been run.
Postconditions	Schedule has been printed
Main Course	<ol style="list-style-type: none"> 1. User is logged in 2. User is viewing schedule (UC_2) 3. User selects print
Alternate Courses	AC_1: User is not logged in <ol style="list-style-type: none"> 1. User sent to login screen 2. User sent to main course step 2
Exceptions	EX_1: Printer isn't connected or isn't working correctly <ol style="list-style-type: none"> 1. User is alerted that there is printer issue EX_2: Schedules haven't been created yet <ol style="list-style-type: none"> 1. User is not able to print schedule

UC_12:

Name	Lock camper rankings
ID	UC_12
Description	Camper class rankings are locked and no more changes by campers are allowed.
Actors	Administrators
Organizational Benefits	This keeps the class rankings from changing, allowing the ranking system to be used to place campers in classes.
Frequency of Use	Once per summer camp session
Triggers	The current date is past a deadline for campers to enter their class rank preferences.
Preconditions	<p>The administration determines that the rankings should be locked.</p> <p><Q - Does the administrator tell the system to automatically stop accepting responses by a deadline or manually decide responses are no longer accepted?></p>
Postconditions	Campers are no longer allowed to rank classes.
Main Course	<ol style="list-style-type: none">1. An administrator logs into the system.2. The administrator turns off the camper class ranking functionality.3. The camper class ranking functionality is turned off
Alternate Courses	<p>AC_1: Administrator is not logged in</p> <ol style="list-style-type: none">1. Administrator sent to login screen2. Administrator sent to main course step 2
Exceptions	<p>EX_1: Camper rankings have not yet been opened</p> <ol style="list-style-type: none">1. User not given option to lock rankings

UC_13:

Name	Print report of current class list
ID	UC_13
Description	After viewing a report of the campers enrolled in class(es) they teach, instructors can print a hard copy
Actors	Instructors
Organizational Benefits	Instructors are able to have an offline list of who they are responsible for, are able to take attendance if desired
Frequency of Use	As often as needed, at least once per session, more if campers are added or removed from the class towards the beginning of the session
Triggers	Ranking system has been run and there are students in assigned classes
Preconditions	Instructors are logged in Instructors are assigned to at least 1 class Printer is connected to computer/device running the CRSS
Postconditions	Instructor has physical copy of class enrollment report
Main Course	<ol style="list-style-type: none"> 1. Instructor logs in 2. Instructor selects to print class list from menu 3. Report is formatted for printing, sent to printer, printed <p><Q - Should the print option be offered from the main menu or only from the view class enrollment screen? UC_10></p>
Alternate Courses	AC_1: All campers are removed from class <ol style="list-style-type: none"> 1. Instructor is notified class list is empty AC_2: User is not logged in <ol style="list-style-type: none"> 3. User sent to login screen 4. User sent to main course step 2
Exceptions	EX_1: Printer is not connected <ol style="list-style-type: none"> 1. Instructor is notified printer is not connected, cannot print

UC_14:

Name	System generates usernames and passwords
ID	UC_14
Description	System creates usernames and passwords when users register in the system
Actors	Campers, instructors, administrators <Q- Should instructors and administrators register in different ways?>
Organizational Benefits	Usernames and passwords provide security and privacy to users and the system.
Frequency of Use	Once per user registration
Triggers	Users submit registration request <Q - Do administrators manually create user accounts for registered campers or staff?>
Preconditions	User does not have an account in the system User provides the system with registration information
Postconditions	The user has an account in the system with a unique username and password.
Main Course	<ol style="list-style-type: none"> 1. User starts registration process 2. User inputs in required information 3. User clicks submit button 4. System generates a unique username and password for the user 5. System communicates to the user their new username and password <Q - Should the system provide a temporary password that users can change?>
Alternate Courses	AC_1: User did not provide all the required information <ol style="list-style-type: none"> 1. Prompt (window, message) tells user that information is not complete 2. Go back to main course step 2
Exceptions	EX_1: User information is in the system already <Q - Should all users be enrolled in the camp in some way or are other accounts possible like parent accounts, etc?>

