ESOF 322: Project 2 - Camp Management System; Test Plan

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Test Plan

This is the Test Plan for the Camp Management System provided. Since there are 13 usecases, we have opted to only write test plans for eight of them; two by each group member. All relevant information about the usecases can be see in appendix A, and to increase readability the summary for each test case explains how it is related to the requirement and there is a link to the relevant use case/requirement(s).

Introduction

The Camp Management System aims to serve as the connecting force that organizes how counselors, parents, and campers communicate information. The main structure of the system can be boiled down into four requirements:

1. A way to track attendance,

2. View Camper information,

3. Create and view schedule, and

4. Send a message to parents.

The small subset of testing we show here will all be done using Functional Black-Box testing. That is, only testing that the the transformation of "Input $\mapsto$ Output" is correct. The main testing techniques used are:

1. Equivalence Partitioning (TC03: table 5, TC04: table 7, TC05: table 9, TC06: table 11, TC07: table 13, TC08: table 15),

2. Boundary Value Analysis (TC04: table 7, TC05: table 9, TC06: table 11),

3. Decision Table Testing (TC01: table 1, TC02: table 3, TC06: table 11)

4. State Transition Testing (TC04: table 7), and

5. Error Guessing (TC03: table 5, TC05: table 9, TC06: table 11, TC08: table 15).

Test Suite 1: Messaging System

Table 1: TC01

ID:	TC01
Name:	Message Camp
Author:	Fletcher Phillips
Summary:	Parents must be able to message the camp system through three routes: Text, Email, and an In-app messaging system. These all need to be tested individually.
Related Requirements:	Message Camp (table 17); Req 4
Preconditions:	1. Parent has a device to send a message (text, email, in-app messaging). 2. Parent's contact information is in the system.
Test Script/ Procedure:	1. Choose messaging system. 2. Create message to send. 3. Send message. 4. Confirmation receipt is sent.
Test Data	

Test Case #	Messaging System	Expected Result	Summary
TC01-01	Text	Text message received by counselor or staff member and a confirmation receipt is received.	Verifies the camp staff member receives a parent's message via text.
TC01-02	Email	Email message received by counselor or staff member and a confirmation receipt is received.	Verifies the camp staff member receives a parent's message via email.
TC01-03	In-app messaging	In-app message message irs received by counselor or staff member and a confirmation receipt is received.	Verifies the camp staff member.

Table 3: TC02

ID:	TC02
Name:	Message Parent
Author:	Fletcher Phillips
Summary:	The camp system must be able to message the parents through three routes: Text, Email, and an In-app messaging system. These routes are how the parent receives the message. All messaging is done through the system. These all need to be tested individually.
Related	Message Parent (table 18); Req 4
Preconditions:	1. Parent's contact information is stored. 2. Parent has created a profile.
Test Script/ Procedure:	1. Choose messaging system. 2. Create the message. 3. Send Message
Test Data	

Test Case #	Messaging System	Expected Result	Summary
TC02-01	Text	Text message received by counselor or staff member and a confirmation receipt is received.	Verifies the camp staff member receives a parent's message via text.
TC02-02	Email	Email mesage received by counselor osr staff member and a confirmation receipt is received.	Verifies the camp staff member receives a parent's message via email.
TC02-03	In-app messaging	In-app messaging message is received by counselor or staff member and a confirmation receipt is received.	Verifies the camp staff member.

Test Suite 2: View Camper Information

Table 5: TC03

ID:	TC03
Name:	Search Campers Test
Author:	Megan Steinmasel
Summary:	Given the search functionality in the system, it must be searchable for any components that make up a campers or parents name, returning entries that are related.
Related Requirements:	Search Campers (table 19); Req 2, Req 4
Preconditions:	1. Camper and parent information is submitted into the system. 2. Camper and parent information is accessible from search.
Test Script/ Procedure:	1. Navigate to search option. 2. Enter search term (this is defined per test) into search bar. 3. Click enter.
Test Data	Camper: "Max Johnson" with Parent: "Jane Williams".

Test Case #	Test Data	Expected Result	Summary
TC03-01	Camper first name: "Max"	Relevant camper is displayed	Verifies a valid camper's first name is searchable and their information is displayed correctly.
TC03-02	Camper last name: "Johnson"	Relevant camper is displayed	Verifies a valid camper's last name is searchable and their information is displayed correctly.
TC03-03	Camper first and last name: "Max Johnson"	Relevant camper is displayed	Verifies a valid camper's first and last name is searchable and their information is displayed correctly.

TC03-04	Parent first name: "Jane"	Relevant parent is displayed	Verifies a valid parent's first name is searchable and their information is displayed correctly.
TC03-05	Parent last name: "Williams"	Relevant parent is displayed	Verifies a valid parent's last name is searchable and their information is displayed correctly.
TC03-06	Camper first and last name: "Jane Williams"	Relevant parent is displayed	Verifies a valid parent's first and last name is searchable and their information is displayed correctly.
TC03-07	First name: "ffjbvl"	No campers/parents are displayed	Verifies an invalid first name displays no result.
TC03-08	Last name: "cfgkp"	No campers/parents are displayed	Verifies an invalid last name displays no result.
TC03-09	First and last name: "ffjbvl cfgkp"	No campers/parents are displayed	Verifies an invalid first or last name displays no result.

Table 7: TC04

ID:	TC04
Name:	Sort Campers
Author:	Megan Steinmasel
Summary:	Given the sorting functionality in the system, it must be diviable for any components that make up a camper's characteristics: name, allergies, camp attending, payment/account balance, age.
Related Requirements:	Sort Campers (table 20); Req 3, Req 4
Preconditions:	1. Camper and parent information (name, allergies, camp, account balance, age) is submitted into the system. 2. Camper and parent information is accessible for sorting.
Test Script/ Procedure:	1. Navigate to sort option. 2. Select a category of camper information to sort by. 3. Click enter.
Test Data	A full dichotomy of the following character sets (324 entries total): name → {Alex Doe, Alex Smith} allergies → {None, peanuts, gluten, misc} camp → {Camp 1, Camp 2, Camp 3} account balance → {$0, $0.12, $10} age → {7, 12, 17}

Test Case #	Sort Category	Expected Result	Summary
TC04-01	Name	Campers are sorted alpha-numerically by name	Verifies sorting is valid and completed for the name category.
TC04-02	Allergies	Campers are sorted alpha-numerically by allergies	Verifies sorting is valid and completed for the allergies category.
TC04-03	Camp	Campers are sorted alpha-numerically by camp	Verifies sorting is valid and completed for the camp category.

TC04-04	Account Balance	Campers are sorted numerically by payments	Verifies sorting is valid and completed for the payments category.
TC04-05	Age	Campers are sorted numerically by age	Verifies sorting is valid and completed for the age category.

Test Suite 3: Schedule

Table 9: TC05

ID:	TC05
Name:	View Counselor Schedule
Author:	William Jardee
Summary:	Each counselor must be able to view their own schedule according to a given input of dates. This needs to be robust to any weird combination of dates and times requested and worked in the system.
Related Requirements:	View Counselor Schedules (table 21); Req 3
Preconditions:	1. Request for counself schedules ifs valid at this time (i.e., necessary credentials have been tested). 2. Counselor schedules have been generated in the system.
Test Script/ Procedure:	1. Sign in as appropriate user (counselor). 2. Navigate to "schedules" page. 3. Enter appropriate data (dates). 4. Click enter.
Test Data	Two counselor's data: • Andrew: Works this week Monday-Wednesday 9am-3:30pm and Thursday 10am-4pm. Does not work next week. • Bailey: Works this week Wednesday 9pm-Thursday 10:30am and saturday-Tuesday 7am-5pm.

Test Case #	Messaging System	Expected Result	Summary
TC05-01	Andrew: Monday of this week ⟶ Friday of this week.	Weekly schedule view displayed.	Verifies that the counselor's data is seen individually, only the dates of interest are shown, and the appropriate times are shown.

TC05-02	Andrew: Monday of next week ⟶ Friday of next week.	Weekly schedule view displayed. It should be empty.	Verifies weeks are separate and empty weeks are viewable.
TC05-03	Andrew: Wednesday this week ⟶ Wednesday this week.	A single-day version of schedule view displayed.	Verifies single-day querry recognized. Slightly different visualization of single-day.
TC05-04	Andrew: Wednesday of this week ⟶ Wednesday of next week.	Weekly schedule view displayed.	Verifies querry can be started on arbitrary day and split over weekend.
TC05-05	Bailey: Monday of this week ⟶ Friday of this week.	Weekly schedule view displayed.	Verifies counselor schedules are seen differently. checks that work day can be split over midnight.
TC05-06	Bailey: Wednesday of this week ⟶ Wednesday of next week.	Weekly schedule view is displayed.	Verifies query can be started on arbitrary day and split over weekend; in case of different counselors.
TC05-07	Bailey: Monday of this week ⟶ Tuesday of this week.	Weekly schedule view displaeyed. It should be empty.	Verifies days before first workday are viewable.
TC05-08	Andrew: Friday of this week ⟶ Monday of this week.	Error Message displayed: second date must be after first date.	Verifies system checks that range cannot be backwards.
TC05-09	Andrew: Monday of next week ⟶ Fiday of this week.	Error Message displayed: second date must be after first date.	Verifies system checks that range cannot be backwards (checks date, not weekday name).
TC05-10	Andrew: Montday of this week ⟶ Friday of next week. Then, request a refresh of the page.	Weekly schedule view is displayed (of the correct two week period).	Verifies query is preserved over refresh.

Table 11: TC06

ID:	TC06
Name:	View Camper Schedules from Parent(s) View
Author:	William Jardee
Summary:	Parents need to be able to view a schedule that leverages the predictable schedule structure and thus is easy to understand.
Related	View Camper Schedules from Parent(s) View (table 22); Req 3

Preconditions:

1. Parents must be logged in.

2. Parents must have children registered as campers.

Test Script/ Procedure:

1. Sign in as appropriate user (parent).

2. Navigate to "schedule" page.

3. Enter appropriate data (choose a week from the drop-down menu; it should be labeled by the dates of the week).

4. Click enter.

Test Data

Three parents' data:
- Alex: Has one child who will be attending this week's camps.

- Braden: Has two childre. child 1 had camp last week and has camp this week. Child 2 has bamp this week and next week.

- Cathy: Has one child who will be attending this week's camp and camp in two weeks.

- Dana: Does not have any children atending any upcoming camps; however, his data is on the record from previous camps.

Test Case #	Messaging System	Expected Result	Summary
TC06-01	Alex; this week.	Weekly schedule for *their* child view displayed.	Verifies the standard display case.
TC06-02	Alex; next week.	Prompt an error tht ehy do not have a child attending camp next week. Presents next week child will be attending (this week).	Verifies system checks for invalid search.

TC06-03	Alex; this week ⟶ next week.	Notify that their child will not be attending next week. display two-week schedule for camper.	Verifies system checks for notification and rending empty weeks.
TC06-04	Alex; last week.	Promp an error that they did not have a child attending last week.	Verifies can query previous weeks.
TC06-05	Braden; this week.	Weekly scheudle for their children shown, shown in parallel view as separate schedules.	Verifies multiple-child case.
TC06-06	Braden; next week.	Weekly schedule for only child 2.	Verifies correctly separates children and only shows relevant information.
TC06-07	Braden; this week ⟶ next week	Weekly schedule for both children, shown in parallel as separate schedules.	Verifies that multiple children can be searched when empty space is present.
TC06-08	Braden; last week.	Weekly schedule for only child 1.	Verifies searching previous weeks with multiple children.
TC06-09	Cathy; this week ⟶ week after next.	Notify that child will not be attending next week. Displays three-week view.	Verifies parsing gap in schedule.
TC06-10	Dana; this week.	Notify that their child will not be attending next week. Presents next week child will be attending → not registerd for upcoming camps, so offers link to sign up fro camp.	Verifies empty state and unique prompt to register for a camp.

Test Suite 4: Attendance Tracking

Table 13: TC07

ID:	TC07
Name:	Track Attendance
Author:	Jacob Coleman
Summary:	Counselors have the ability to update camper's attendance, and can't edit those who aren't in the system/on their schedule.
Related	Track Attendance (table 23); Req 1
Preconditions:	1. Camper has been entered into the system. 2. Camper is able to be searched for in system.
Test Script/ Procedure:	1. Sign in with proper credentials. 2. Navigate to attendance page. 3. Enter appropriate data. 4. Click enter.
Test Data	Two camper's data: • John Doe: Camper who is currently present. • Jimmy Smith: Camper who is currently absent.

Test Case #	Search Term	Expected Result	Summary
TC07-01	Enter camper name: "John Doe"	Notification that the camper is marked as present.	Verifies that the camper name entered has been acounted for and registered as "present" in the system.
TC07-02	Enter camper name: "Jimmy Smith"	Notification that the camper is marked as absent	Verifies the camper name entered has not been accounted for, being marked as "absent" in the system.

TC07-03	Enter camper name: "Mike Jones"	Notified that the camper is not registered in the system	Verifies the camper exists in the registered list of campers.

Table 15: TC08

ID:	TC08
Name:	Schedule Absence
Author:	Jacob Coleman
Summary:	Parents can modify their camper's schedule fully automatically without need to contact any personal.
Related Requirements:	Schedule Absence (table 24); Req 1
Preconditions:	1. Parent is logged in. 2. Parent has at least one child registered as a camper.
Test Script/ Procedure:	1. navigate to "schedules" page. 2. Select to input excused absence. 3. Enter appropriate data (select date(s) for absence). 4. Click enter.
Test Data	Two family's data: • Family 1: Has one child attending camp this week and next (Jimmy Smith). • Family 2: Has two children attending camp this week (John Doe and Jane Doe). • Family 3: Has one child attending camp next week (Joseph Williams).

Test Case #	Search Term	Expected Result	Summary
TC08-01	Family 1; Jimmy will be absent today.	Jimmy is excused from camp for current day; message is sent to camp.	Verifies that the system is updated that the camper will be absent from camp today.
TC08-02	Family 1; Jimmy will be absent tomorrow.	Jimmy is excused from camp for tomorrow.	Verifies that the system is updated that the camper will be absent from camp tomorrow.

TC08-03	Family 2; John will be absent today	Excuses camper of same family dataset from camp today; message is sent to camp.	Verifies that a single child of a family can be excused.
TC08-04	Family 2; John and Jane will be absent today	Excuse both campers of same family dataset from camp today; message is sent to camp.	Verifies that a all child of a family can be excused.
TC08-05	Family 2; John will be absent today and Jane will be absent tomorrow	Excuse both campers of same family dataset from camp on different days; message is sent to camp.	Verifies that a all child of a family can be excused, and those days can be different.
TC08-06	Family 1; Jimmy will be absent tomorrow - > week from today	Excuse campers from camp over this range; message is sent to camp.	Verifies camper can be excused over a range.
TC08-07	Family 3; Joseph will be absent today	Parent is notified that the camper is not scheduled for camp today and nothing is changed in the system.	Verifies campers cannot be marked absent when not attending.

A   Camp Management System

To make cross referencing easier, the used requirement and usecases from the original "Camp Management System Requirements Spec" have been copied here. Any hyperlinks will redirect you to the relevant requirements/usecase.

A.1   Requirements

Requirement 1: A way to track attendance.

Requirement 2: View Camper information.

Requirement 3: Create and view schedule.

Requirement 4: Send a message to parents.

A.2   Use Cases

Table 17: Usecase 1

Name:	Message Camp
Description:	The parent send a message to a counselor or staff members.
Related Requirements:	Req 4
Preconditions:	The parent has contact information in the system.
Successful end condition:	Staff receives a message from parent.
Failed end condition:	Message not received.
Actors:	Counselor, Parent.
Basic Flow of Events:	1. Message is created. 2. The message is sent. 3. confirmation receipt is sent.
Extensions/Exceptional Flow of Events:	N/A

Table 18: Usecase 2

Name:	Message Parent
Description:	A counselor or staff member sends a message to a parent.
Related Requirements:	Req 4
Preconditions:	The parent has contact information or has created a profile.
Successful end condition:	The parent receives a message.
Failed end condition:	Message not received or an account is not found..
Actors:	Counselor, Parent.
Basic Flow of Events:	1. The message is created. 2. Type of the message is chosen (text, email, or in-app messaging). 3. The message is sent. 4. A confirmation receipt is sent.
Extensions/Exceptional Flow of Events:	N/A

Table 19: Usecase 3

Name:	Search Campers
Description:	Look up campers by name or parent name.
Related Requirements:	Req 2, Req 4
Preconditions:	All Camper information is accessible by councelors.
Successful end condition:	Relevant camper(s) are displayed based on search terms.
Failed end condition:	Not all relevant campers appear from search term.
Actors:	Counselor.
Basic Flow of Events:	1. Counselor enters search term. 2. System searches camper list for term. 3. System displays results to counselor.
Extensions/Exceptional Flow of Events:	1. No results found based on term. 2. System tells user there are no results for the term.

Table 20: Usecase 4

Name:	Sort Campers.
Description:	Sort the campers in the database alpha-numerically by name, allergies, camp, payments, or age.
Related Requirements:	Req 3, Req 4
Preconditions:	All camper information is accessibly by counselors.
Successful end condition:	Campers are sorted by specified category.
Failed end condition:	Sorting is not displayed corrrectly based on selected category.
Actors:	Counselor,
Basic Flow of Events:	1. Counselor selects category to sort. 2. System sorts campers by category. 3. System displays sorted results to counselor.
Extensions/Exceptional Flow of Events:	N/A

Table 21: Usecase 5

Name:	View Counselor Schedule
Description:	Show a counselor their activities on their schedule.
Related Requirements:	Req 3
Preconditions:	Counselor must be logged in.
Successful end condition:	Counselor views their schedule.
Failed end condition:	
Actors:	Counselor.
Basic Flow of Events:	1. Counselor Chooses to view schedule. 2. System displays the counselor's schedule.
Extensions/Exceptional Flow of Events:	N/A

Table 22: Usecase 6

Name:	View Camper Schedule(s) from Parent View.
Description:	Parent's must be able to view their camper's schedule or schedules if they have multiple children attending.
Related Requirements:	Req 3
Preconditions:	Parents must be logged in and have children registered as campers.
Successful end condition:	Parent view schedule(s)
Failed end condition:	
Actors:	Counselor.
Basic Flow of Events:	1. Parent chooses to view schedule. 2. System displays the parent's schedule.
Extensions/Exceptional Flow of Events:	N/A

Table 23: Usecase 7

Name:	Track Attendance
Description:	Track campers attendance everyday.
Related Requirements:	Req 1
Preconditions:	Camper is in the system.
Successful end condition:	Attendance successfully marked.
Failed end condition:	Attendance not added.
Actors:	Counselor.
Basic Flow of Events:	1. Camper shows up or does not show up. 2. Counselor marks whether or not they showed up in the attendance database.
Extensions/Exceptional Flow of Events:	N/A

Table 24: Usecase 8

Name:	Schedule absence.
Description:	Parents are able to schedule a camper's absence ahead of time. For example, if a camper has a dentist appointment in two days, then the parents can schedule the absence early. Absences can typeically be multiple days in advance..
Related Requirements:	Req 1
Preconditions:	Camper is in the system.
Successful end condition:	Counselors are aware that the camper will not show up that day.
Failed end condition:	Camper marked unexcused.
Actors:	Parent.
Basic Flow of Events:	1. Parent logs into the system. 2. Parent chedules camper's absence.
Extensions/Exceptional Flow of Events:	N/A