Testing this app is mostly done manually, and entails checking all the below conditions hold (this can all be done through direct user interaction on the web application):

**Direct User Testing**

Entire site:

1. Check to see that, when logged out of CAS, CAS login/logout page is displayed.
2. When logged in:
   1. Every player name is a clickable link that brings up player profile
   2. Every set of college initials is a clickable link that brings up Residential College profile for that college
   3. Every college name is a clickable link that brings up Residential College profile
   4. Every college crest is a clickable link that brings up Residential College profile
   5. Every sport icon on a page that is NOT a College profile, is a clickable link to get to corresponding sport page
   6. Each page should display navigation bar along top of page with options: “Home, Newsfeed, Leaderboards, Colleges, Sports, (User Name)”
      1. The “Home” label should link to “/home”
      2. The “Newsfeed” label should link to “/newsfeed”
      3. The “Leaderboard” label should link to “/leaderboard”
      4. The “Colleges” label should, when clicked, produce a dropdown list of twelve colleges: Berkeley, Branford, Calhoun, Davenport, Ezra Stiles, Jonathan Edwards, Morse, Pierson, Saybrook, Silliman, Timothy Dwight, and Trumbull
         1. For each College testcollege displayed on said dropdown list, the label for testcollege should be a clickable link to “/college/testcollege”
         2. If the test college is composed of two words (e.g. “Timothy Dwight”), the label for “test college” should be a clickable link to /college/test-college”
         3. Each college label’s background should turn from white to gray when mouse hovers over it
      5. The “Sports” label should link to “/sport”
      6. The (User Name) label should:
         1. display the name of the user
         2. When clicked, produce a dropdown list of three options: “My Profile,” “My College,” and “Logout”
            1. The “My Profile” label, when clicked, should link to “/profile”
            2. The “My College” label, when clicked, should link to the page for the user’s college, e.g. if the user is a student in Saybrook College, the label should link to “/college/saybrook”, and if the user is in Jonathan Edwards College, the label should link to “college/jonathan-edwards”
            3. Each option label’s background should turn from white to gray when mouse hovers over it
   7. If user has administrative capability, navigation bar should also display “Admin” on the very right
      1. This label should be a clickable link which redirects to the page “/admin”

Home Page

1. When logged into CAS, should immediately be redirected to home page
2. Home page should display navigation bar with above labels
3. Homepage should display four sections:
   1. Upcoming Games
      1. Below the section header should be a list of ~5 games
      2. The cell for each game should contain the following, from left to right:
         1. Sport icon for the sport of the game being played
         2. Date and time (in the format “MM/DD @ H:MM AM/PM”)
         3. List of competing colleges in form (crest-of-college-1) (initials-of-college-1) vs. (crest-of-college-2) (initials-of-college-2)
      3. Each cell should turn from white to gray when mouse hovers over it.
   2. College Leaderboard
      1. Below the section header should be a list of 6 colleges
      2. The cell for each college should contain the following, from left to right:
         1. Ranking of college in overall leaderboard
         2. College crest
         3. Name of college
         4. Total number of intramural points
            1. The point number for every college should be greater than or equal to that for all colleges below it in said list
      3. Each cell should turn from white to gray when mouse hovers over it.
   3. Player Leaderboard
      1. Below the section header should be a list of 6 students
      2. The cell for each student should contain the following, from left to right:
         1. Ranking of student in overall leaderboard
         2. College crest for college said student resides in
         3. Name of student
         4. Student’s point total
            1. The point total for every student should be greater than or equal to that for all students below him/her in said list
      3. Each cell should turn from white to gray when mouse hovers over it.
   4. Fall
      1. Below section header should be images representing sports, all blue and arranged in a grid form. These sports represent sports played during that season of intramurals.
   5. Winter
      1. Below section header should be images representing sports, all blue and arranged in a grid form. These sports represent sports played during that season of intramurals.
   6. Spring
      1. Below section header should be images representing sports, all blue and arranged in a grid form. These sports represent sports played during that season of intramurals.

Newsfeed

1. Newsfeed should display four large sections:
   1. Recent Games
      1. Below the section header should be a list of ~8 games
      2. The cell for each game should contain the following, from left to right:
         1. Sport icon for the sport of the game being played
         2. Date (in the format “MM/DD””)
            1. No dates should be beyond the current date
         3. List of competing colleges in form (crest-of-college-1) (initials-of-college-1) vs. (crest-of-college-2) (initials-of-college-2)
         4. Score, in the form (score-of-college-1) - (score-of-college-2)
      3. Each cell should turn from white to gray when mouse hovers over it.
   2. Overall Leaderboard
      1. Below the section header should be a list of 8 colleges
      2. The cell for each college should contain the following, from left to right:
         1. Ranking of college in overall leaderboard
         2. College crest
         3. Name of college
         4. Total number of intramural points
            1. The point number for every college should be greater than or equal to that for all colleges below it in said list
      3. Each cell should turn from white to gray when mouse hovers over it.
   3. Upcoming Games
      1. Below the section header should be a list of ~5 games
      2. The cell for each game should contain the following, from left to right:
         1. Sport icon for the sport of the game being played
         2. Date and time (in the format “MM/DD @ HH:MM AM/PM”)
            1. No dates should be before the current date
         3. List of competing colleges in form (crest-of-college-1) (initials-of-college-1) vs. (crest-of-college-2) (initials-of-college-2)
         4. If user is in one of the colleges competing in game, there should be a blue ‘RSVP’ button or a green ‘Going’ button, indicating if user can still RSVP for game or already has, respectively
            1. User can toggle between two displayed buttons by clicking button
            2. When you navigate back to your user profile, you should see that your profile’s Upcoming Games list now has the new game you just RSVPed for (or game will disappear from your Upcoming Games if you have deregistered)

Leaderboards

1. Leaderboard page should have two tabs, Players and Colleges, each bringing up a separate Leaderboard
   1. Players
      1. Below the section header should be a list of 12 students
      2. The cell for each student should contain the following, from left to right:
         1. Ranking of student in overall leaderboard
         2. College crest for college said student resides in
         3. Name of student
         4. Student’s point total
            1. The point total for every student should be greater than or equal to that for all students below him/her in said list
      3. Each cell should turn from white to gray when mouse hovers over it.
   2. Colleges
      1. Below the section header should be a list of 12 colleges
      2. The cell for each college should contain the following, from left to right:
         1. Ranking of college in overall leaderboard
         2. College crest
         3. Name of college
         4. Total number of intramural points
            1. The point number for every college should be greater than or equal to that for all colleges below it in said list
      3. The highest-scoring college should have a background of a large picture of said college
         1. The next highest-scoring college should have a smaller picture of said college as its label’s background
         2. The college after that should have a smaller picture still
         3. All remaining colleges have a white background that turns to gray when you hover your mouse over it

Colleges

1. For a given college page, a picture of that college, over which is laid the name of that college and “X Tyng Points”, where X is that college’s current intramural score, should be displayed
2. Below cover photo are three sections, Fall, Winter, and Spring, under each of which are blue sports icons representing the games played during those seasons respectively
3. Before any blue icons are clicked, the following should appear below the Spring Icons:
   1. Upcoming Games
      1. Under the section heading is a list of upcoming games
      2. The cell for each game should contain the following, from left to right:
         1. Sport icon for the sport of the game being played
         2. Date and time (in the format “MM/DD @ HH:MM AM/PM”)
            1. No dates should be before the current date
         3. List of competing colleges in form (crest-of-college-1) (initials-of-college-1) vs. (crest-of-college-2) (initials-of-college-2)
            1. At least one of the colleges should be the college whose profile is being viewed
         4. If user is in one of the colleges competing in game, there should be a blue ‘RSVP’ button or a green ‘Going’ button, indicating if user can still RSVP for game or already has, respectively
            1. User can toggle between two displayed buttons by clicking button
            2. When you navigate back to your user profile, you should see that your profile’s Upcoming Games list now has the new game you just RSVPed for (or game will disappear from your Upcoming Games if you have deregistered)
   2. Past Games
      1. Below the section header should be a list of ~10 games
      2. The cell for each game should contain the following, from left to right:
         1. Sport icon for the sport of the game being played
         2. Date (in the format “MM/DD””)
            1. No dates should be beyond the current date
         3. List of competing colleges in form (crest-of-college-1) (initials-of-college-1) vs. (crest-of-college-2) (initials-of-college-2)
            1. At least one of the colleges should be the college whose profile is being viewed
         4. Score, in the form (score-of-college-1) - (score-of-college-2)
         5. Outcome, where if college (whose profile is being viewed) has higher score than other college, W (for “win”) is displayed; if lower, L (for “lose”); if equal, T (for “tie”)
      3. Each cell should turn from white to gray when mouse hovers over it.
4. After any blue icons are clicked, the following should appear below the Spring Icons:
   1. Same as before icons are clicked, but only games corresponding to selected sport should be included (so all icons are uniform)

5. Sports

* Should show every sport available categorized by season (Fall, WInter, Spring) accurately
* Clicking on icon should direct you to sport page
  + Contains option to join college team for that sport
    - Red “Join” button displayed if not joined
    - Green “Joined” button displayed otherwise
    - Button can toggle
  + Contains leaderboard
    - Below the section header should be a list of 12 colleges
    - The cell for each college should contain the following, from left to right:
      * Ranking of college in sport-specific leaderboard
      * College crest
      * Name of college
      * Total number of intramural points for that sport
        + The point number for every college should be greater than or equal to that for all colleges below it in said list
      * Win-loss-tie record of that college, displayed in W-L-T form
    - Each cell should turn from white to gray when mouse hovers over it.
  + Contains schedule for that sport
    - Upcoming Games
      * Under the section heading is a list of upcoming games
      * The cell for each game should contain the following, from left to right:
        + Date and time (in the format “MM/DD @ HH:MM AM/PM”)

No dates should be before the current date

* + - * + List of competing colleges in form (crest-of-college-1) (initials-of-college-1) vs. (crest-of-college-2) (initials-of-college-2)
        + If user is in one of the colleges competing in game, there should be a blue ‘RSVP’ button or a green ‘Going’ button, indicating if user can still RSVP for game or already has, respectively

User can toggle between two displayed buttons by clicking button

When you navigate back to your user profile, you should see that your profile’s Upcoming Games list now has the new game you just RSVPed for (or game will disappear from your Upcoming Games if you have deregistered)

* + - Past Games
      * Below the section header should be a list of ~10 games
      * The cell for each game should contain the following, from left to right:
        + Date (in the format “MM/DD””)

No dates should be beyond the current date

* + - * + List of competing colleges in form (crest-of-college-1) (initials-of-college-1) vs. (crest-of-college-2) (initials-of-college-2)
        + Score, in the form (score-of-college-1) - (score-of-college-2)
      * Each cell should turn from white to gray when mouse hovers over it.

6. User Profile

* My Profile
  + should contain your name, your residential college picture, the sports you have registered for, and the upcoming games you have RSVPed for and attended in the past, listed as described above
    - Games attending in future: each game displays sport icon, date, colleges playing in game, and option to RSVP if student is in participating college
    - Games attended: each game displays sport icon, date, colleges played in game, score, and outcome for college student resides in (as described above)
  + Contains button to join a team for a sport, which opens new window showing green icons (for sports joined) and blue icons (for sports not yet joined), users can toggle between green and blue for all icons
* My College links to College page as described above
* Logout option logs user out of CAS and returns to CAS logout page
* Profiles of other students
  + these can be navigated to by clicking on any student’s name (which are links throughout site on features such as player leaderboard)
  + other student profiles should look almost identical to your profile
  + profile should only show games the student has RSVPed for (this way, you can easily RSVP for games that your friends will be participating in)

7. Admin

* Make sure only those designated with the ability to see this tab can see it
  + Also, ensure users who navigate to /admin URL, but are not allowed to access admin page, still can not see it
* Score Input
  + should let you type in any numerical score up to 3 digits for each team and save when you have assigned score
    - check that winning college and players on winning college team all have increased in points after game score is saved
    - check only past games can be scored
  + check to see it lets you change score if typed incorrectly
  + only removes game from list when score is added
* Upcoming Game Input
  + should allow auto-complete of sport and each college participating in game
  + should show browsing of calendar to easily choose date of game
  + after game is created, make sure it shows up in Upcoming Games for Newsfeed
  + check app allows editing and deletion of created games
* Player Check-in
  + check to see that all players who have registered for a game appear on the player sheet for the game
  + check that selecting “here” or “not here” for a player removes that player from the check-in list
  + check that for a game that a player appears in, that game is listed on Upcoming Games on that person’s personal profile