

The Kingston YMCA Data Manager. Version 0.5

Preface.

The primary objectives of the system are to

1. Facilitate compliance with Jamaica's Data Protection Act (2020)
2. Allow easy access to approved persons on client information.
3. Produce participant lists for events
4. Generate invoices , and facilitate communication of invoices to clients.

Other longer term objectives include generating activity historical data to allow strategic decision making, supporting scheduling of resources such as rooms, and provide data to support the marketing of rooms and activities.

Subject to regulatory issues and data security threat levels, the data may eventually support online data management by clients.

In order to accomplish those objectives, the system maintains the following data items:

1. Client – A client of the Kingston YMCA
2. Activity – An activity offered by the Kingston YMCA
3. Room – A physical location managed by the Kingston YMCA
4. Recurring Event – An event which will periodically repeat, associated with an Activity and a Room
5. One Time Event – A single event at a set date, with a Client, an Activity, a Room, and has a cost
6. Package – A group of single or recurring events within an Activity, with a duration and has a cost – (A client registers for an activity by selecting a package)
7. Invoice – A record of expected payment by a client – Invoices will be generated for one time events and for registered packages – Note Receipting will be done outside the system, but a receipt can be associated with an invoice.
8. User – a user of the system, associated with a role that has specific permissions.

The current implementation is to be considered a minimal working example, and it is understood adjustments may be wanted or needed.

Status of requests and adjustments will be tracked using a shared google sheet at https://docs.google.com/spreadsheets/d/1znXWDl198x5KW1uSJAzYW966AMg2vJJH/edit?usp=drive_link&oid=104049872048977887546&rtpof=true&sd=true.

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Accessing the system and logging in.

After going to the application URL, select the login option, and then enter the user name and password that has been supplied into the login screen, shown in Figure 1.

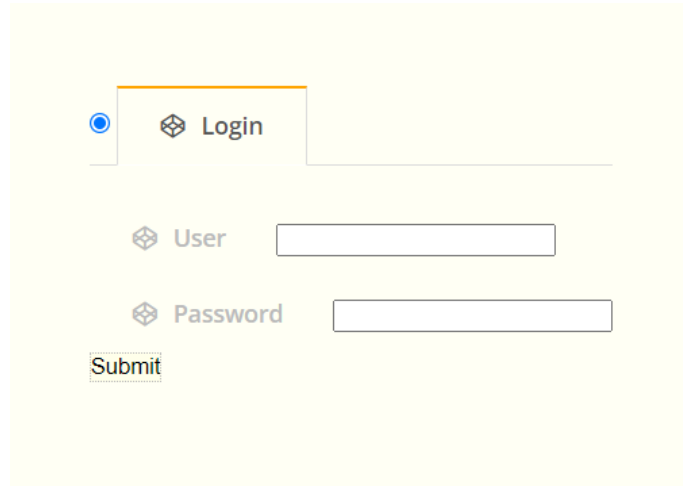
The image shows a login interface on a light yellow background. At the top left, there is a radio button selected next to a 'Login' button with a gear icon. Below this, there are two input fields: one labeled 'User' and one labeled 'Password', both with gear icons to their left. At the bottom left of the form area, there is a 'Submit' button.

Figure 1. The login screen.

If the entered user name and password coincide with the value in the system, data will be presented based on the role assigned to the user. Otherwise, the message “Incorrect Username/Password” will be displayed.

Role Permissions

	Reader	Editor	Moderator	Admin
ViewClients	√	√	√	√
ViewActivities		√	√	√
ViewEvents		√	√	√
ViewPackages		√	√	√
ViewRooms		√	√	√
ViewInvoices		√	√	√
ViewUsers		√	√	√
EditClients		√	√	√
EditActivities			√	√
EditEvents			√	√
EditPackages			√	√
EditRooms			√	√
ManageInvoices			√	√
EditUsers				√

Table 1. Roles and Permissions

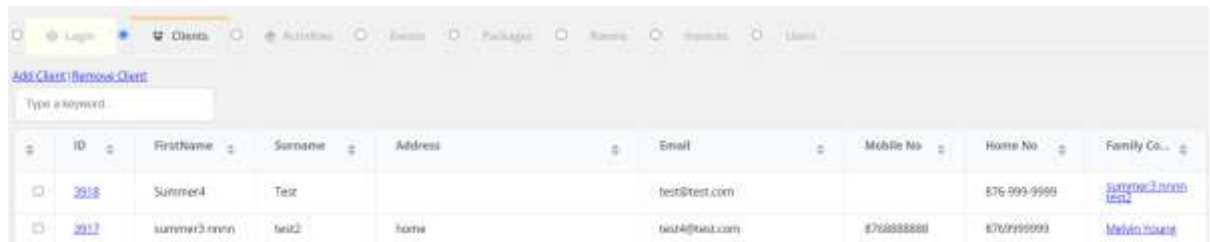
Managing Clients

A client is a person who engages the services of the Kingston YMCA. Basic information stored on each client, modeled from the paper forms, include the first name, middlename, surname, date of birth, address, next of kin, email address, two phone numbers, a gender, and whether there are medical issues on record or restrictions. The interface allows management of clients using a client listing, as well as a detailed view of each client, that allows approved persons to edit.

The Client listing

The client listing allows a user to view clients. Users with permission can add a client by clicking the “Add Client” link. To remove a client, select the checkbox beside the id for the client to be removed, then click the “remove client” option.

The box above the listing allows a user to filter the client list.



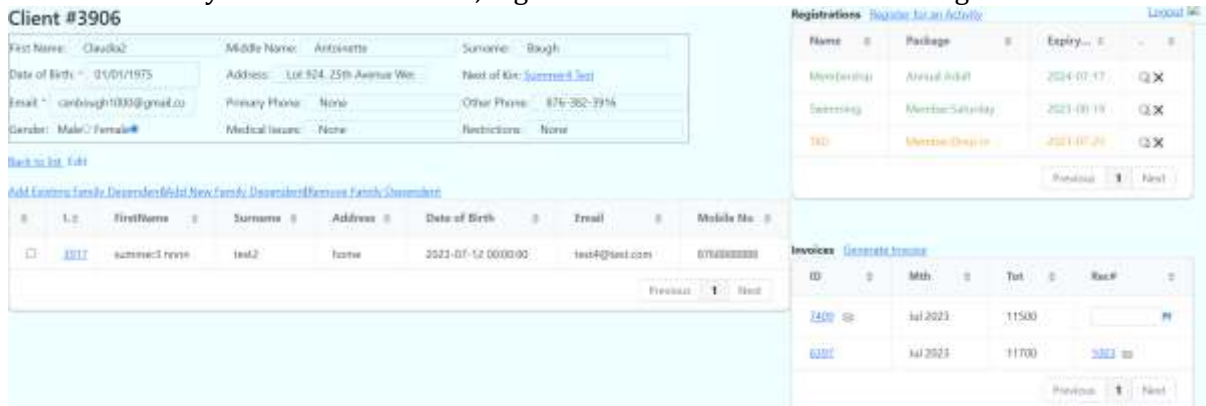
The screenshot shows a web application interface for managing clients. At the top, there is a navigation menu with items like 'Login', 'Clients', 'Activities', 'Events', 'Packages', 'Rates', 'Members', and 'Users'. Below the menu is a search bar with the text 'Add Client | Remove Client' and a placeholder 'Type a keyword'. The main content is a table with columns: ID, FirstName, Surname, Address, Email, Mobile No., Home No., and Family Co... The table contains two rows of data:

ID	FirstName	Surname	Address	Email	Mobile No.	Home No.	Family Co...
<input type="checkbox"/> 3918	Summer4	Test		test@test.com		876 999 9999	summer3@mnn-test2
<input type="checkbox"/> 3917	summer3@mnn	test2	home	test4@test.com	8768888888	8767777777	Mavin Young

Figure 2. The client Listing

Detailed Client information

Detailed client information stored in the system is modeled from the paper forms that have been used, as shown in Figure 3. Data associations in the system also allow information on associated family contact information, registrations and invoices to be managed.



The screenshot shows the detailed view for Client #3906. The main form contains the following information:

Client #3906

First Name: Claudia2 Middle Name: Antonette Surname: Bough
Date of Birth: 01/01/1975 Address: Lot 524, 25th Avenue West Next of Kin: [Summer4 Test](#)
Email: climbough1000@gmail.co Primary Phone: None Other Phone: 876-362-2914
Gender: Male Female Medical Issues: None Restrictions: None

Below the form is a table for family contacts:

ID	First Name	Surname	Address	Date of Birth	Email	Mobile No.
<input type="checkbox"/> 3911	summer3@mnn	test2	home	2022-07-12 00:00:00	test4@test.com	8768888888

On the right side, there are two sections: 'Registrations' and 'Invoices'. The 'Registrations' section shows a table with columns: Name, Package, Expiry, and a checkbox. It contains three rows of data:

Name	Package	Expiry	
Monthly	Annual Adult	2024-07-17	<input type="checkbox"/>
Summering	Member Saturday	2023-08-19	<input type="checkbox"/>
TD	Member One-on-one	2023-07-26	<input type="checkbox"/>

The 'Invoices' section shows a table with columns: ID, Mth, Tot, and Rec#: It contains two rows of data:

ID	Mth	Tot	Rec#
2400	Jul 2023	11500	#
6200	Jul 2023	11700	3023 20

Figure 3. Client Detail Screen

A user with permission to edit the data will see the Edit link. On clicking it, data items become modifiable. To change the “next of kin”, click the “Next of kin” link, and locate the parent to be associated from the list of clients that pop up. When all the data on the screen is as expected, click the update link. (Note in this context, the term “Next of Kin” refers to the role of “head of family”).

Setting Family Dependent Information

Users with permission are able to add or remove family dependents. When adding a family dependent, the options are to add a client that already exists in the system, or to add a new client. On selecting the option “Add Existing Family Dependent”, a list of clients will pop up. The child to be linked can then be selected. On selecting the option “Add New Family Dependent”, a new client will be created, with the parent set to the client that was previously selected.

Registering for an activity

After clicking the “Register for an Activity” link, a list of activities for which the client is currently not registered, appears, as shown in Figure 4. Selecting an option will then present a filtered list of packages, as shown in figure 5.

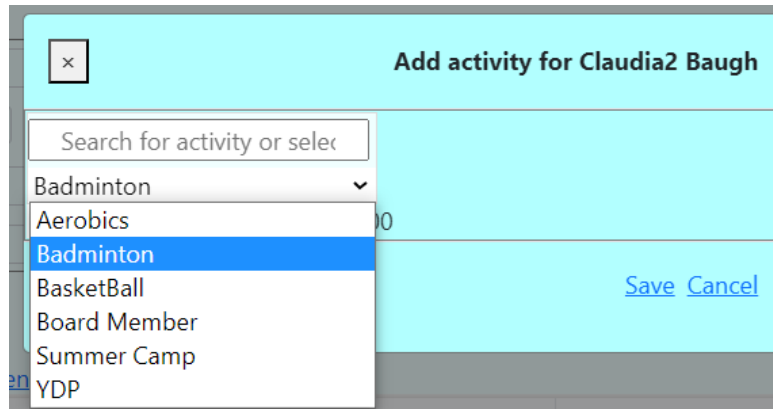


Figure 4. List of activities in which client is not registered..

The filtered list of packages for each activity is filtered by membership status, age and activity. That is, if the client is an adult member, (as in the test example presented here) packages that apply to adult members will be presented in the list. On selecting a package from the list, the price of the package will appear beside it.

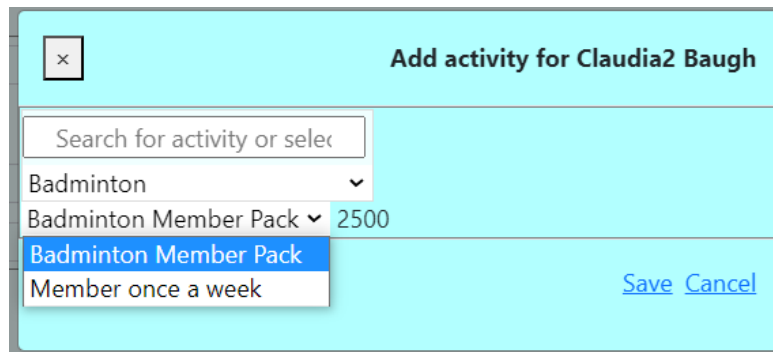


Figure 5. Filtered list of packages for an activity

When the save button is clicked, a new entry will be added to the list of registrations with the activity name, package name and expiry date, as shown in figure 3. If a user wants to be dissociated from an activity, the user clicks the x in the list of registrations. If a user wants

to renew a registration, the renew(circular) icon is clicked. On clicking the renew icon the registration window appears with the activity of interest selected. Figure 6 gives an example of the screen that is shown on clicking the Renew button beside the activity “TKD”



Figure 6. Renewing an activity

Managing Invoices

Invoices are generated for activities, as well as rental of rooms for one time events. To generate any outstanding invoice for a client, click the “Generate Invoice” link from the client screen. The invoice will then appear as a row in the list of invoices, as shown in Figure 7.

ID	Mth	Tot	Rec#
7409	Jul 2023	11500	<input type="text"/>
6397	Jul 2023	11700	1003

Figure 7. Invoice listing for a client.

Each row will show an ID number, the month and year of the service date, the invoice total, and, either the space to enter and save a receipt number, or the receipt number. On clicking the invoice number, the invoice will pop up, with a format as shown in figure 8.

Invoice#6397 for Client #Claudia2 Baugh (Jul 2023)

Category	Activity	Package	Expiry	Price
Activity	Swimming	Member:Monthly-Adult	2022-11-05	3000
Activity	Membership	monthly	2023-07-20	3000
Activity	TKD	Member:Saturday Only-Adult	2023-07-20	2500
Rental	Court4	badminton practice	2023-07-17	4800

Invoice total: 11700

Figure 8. Sample invoice

Note the invoice contains entries for “Activity” and for “Rental”

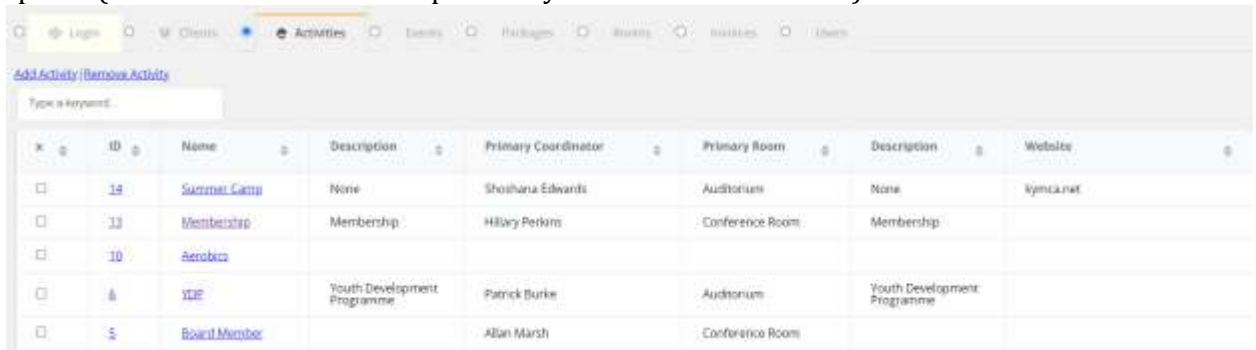
The option to email and invoice or receipt (shown in Figure 7) will be presented subject to the following conditions: Each invoice or receipt is to be emailed only once, and once a receipt number is entered an invoice is no longer sent.

Managing Activities

An activity is used to hold information on a service associated with the Kingston YMCA. Basic information stored for each activity includes its name, a description, a primary coordinator, a primary room, and a website. The interface allows management of activities using an activity listing, as well as a detailed view of each activity, that allows approved persons to edit. Note that, while any activity can be added or removed, it is important to be careful while managing the “Membership” activity. Several features within the system test if a client has an active membership in order to determine applicable payment rates or service packages.

The Activity listing

The activity listing allows a user to view activities. Users with permission can add an activity by clicking the “Add Activity” link, shown in Figure 9. To remove an activity, select the checkbox beside the id for the activity to be removed, then click the “remove activity” option. (Note that the “Membership” activity should not be removed)



<input type="checkbox"/>	ID	Name	Description	Primary Coordinator	Primary Room	Description	Website
<input type="checkbox"/>	19	Summer Camp	None	Shoshana Edwards	Auditorium	None	ymcainet
<input type="checkbox"/>	13	Membership	Membership	Hilary Perkins	Conference Room	Membership	
<input type="checkbox"/>	10	Aerobics					
<input type="checkbox"/>	6	YEP	Youth Development Programme	Patrick Burke	Auditorium	Youth Development Programme	
<input type="checkbox"/>	5	Board Member		Alan Marsh	Conference Room		

Figure 9. The Activity Listing

The box above the listing allows a user to filter the activity list.

Detailed Activity information

Detailed activity information is managed on the screen shown in Figure 10. A list of registered clients, packages, recurring events and one time events are also shown. If a user has permissions, clicking the “Edit” button will allow the information to be modified, and the modified information is saved when “Update” is clicked.

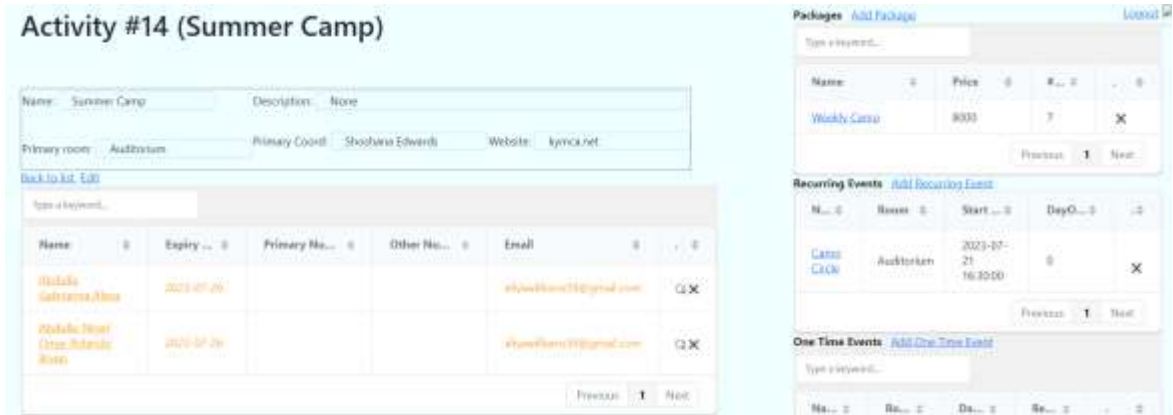


Figure 10. Manage Events

Managing events

An event is a record that something is to happen in an activity at a location. The system manages two types of events, namely, 1:recurring events, and 2:OneTime Events. Recurring Events, as well as one time events, have their own listing and detail screens. The listing screens are shown in Figure 11. Note however, the ability to add or remove events from each listing is dependent on permissions to edit events.

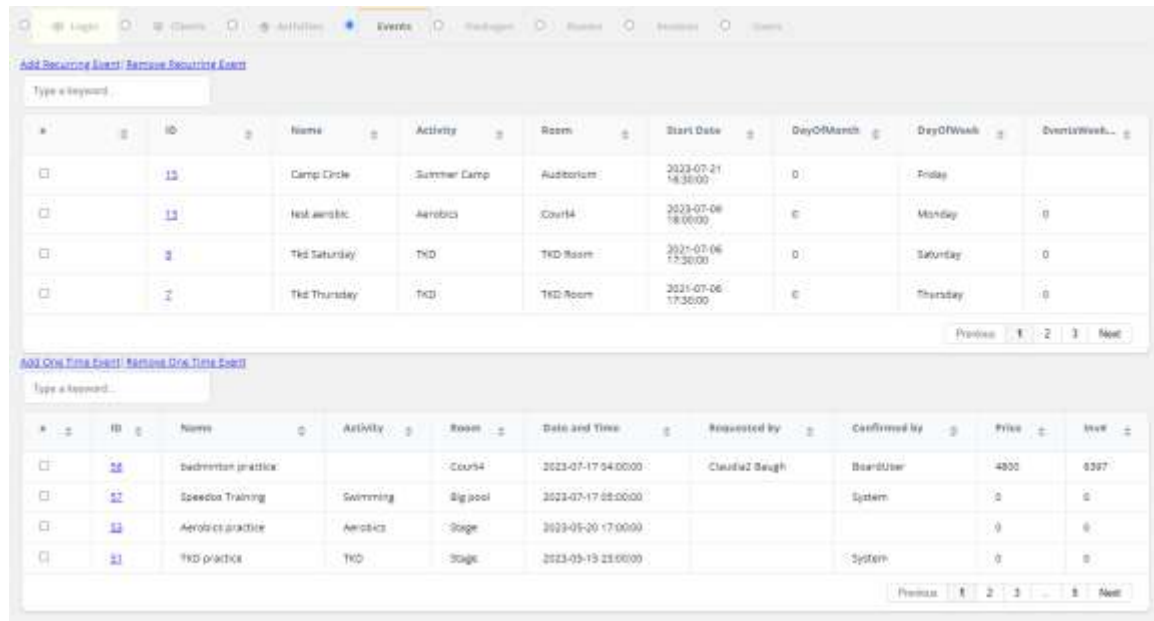


Figure 11: Event Listings

Recurring Event Detail

The recurring event detail screen allows the system to store information on the event name, activity, start date, duration and room. It is also possible to specify the day of the month (eg. The 2nd of each month), the day of week (eg. On Tuesdays) and the week of the Month. (Eg. The second week each month). Combinations of Day of Week and Week of month are also valid, eg. 2nd Tuesday each month. A user with permission is able to click the Edit link. On doing so the approved user will be able to enter the name of the event, select activity, start date, duration and room, then enter the schedule information.

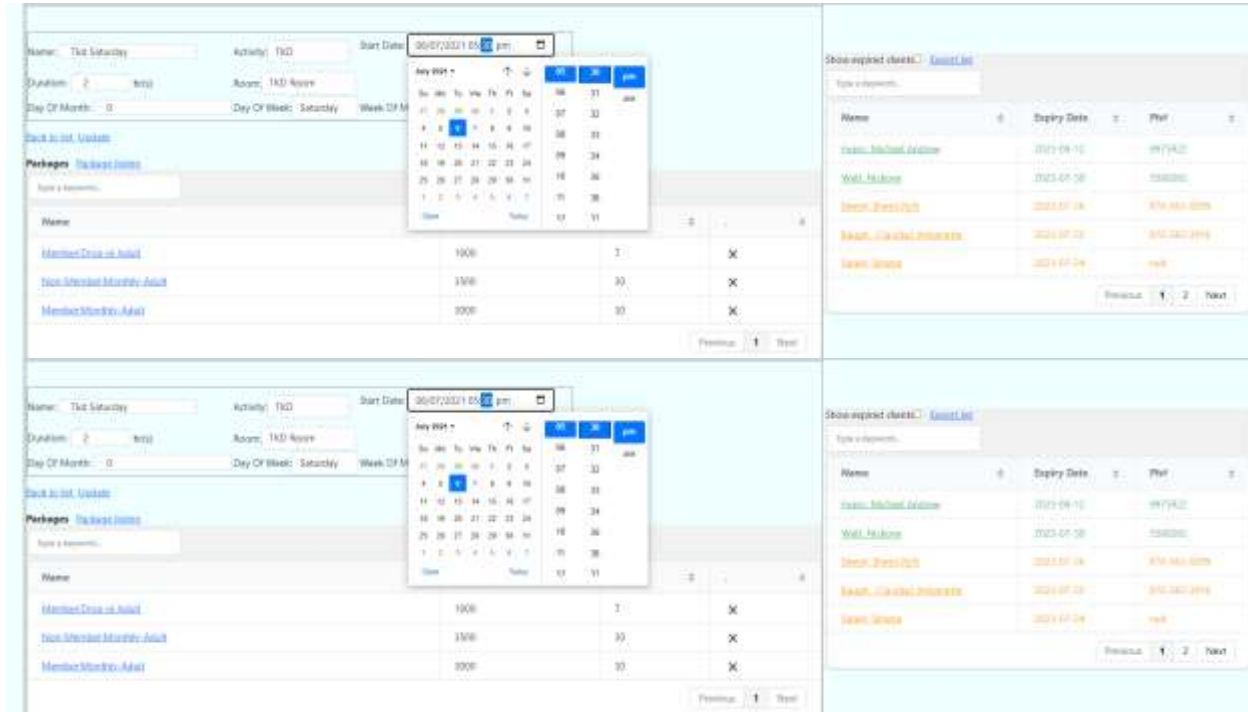
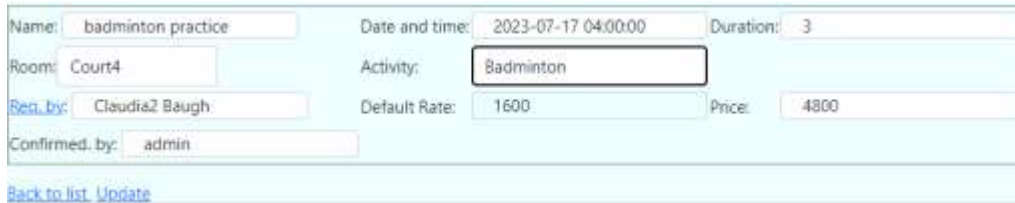


Figure 12: Recurring Event Detail Management Screen

Note that the list of packages is not managed from this screen- Events are added to packages from the package management screen. The listing provided is to allow a user to see what packages an event is involved with. A list of associated clients for the event is displayed to the right of the screen. Note also the system does not allow users to be added or removed here – users are added or removed either on the client screen, or on the packages screen. Based on their association with the packages however, association with the event is determined. By default, the client listing will only show current clients. In the event expired clients are to be included, check the box, and refresh the page (F5). It is also possible to export the list of clients to a spreadsheet by clicking the “Export List” link.

One Time Event Detail Screen

The one time event detail screen allows the system to store information on the event name, activity, date and time, duration and room and client, as shown in Figure 13. Depending on whether the client has an active membership, a default room rate is indicated, which is used to calculate a suggested price. The price can however be entered manually, and the user that confirmed the transaction is stored on the record.



The screenshot shows a form with the following fields and values:

Name:	badminton practice	Date and time:	2023-07-17 04:00:00	Duration:	3
Room:	Court4	Activity:	Badminton		
Req. by:	Claudia2 Baugh	Default Rate:	1600	Price:	4800
Confirmed. by:	admin				

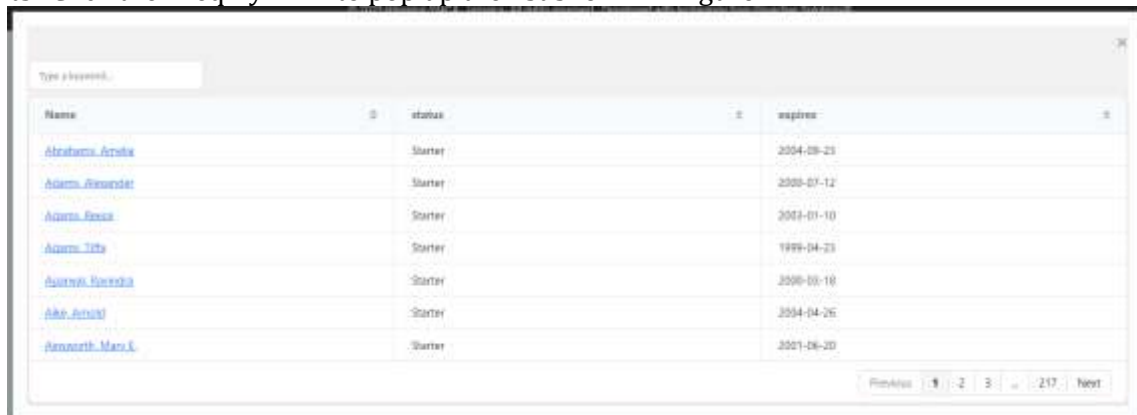
At the bottom left, there are two links: [Back to list](#) and [Update](#).

Figure 13. Screen to manage details of a one time event.

Note however that if another room is selected, or if the duration is updated, then the price is recalculated based on the default rate, so if there is another arrangement for a price, the price should be manually updated.

An interesting feature of the recording of single events is that on the first save, the system performs clash detection, by making sure the a room does not have two events happening at the same time. (the check is done across one time and recurring events). Bear in mind however that, although the system has the capability to represent associate a master room that contains a room, clash detection is currently not done across levels of a room, so the users need to manage that. As an example, Court 1 and Court 3 are a part of the room Auditorium. The system will ensure that Court1 does not have two events happening at the same time , that court 3 does not have two events happening at the same time, and do the same check with Auditorium when creating and event. The system will however NOT check Court1 against Auditorium, so resolving any such potential clash is the responsibility of the user. Also, clash detection is not done when updating an event.

Adding the client that requested the event is done by selecting the client from a list of potential clients. Click the “Req By” link to pop up the list shown in Figure 14.



The screenshot shows a list of clients with the following columns: Name, status, and expires. The list is filtered by "Type a keyword".

Name	status	expires
Abraham Arata	Starter	2004-08-23
Adam Rowndel	Starter	2008-07-12
Adam Ross	Starter	2003-01-10
Adam Tyle	Starter	1999-04-23
Andrew Eversha	Starter	2006-03-19
Ake Arvad	Starter	2004-04-26
Anwarth Mani	Starter	2001-06-20

At the bottom right, there is a pagination control: Previous 1 2 3 ... 217 Next

Figure 14: Selecting client that wants one-time event

The list can be filtered by typing into the search box. The status column displays “Member” if the client has an active membership, and “Starter” otherwise. The expires column shows when membership (if ever active) last expired. When the client name is clicked, the calling screen is updated.

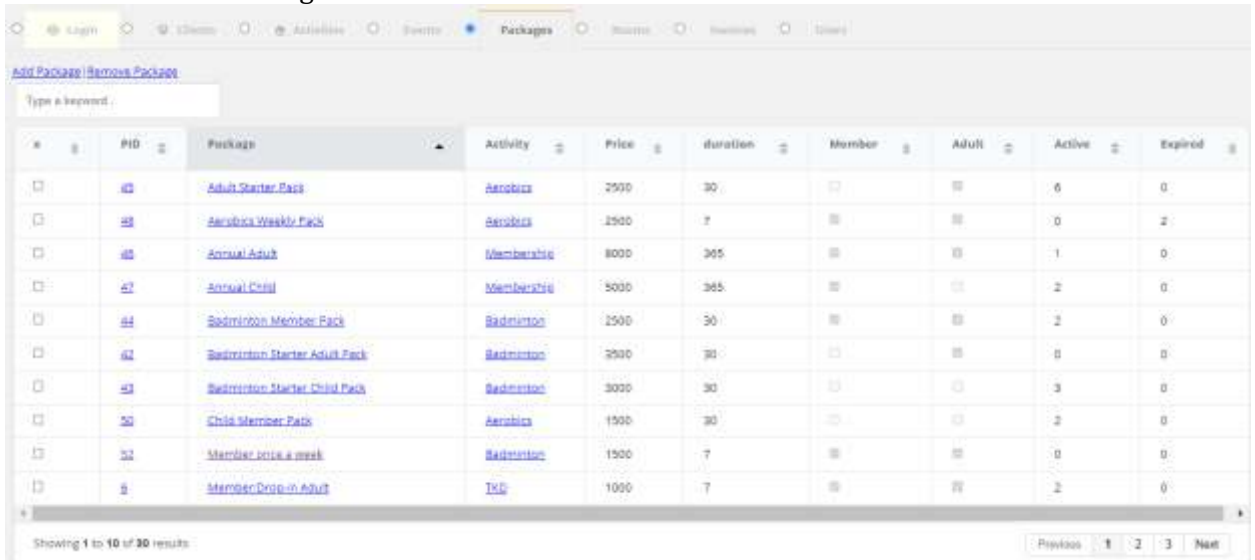
Managing Packages

A package represents a unit that can be billed to a client, and is put together as a set of events for an activity. A client registers for a service by registering for a package. Each package is tagged as being either for members or starters (non-members) or for adult or child.

The Package listing

The package listing allows a user to view packages. Users with permission can add a package by clicking the “Add Package” link, shown in Figure 15. To remove a package, select the checkbox beside the id for the package to be removed, then click the “remove package” option.

The box above the listing allows a user to filter the client list.



The screenshot shows a web application interface for managing packages. At the top, there is a navigation bar with links for Login, Admin, Activities, Events, Packages (selected), Reports, Members, and Users. Below the navigation bar, there are two buttons: "Add Package" and "Remove Package". A search box labeled "Type a keyword" is positioned above a table. The table has the following columns: ID, Package, Activity, Price, duration, Member, Adult, Active, and Expired. The table contains 10 rows of package data. At the bottom of the table, there is a pagination control showing "Showing 1 to 10 of 30 results" and buttons for "Previous", "1", "2", "3", and "Next".

ID	Package	Activity	Price	duration	Member	Adult	Active	Expired
40	Adult Starter Pass	Aerobics	2500	30	<input type="checkbox"/>	<input checked="" type="checkbox"/>	6	0
41	Aerobics Weekly Pack	Aerobics	2500	7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0	2
46	Annual Adult	Membership	8000	365	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	0
47	Annual Child	Membership	5000	365	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2	0
44	Badminton Member Pack	Badminton	2500	30	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	2	0
42	Badminton Starter Adult Pack	Badminton	2500	30	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	0
43	Badminton Starter Child Pack	Badminton	3000	30	<input type="checkbox"/>	<input type="checkbox"/>	3	0
50	Child Member Pack	Aerobics	1500	30	<input type="checkbox"/>	<input type="checkbox"/>	2	0
51	Member join a week	Badminton	1500	7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0	0
5	Member Drop in Adult	Txd	1000	7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	2	0

Figure 15. Package Listing

In the package listing, the units for the duration is days, and the price is expected to be in Jamaican Dollars. If a package is designed for a member, the member box will be checked, otherwise it will not be. The same applies to the “Adult” column. While rendering the list, the database is queried to determine the number of clients with an active registrations, as well as the number of clients with expired registrations, and those numbers are displayed.

Detailed Package information

Information stored on a package generally consists of it's name, whether it is targeted towards members or adults, or the price, and the duration of the package (number of days). The management information is shown in Figure 16.

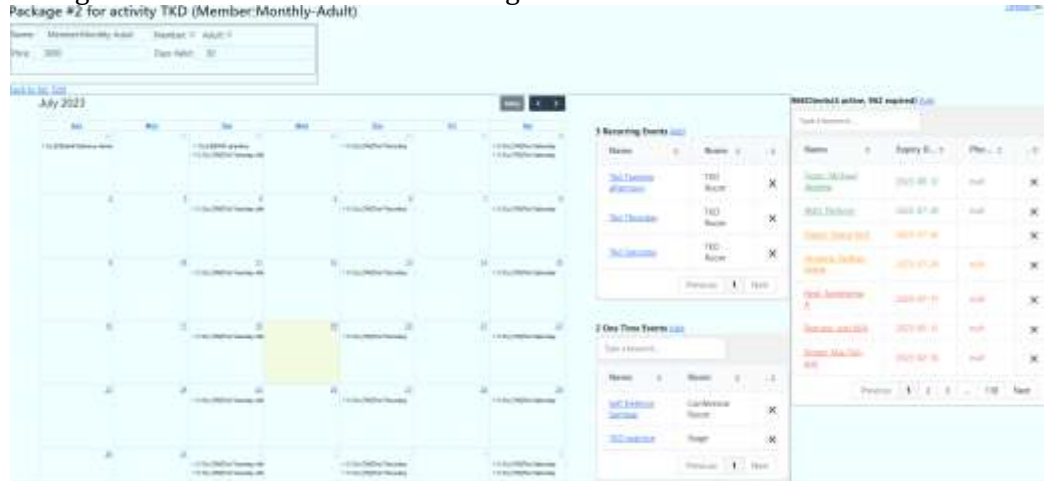


Figure 16: Package Detail Screen

The component events of a package allows the generation of a schedule for the package. One time or recurring events can be added using the appropriate links, or removed by clicking the X to the right of the event.

The package screen also shows a list of clients that are associated, along with available clients that can register. On clicking the “Add” link beside the clients, a window with contents similar to figure 17, appears that contains a list of clients.

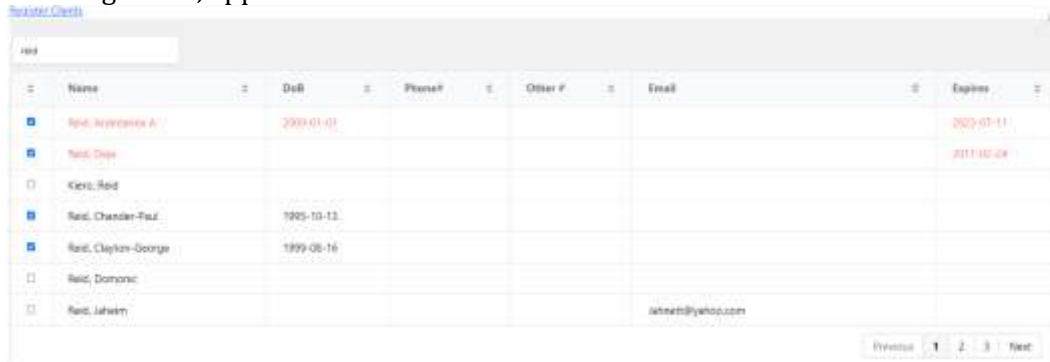


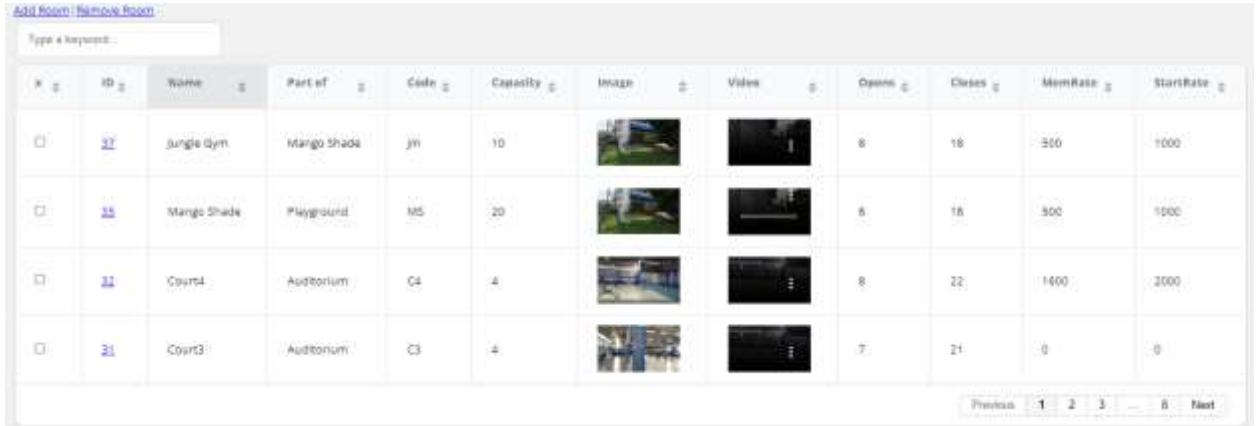
Figure 17: Registering multiple clients on an activity

The list can be filtered by typing into the box. Multiple clients can then be registered by clicking the “Register Clients” link. After registering clients the updated registrations will be displayed. If the client has never been registered in the activity, then the registration will expire at a date given by the current date plus the duration of the package. If the client has been registered in the activity before (a user will know as the client will show up in the list in the colour black), the new expiry date will be the previous expiry date plus the duration of the package.

It is possible for a user to waive past registrations by dissociating the client from the activity on the package management screen (using the X) and then re-registering the client.

Managing Rooms

A room represents a physical location managed by the YMCA. For each room, the system keeps information on the its name, its container, a short code to allow it to be represented on the timetable, an image, a video, it's opening and closing times, and a default member rate vs a default starter rate. The room listing is shown in Figure 18. A user can filter rooms by typing in the search box.











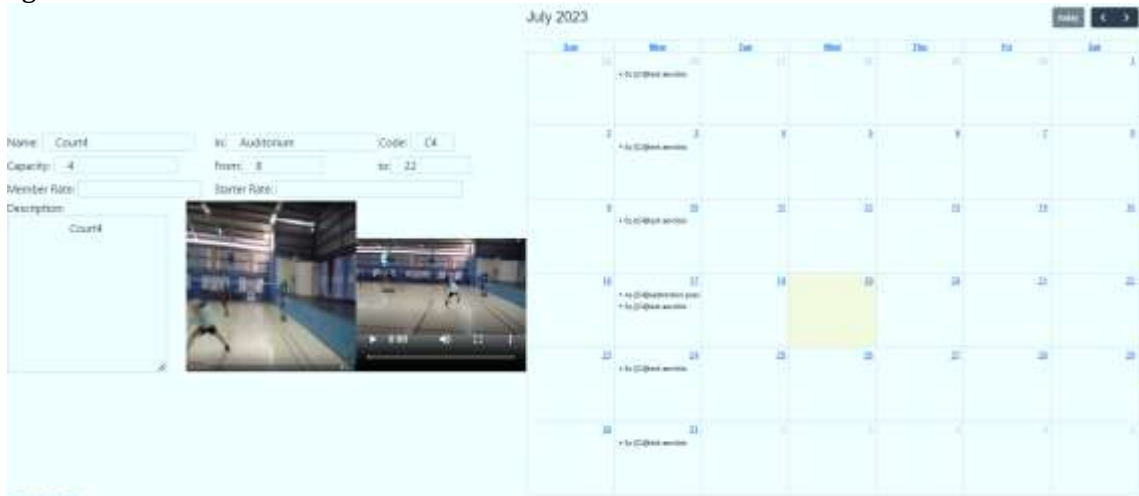
<input type="checkbox"/>	ID	Name	Part of	Code	Capacity	Image	Video	Opens	Closes	MemRate	StartRate
<input type="checkbox"/>	32	Jungle Gym	Mango Shade	JN	10			8	18	500	1000
<input type="checkbox"/>	35	Mango Shade	Playground	MS	20			8	18	500	1000
<input type="checkbox"/>	33	Court4	Auditorium	C4	4			8	22	1400	2000
<input type="checkbox"/>	31	Court3	Auditorium	C3	4			7	21	0	0

Figure 18: Room Listing Screen

Users with permission can add a room by clicking the “Add room” link. To remove a room, select the checkbox beside the id for the room to be removed, then click the “remove room” option. The box above the listing allows a user to filter the client list.

Detailed Room information



Details of a room can be edited by a user with access, using a screen similar to that shown in Figure 19.



July 2023

Name: Court4 Part of: Auditorium Code: C4
Capacity: 4 Opens: 8 Closes: 22
Member Rate: Starter Rate:

Description: Court4

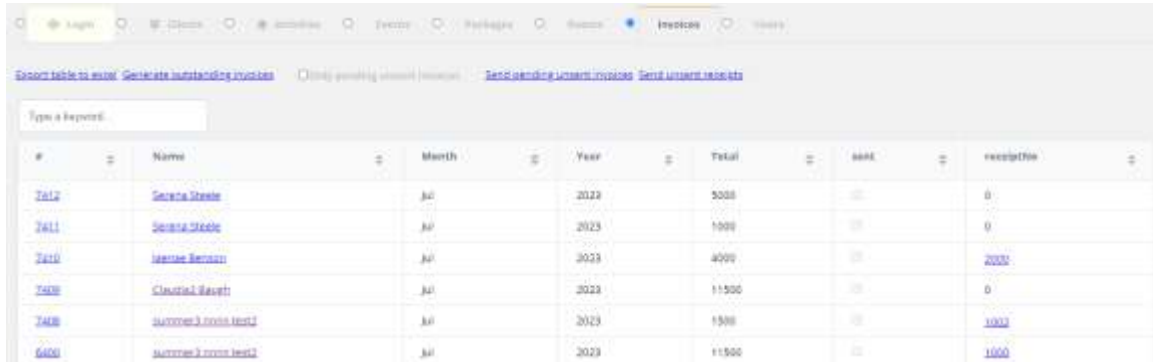
Calendar: July 2023 (Yellow highlight on 19th)

Figure 19. Room Detail Management Screen.

Note that images and videos are currently selected from a list of available images which have been pre-uploaded. Once satisfied with the information stored for a room, click “Update” to save changes.

Managing Invoices

Invoices are generated per client, and there is an option to manage invoicing and receipting from the client screen. The Invoice listing screen, shown in Figure 20, provides an opportunity to centrally manage invoices however.



The screenshot shows a web application interface for managing invoices. At the top, there is a navigation bar with links for Login, Clients, Invoices, Reports, Packages, Rooms, Invoices, and Users. Below the navigation bar, there are several action links: "Downloadable to excel", "Generate outstanding invoices", "Only pending amount (total)", "Send pending unsent invoices", and "Send unsent receipts". A search box labeled "Type a Report:" is present. The main content is a table with the following columns: #, Name, Month, Year, Total, Sent, and receipted. The table contains six rows of data, each representing an invoice for a different client.

#	Name	Month	Year	Total	Sent	receipted
7412	Serena Steele	Jul	2023	5000	<input type="checkbox"/>	0
7411	Serena Steele	Jul	2023	1000	<input type="checkbox"/>	0
7410	Lynne Benson	Jul	2023	4000	<input type="checkbox"/>	2000
7409	Claudia Haupt	Jul	2023	11500	<input type="checkbox"/>	0
7408	Summer3 room test1	Jul	2023	1500	<input type="checkbox"/>	1000
6400	Summer3 room test1	Jul	2023	11500	<input type="checkbox"/>	1000

Figure 20: The Invoice Listing Screen

Useful options on this screen include the ability to export the list from the table to excel, to generate any outstanding invoices (ie. If there were registrations or rentals for which invoices have not yet been generated), to filter only on unsent invoices for which there is no receipt, to email all previously unsent invoices without receipt, and to send any receipts that were not previously sent