

	Test ID	Test Type	Test Description	Test Step	Expected Result	Actual Result	Pass/Fail
	1	Functionality	Check to see if client can be added	Press 'Create New Client' and fill out the form with valid data. Check if the client appears within the 'Select Client' list.	Newly added client appears within 'Select Client' list	Client name successfully appeared within 'Select Client' list	PASS
	2	Security	Check to see if clients name is between character constraints	Enter names that are below and above the character restraints, and see if they are accepted	Error message is displayed on the 'Add Client' form informing user about character constraints	Error message was displayed successfully.	PASS
	3	Security	Check to see if clients name contains acceptable character types	Enter names with special character types (such as @ and ;) and emojis to see if they are accepted	The system accepts the values and does not crash when a user enters special characters	The system accepts the characters and works as intended	PASS
	4	Security	Check to see if the 'client's name' input accepts an empty value	Try and submit the 'Add Client' form without entering a value into the 'client name' input	An error message would be shown showing how the character requirement had not been met.	Error message successfully shown.	PASS
	5	Functionality	See if the number of hours away (distance) successfully registers when a client is added	Press 'Create New Client' and fill out the form with valid data. Check if the distance is correctly stored alongside the client in the database	The database would contain a client with the 'hours away' field correctly shown as the nearest whole number from the input.	Database was successfully updated with the number of hours away that the client is located.	PASS
	6	Security	Check to see if the 'number of hours away' field's input is between constraints.	Press 'Create New Client' and fill out the form. Input negative distance and distances above 20 hours.	Negative numbers should be reset to 0, positive numbers above 20 should display error message, and not add to the database.	Error message successfully shown when needed, and database not added to with invalid data.	PASS
	7	Security	Check to see if the 'number of hours away' field can successfully round decimal numbers.	Press 'Create New Client' and fill out the form. Input a decimal value for the 'number of hours away' field.	Should round to whole number and then insert into the database.	Successfully rounded to int value and added to database.	PASS
	8	Security	Check to see if the 'number of hours away' field accepts an empty input	Press 'Create New Client' and fill out the form. Populate the form, except for the 'number of hours away' field and submit the form.	'Number of hours away' field should default to 0 if the user does not specifically specify the value.	Value successfully defaults to 0 and is added to the database	PASS
	9	Functionality	Check to see if 'Have had dispute with client' box successfully functions when ticked or not ticked	Press 'Create New Client' and fill out the form. Test adding clients with the 'Client Dispute' checkbox ticked and not ticked, and see if they are added to the database.	See if true or false is correctly added to the database depending on whether the 'Client Dispute' checkbox is ticked or not ticked.	True or false is successfully added to the database when ticked or unticked.	PASS
	10	Functionality	Check to see the 'Add Client' button successfully added to the database.	Press 'Create New Client' and fill out the form with valid data.	Client is added to the database, and is displayed in the client list as a result.	Client successfully added to database, and can be seen within client list	PASS
	11	Security	Check to see if the 'Add Client' button refuses to add to the database if the input fields have not been filled within the form.	Press 'Create New Client' and fill out the form with invalid data.	Errors should be shown on fields where invalid data was entered, and invalid data should not be used to try and create a client.	Errors shown on any fields with invalid data, and if an error is shown client is not added to the database.	PASS
	12	Functionality	Check to see if the 'Client Selection' dropdown within the Add Department form shows all clients registered on the system.	Open the 'Add Department' page and click the 'Client Selection' dropdown. Check to see if each client added to the system is displayed within the dropdown.	Each client stored within the database is visible within the dropdown.	Each client was successfully shown within the dropdown and selectable.	PASS
	13	Functionality	Check to see if 'Client Selection' dropdown within the Add Department form successfully stores the selected client within the database when selected.	Open the 'Add Department' page and fill out the form with valid data. Check to see if the correct client foreign-key has been applied to the department in the database.	Client foreign key matching the selected client within the dropdown is stored within the database, within the department table.	Client foreign key was successfully added to the database.	PASS
	14	Functionality	Check to see if the 'Department Name' field is successfully stored within the database as entered when the form is submitted.	Open the 'Add Department' page and fill out the form with valid data. Check to see if the correct department name entered in the form is stored within the database.	Department name entered within the form is added to the database within the new entry to the database table.	Department name was successfully replicated within the department table.	PASS
	15	Security	Check to see if 'Department Name' is accepted if it falls outside of acceptable character length	Open the 'Add Department' page and fill out the form, but make the 'Department Name' field shorter than 2 characters, and higher than 50 to test outside of accepted character length.	An error is displayed showing that the input for the department name is out of the accepted range. The department should not be added to the database as a result of the invalid form value.	Error message was successfully displayed and the department was not added to the database as a result.	PASS
	16	Security	Check to see if 'Department Name' is composed of accepted characters.	Enter various special characters and emojis and see how the system responds	The system should accept the data, and not suffer from a critical error	System accepts the data, and no error is displayed	PASS
	17a	Functionality	Check to see if the 'Add Department' button successfully adds a department to the database with the information provided.	Input valid details for a department and press the 'Create Department' button	A new department is added to the departments table, which links to the provided client using a foreign key.	Rather than linking to the client using the foreign key, the client is cloned, and then the foreign key links to the new cloned client, creating duplicate entries in the table.	FAIL
	17b	Functionality	Check to see if the 'Add Department' button successfully adds a department to the database with the information provided.  Since previous fail, [Required] keyword has been removed from the foreign key within the EF annotations	Input valid details for a department and press the 'Create Department' button	A new department is added to the departments table, which links to the provided client using a foreign key.	The added department is successfully linked to the respective client via a foreign key.	PASS
	18	Functionality	Check to see if all stored clients are shown within the client list on the Client/Department Selection screen	Check the Client Department View which should have a list of all clients registered on the system. Check each client stored within, or added to, the system has their name displayed successfully within the list.	Every client from the database should be displayed within the list. If a new client is added using the 'Add Client' button, that client should also be displayed in the list.	Each client is successfully stored in the list, whether within the database at runtime or added using the 'Add Client' button.	PASS
	19	Functionality	Check to see if all stored departments are shown within the department list on the Client/Department Selection screen	Check the Client Department View which should have a list of all departments registered on the system. Check each department stored within, or added to, the system has their name displayed successfully within the list.	Every department from the database should be displayed within the list. If a new department is added using the 'Add Department' button, that department should also be displayed in the list.	Each department is successfully stored in the list, whether within the database at runtime or added using the 'Add Department' button.	PASS

	20	Functionality	Check to see if the 'Confirm Selection' button opens the Event view for the selected department on the Client/Department screen	Make sure there is at least one client added, which has a department assigned. Select both the client and a department it has from within the list, and press the 'Confirm Selection' button.	As input data is valid, the event creation form should be opened for the selected department.	The event creation form successfully opens for the selected department.	PASS
	21	Security	Check to see if an error is returned when the user clicks confirm selection having not selected a department in the Client/Department selection screen.	Try pressing the 'Confirm Selection' button having not selected both a client and associated department.	Should display an error message telling users to select both a client and department, whilst not loading the event creation form.	Error message successfully displayed and event creation form not opened	PASS
	22	Functionality	Check to see if the 'Create New Client' button brings up the Create Client form.	Press the 'Create New Client' button	Should bring up a form containing fields to enter details for a new client	Form successfully displayed	PASS
	23	Functionality	Check to see if the 'Create New Department' button brings up the Create Department form.	Press the 'Create New Department' button	Should bring up a form containing fields to enter details for a new department	Form successfully displayed	PASS
	24	Functionality	Check to see all activities associated with an event are shown under the requested activities box	Select a department to bring up the booking screen for a department. Add an activity via the 'Add Activity' button and form. Check that this activity is displayed within the activity list. Repeat to check that multiple activities are simultaneously displayed	Each activity that has been added to the event has its name displayed in the activity list	Activities successfully displayed	PASS
	25	Functionality	Check to see if selected event date by client is successfully added to the database on booking confirmation	Select the event date from the booking form. If the booking is successful (if date is not already taken by facilitator team and activities are added), check that the date has been added to the database			
	26	Functionality	Check to see if selected event date is available for facilitators to attend, if they have been chosen for one or more of the activities.	Try adding an event which contains activities needing facilitators on a date where facilitators are already booked. Repeat this, and check if day before is bookable if client is longer than 2 hours away to compensate for facilitator hotel time	An error message would be displayed on the event booking form alerting the user that that date is unavailable	Error message successfully presented to the user	PASS
	27	Security	Check to see if an invalid date that has already passed is chosen for the event, an error is shown when the 'Confirm Booking' button is pressed.	Try selecting a date in the past and see if the form would accept this input	The form should not allow the user to select a date earlier than the current day, and dates in the future are capped at 2 years	Form successfully prevents user from selecting invalid dates	PASS
	28	Functionality	Check to see if the 'Distance Away (Hours)' field is successfully displayed on the event booking page.	Create a client, making note of the hours away field, and then go to the booking page for that client, and see if the number of hours away presented matches that of the client	Number of hours away field should match the data provided on client creation	Number of hours away successfully matches that of the client	PASS
	29	Security	Check to see that the 'Distance Away (Hours)' field input is not below or above the minimum and maximum parameters	Create a client, and try and select a distance value of below 0, or above 20.	Should not be able to populate the values with these inputs and should be rejected by the system	Cannot select values below 0 or above 20 within the UI, so test is a success	PASS
	30	Security	Check to see that the 'Distance Away (Hours)' only accepts numeric input.	Create client, and try to populate distance field using text input	The input should not accept text input, so a user should not be able to enter any text values	The form element does not allow the user to enter any text, only numeric values as expected	PASS
	31	Functionality	Check to see that the event is created within the database when the 'Confirm Booking' button is pressed, provided valid inputs are provided.	Populate an event with activities and valid data, and then press the 'Confirm Booking' button	Success message should be displayed and event should be added to database with provided information		
	32	Functionality	Check to see 'Add Activity' form is displayed when the user presses the 'Add New Activity' button.	Press the 'Add Activity' button	Form should be shown to allow users to enter details of an activity they wish to add to the event booking.	Form successfully shown	PASS
	33	Functionality	Check to see each activity template stored within the database is shown within the 'Select Activity' dropdown	Within the 'Add Activity' form click the dropdown for preset activities and see if all activities stored within the database are present.	The dropdown should display each preset activity stored within the database.	Name of each activity template successfully shown within the dropdown	PASS
	34	Functionality	Check to see if 'Facilitator Required' box successfully functions when ticked or not ticked	Add an activity to an event without the facilitator required box ticked, and select a date facilitators are unavailable on. The event should still be booked as facilitators were not determined to be needed. Then add an activity and tick the box, and see if the system refuses to book as facilitators are required but are unavailable.	If facilitators are required, the date should be booked into the database, and the event should not be bookable on the day another event needs the facilitator group (including day before if client is over 2 hours away)	Facilitator required box successfully determines if the system should check for current facilitator bookings.	
	35	Functionality	Check to see whether all stored rewards within the database are shown within the 'Rewards Selected' dropdowns	Select a department to bring up the booking screen for a department. Add an activity via the 'Add Activity' button and form. Check that the activity has each reward option stored within the RewardTemplate database table available for choosing.	Each reward option stored within the RewardTemplate database table should be available for selection within the dropdown	Each stored reward option is available for selection within the dropdown as expected	PASS
	36	Functionality	Check to see whether all stored additions within the database are shown within the 'Additions' dropdowns	Within the 'Add Activity' form click the dropdown for preset additions and see if all additions stored within the database are present.	The dropdown should display each preset addition stored within the database.	Name of each addition successfully shown within the dropdown	PASS
	37	Functionality	Check to see whether the estimated price is updated to match the input data for the activity	Within the 'Add Activity' form change the various activity options to see how they affect the total price.	Within the 'Add Activity' form, changing the various options (activities, prizes and additions) should affect the total pricing with their respective cost.	Total price correctly shows total cost of all options, and changes when choices are modified by the user to match new values.	PASS
	38	Security	Check to see whether the 'Activity Name' field for a custom activity is not empty when adding custom activity, and display error if it is.	Within the 'Add Activity' form try to add a custom activity without populating the 'Activity Name' field, and see if the value is accepted	The value should be refused as it falls below the minimum character requirement for the field, preventing the activity from being added. An error message should also be displayed to inform the user.	Error message is successfully displayed and the activity is not added to the database	PASS

	39	Security	Check to see whether the 'Activity Name' field for custom activities falls between minimum and maximum character requirements, and display and error if it does not	Within the 'Add Activity' form try to add a custom activity while populating the 'Activity Name' field with less than 2 characters, and more than 50, and see if the value is accepted	The values should be refused as being either above or below the maximum character requirements, and an error message should be displayed to inform the user	Error message is successfully displayed and the activity is not added to the database	PASS
	40	Security	Check to see whether the 'Activity Name' field for custom activities contains invalid characters	Within the 'Add Activity' form try adding emojis and special characters to the 'Activity Name' textbox and see whether the system accepts them	The values should be accepted and the system should not throw a critical error	System successfully accepts characters and no error is shown to the user	PASS
	41	Functionality	Check to see if the 'Add Activity' button successfully works when the template activity form data has been filled out with valid data, and is uploaded to the database.	Complete the 'Add Activity' button form with valid data and press the button to add the activity	Check if the activity was successfully created using the data and added to the database	Activity was successfully created and added to database	PASS
	42	Functionality	Check to see if the 'Add Custom Activity' button works when the custom activity form has been filled with valid data, and is uploaded to the database.	Complete the 'Add Custom Activity' button form with valid data and press the button to add the activity	Check if the custom activity was successfully created using the data and added to the database	Custom activity was successfully created and added to database	PASS
	43	Functionality	Check to see if 'username' field shows error if it is left empty	Leave 'username' field empty and press on 'login' button	Red text should prompt used that 'Username cannot be empty'	Red text appears with the text 'Username cannot be empty'	PASS
	44	Functionality	Check to see if 'password' field shows error if it is left empty	Leave 'password' field empty and press on 'login' button	Red text should prompt used that 'Password cannot be empty'	Red text appears with the text 'Password cannot be empty'	PASS
	45	Functionality	Check to see if 'login' button works when the correct credentials are input	Fill in username and password fields with correct credentials, press 'login' button	User should be taken to client department selection view form	User is taken to client department selection view form	PASS
	46	Functionality + Security	Check to see if 'login' button works when the incorrect credentials are input	Fill in username and password fields with incorrect credentials, press 'login' button	User should be prompted with the text 'Invalid login credentials'	User is prompted with the text 'Invalid login credentials'	PASS
	47	Functionality	Check to see if 'back; button works on register form	Press 'back' button on register form	User should be taken back to client department selection view form	User is taken back to client department selection view form	PASS
	48	Security	Check to see if a user is added when the 'first name' field is empty	Leave 'first name' field empty and press on 'register new user' button	An error message would show with the text 'First name must be longer than 2 characters'	Error message is displayed and a new user is not added to the database	PASS
	49	Security	Check to see if a user is added when the 'last name' field is empty	Leave 'last name' field empty and press on 'register new user' button	An error message would show with the text 'Last name must be longer than 2 characters'	Error message is displayed and a new user is not added to the database	PASS
	50	Security	Check to see if a user is added when the 'username' field is empty	Leave 'username' field empty and press on 'register new user' button	An error message would show with the text 'Username must be longer than 5 characters'	Error message is displayed and a new user is not added to the database	PASS
	51	Security	Check to see if a user is added when the 'password' field is empty	Leave 'password' field empty and press on 'register new user' button	An error message would show with the text 'E-mail must be longer than 10 characters'	Error message is displayed and a new user is not added to the database	PASS
	52	Security	Check to see if a user is added when the 'email' field is empty	Leave 'email' field empty and press on 'register new user' button	An error message would show with the text 'Username must be longer than 5 characters'	Error message is displayed and a new user is not added to the database	PASS
	53	Functionality	Check to see if a user is added when all fields are empty and the 'register new user' button is pressed	Leave all fields empty and press on 'register new user' button	Error messages should be displayed for all fields that are empty	All error messages are displayed and a new user is not added to the database.	PASS
	54	Security	Check to see if an error message is displayed when a special character is input into the 'first name' field	Input special character into 'first name' field, press 'register new user' button	Error message 'first name can only contain letters' is displayed	Error message is displayed and a new user is not added to the database	PASS
	55	Security	Check to see if an error message is displayed when a special character is input into the 'last name' field	Input special character into 'last name' field, press 'register new user' button	Error message 'last name can only contain letters' is displayed	Error message is displayed and a new user is not added to the database	PASS
	56	Security	Check to see if an error message is displayed when a special character is input into the 'username' field	Input special character into 'username' field, press 'register new user' button	Error message 'username can only contain letters and numbers' is displayed	Error message is displayed and a new user is not added to the database	PASS
	57	Security	Check to see if an error message is displayed when a special character is input into the 'password' field	Input special character into 'password' field, press 'register new user' button	Error message 'password must contain atleast one number and one special character' is displayed	Error message is displayed and a new user is not added to the database	PASS
	58	Security	Check to see if an error message is displayed when a special character is input into the 'email' field	Input special character into 'email' field, press 'register new user' button	Error message 'please enter a valid email' is displayed	Error message is displayed and a new user is not added to the database	PASS
	59	Security	Check to see if an error message is displayed when a number is input into the 'first name' field	Input number into 'first name' field, press 'register new user' button	Error message 'first name can only contain letters' is displayed	Error message is displayed and a new user is not added to the database	PASS
	60	Security	Check to see if an error message is displayed when a number is input into the 'last name' field	Input number into 'last name' field, press 'register new user' button	Error message 'first name can only contain letters' is displayed	Error message is displayed and a new user is not added to the database	PASS
	61	Security	Check to see if an error message is displayed when a number is input into the 'username' field	Input number into 'username' field, press 'register new user' button	No error message is displayed as numbers are allowed in the 'username' field	No error messages are displayed	PASS
	62	Security	Check to see if an error message is displayed when a number is input into the 'password' field	Input number into 'password' field, press 'register new user' button	Error message 'password must contain atleast one number and one special character' is displayed	Error message is displayed and a new user is not added to the database	PASS
	63	Security	Check to see if an error message is displayed when a number is input into the 'email' field	Input number into 'email' field, press 'register new user' button	Error message 'please enter a valid email' is displayed	Error message is displayed and a new user is not added to the database	PASS
	64	Security	Check to see if first name is between character constraints	Enter first name that is below and above the character restraints, and see if it is accepted	The correct error messages for both constraints are displayed	Error messages are displayed and a new user is not added to the database	PASS
	65	Security	Check to see if last name is between character constraints	Enter last name that is below and above the character restraints, and see if it is accepted	The correct error messages for both constraints are displayed	Error messages are displayed and a new user is not added to the database	PASS
	66	Security	Check to see if username is between character constraints	Enter username that is below and above the character restraints, and see if it is accepted	The correct error messages for both constraints are displayed	Error messages are displayed and a new user is not added to the database	PASS

	67	Security	Check to see if password is between character constraints	Enter password that is below and above the character restraints, and see if it is accepted	The correct error messages for both constraints are displayed	Error messages are displayed and a new user is not added to the database	PASS
	68	Security	Check to see if email is between character constraints	Enter email that is below and above the character restraints, and see if it is accepted	The correct error messages for both constraints are displayed	Error messages are displayed and a new user is not added to the database	PASS
	69	Functionality	Check to see if a user is added to the database when all fields are correctly filled out	Fill in all fields on the register new user form, and press on 'register new user' button	New user should be added to the database with the information provided on the form	A new user is successfully added to the database.	PASS
	70	Security	Check to see if an error message is displayed when only letters are input into the 'password' field	Enter password that only contains letters	Error message 'password must contain atleast one number and one special character' should be displayed	Error message is displayed and a new user is not added to the database	PASS
	74	Security	Check to see if an error message is displayed when the user does not use the correct syntax ____@____.	Enter email with incorrect syntax	Error message 'please enter a valid email' is displayed	Error message is displayed and a new user is not added to the database	PASS
	75	Security	Check to see if an error message is displayed when the user uses the correct syntax ____@____.	Enter email with correct syntax	No error message is displayed as the user used the correct syntax	No error messages are displayed	PASS
	76	Functionality	Check to see if the form switches with no activitys stored	Add no activitys to the database and click confirm booking	An error message is displayed and a new form does not open	Error message displayed and no form change	PASS
	77	Functionality	Check to see that the form switches when there are activitys added	Add an activity to the database and then click the confirm booking button	no error message will be displayed and the form will switch to the pdfDisplayForm with a browser and a generate Invoice button.	No error messages are displayed and the form changes	PASS
	78	Functionality	Check that the method correctly retrieves the correct client ID from the EventModel.	Run through the system adding events and activitys then using a console writeline to write out the client ID	This should match the client ID from the database	The client ID matches the client ID in the database	PASS
	79	Functionality	Check that the method correctly retrieves the correct event ID from the EventModel.	Run through the system adding events and activitys then using a console writeline to write out the event ID	This should match the event ID from the database	The client ID matches the event ID in the database	PASS
	80	Functionality	Check that the method correctly retrieves the client's company name from the ClientModel.	Run through the system adding events and activitys then use a console to write out the client name	This should match the name that is stored in the database	The client name matches the client name that is stored in the database	PASS
	83	Functionality	Check that the method correctly populates the PDF with the correct information, including the company name, number of attendees, activity list and prices, base cost, and service charge.	Run through the system and then attempt to generate a pdf using the generate invoice button	This should open and display a pdf that is populated with all of the data that has been pulled from the database for this booking	generates and correctly poplates the PDF according to what is stored in the database	PASS
	84	Functionality	Test that the method correctly displays the invoice using the pdfDisplayView.ShowInvoice() method.	Press the generate Invoice button to generate and display the PDF	This should generate and use the ShowInvoice method to open the pdf in the Forms browser	Generates a pdf and displays it in the forms browser	PASS
	85	Functionality	Test that the method calculates the correct total package cost by adding the base cost and service charge.	Add a price to the database and then run the pdf generation using a console out to print the calculated result of the total package	This should pull the price and add a 50% service charge ontop of that to generate the total package cost, this can then be compared to what the total cost should be.	The expected total cost and the calculated total cost are the same.	PASS
	86	Functionality	Test that the HashPassword method returns a tuple containing the hashed password and the salt.	run the HashPassword method then use the cosole write line to output each part of the tuple to the console	The tuple should contain the correct hashed password and the correct salt	The tuple conatined the correct hashed password and the correct salt	PASS
	87	Functionality	Test that the checkHashMatch method correctly derives the key from the input password and salt and compares it to the original hashed password.	run the checkHashMatch method passing it a input password and pull an orignal hashed password from the database	This should take the input password and run the hashing and salting process on it before comparing it to the orignal hashed password	The Input password is taken salted and hashed and then compaired against the orignal password	PASS
	88	Functionality	Test that the checkHashMatch method returns true if the derived key matches the original hashed password, and false if it does not.	run the checkHashMatch method passing it a input password and pull an orignal hashed password from the database	This should return true if the password is the same as the original and false if it is not	returns true when the passwords are the same and returns false when it is not	PASS
	89	Functionality	Test that the HashPassword method returns different hashed password for different input passwords even with the same salt.	Run the HashPassword method with two diffrent passwords but keeping the salt static	This should return two different hashed passwords despite the salt being the same	Two diffrent hashed passwords are generated	PASS