

Testing and Evaluation

Test Strategy

During the development of my solution, I would compile the code and see if there were any syntax or coding errors. But even after fixing these errors, my solution may still contain operational errors, causing it to operate in an incorrect way. I will test the features of my solution to identify any faults which have not been discovered prior to this.

I will perform Navigational Testing. This involves testing all the buttons in my program to see if they perform the correct actions e.g. displaying the correct form when clicked. This testing will ensure that the user can navigate through the program properly.

Also, I will assess the Interface of the solution. Ensuring the user interface and colour scheme are professional and allow the user to be efficient with their use of the program.

Furthermore, I will test the Program Functionality to ensure that the program functions fully when carrying out tasks.

I will test:

- The security of the LoginForm- It should only allow access to the MainForm if the username and password are correct.
- Adding data- new data should be added without errors
- Deleting data- existing data should be able to be deleted
- Sorting data- data should be sorted dependant on a user-selected field in ascending order
- Filtering data- data should be filtered based on a user-selected field and filter term
- Validation of data- erroneous data should not be stored in the table and the user should be prevented from entering this data.
- Reports- That reports are shown onscreen and print correctly
- Calculations- Calculations should be correct

Test Data

All of the data fields will be tested to ensure they only allow valid data.

The types of data I will use to test my program are:

- “Normal Data” –Data which is expected to be entered and which should be accepted by the program
- “Extreme Data” – Data which is too high or too low of a value to be considered feasible by the program
- “Incompatible Data” – Data which is of the wrong type for the field it is to be stored. E.g. entering numbers in a Name field.
- “Non-Existent Data” – Data which does not exist because no data has been entered.

Examples of these data types:

- Normal data: a sensible string for a name such as “Matthew”
- Extreme data: entering a very long string for a town name such as “Llanfairpwllgwyngyllgogerychwyrndrobwlllantysiliogogoch”
- Incompatible data: entering a number in a name field such as “6746488342478”
- Non-Existent data: leaving the data entry box empty

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Problems during program creation

During the coding of the program, several issues occurred that I had to solve.

One of the issues encountered was with retrieving the value that is auto-incremented when a record is created. It was difficult to retrieve the value reliably, a solution could have been to get the largest auto-incremented value from the table, but this would be unreliable as you cannot be sure that the created record has the largest auto-incremented value.

The issue was eventually solved by manually opening and closing a connection to the database so the value could be returned.

Other issues occurred in implementing features but were eventually solved.

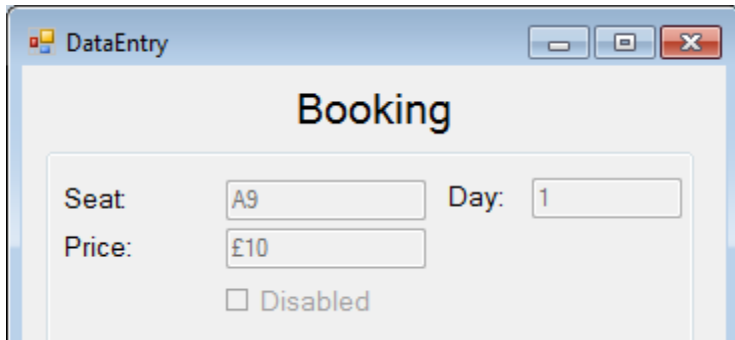
Checking seat prices

Different seats have different prices as defined by:

Ticket prices	
<i>Rows A to C</i>	£10.00
<i>Rows D to F</i>	£12.50
<i>Rows G to L</i>	£7.25

I have checked a few seats from each price band to check they are the correct prices:

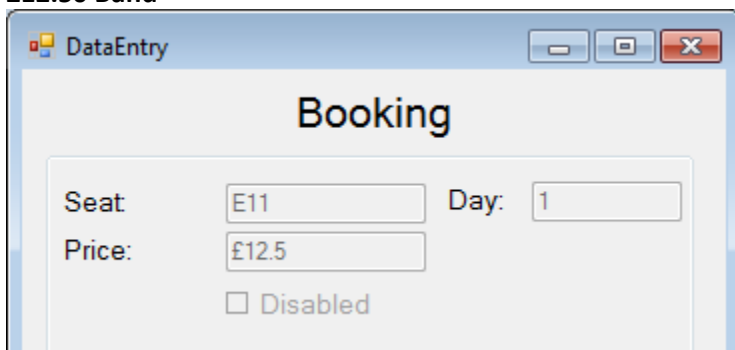
£10.00 Band



The screenshot shows a window titled "DataEntry" with a "Booking" form. The form contains the following fields:

- Seat: A9
- Day: 1
- Price: £10
- Disabled:

£12.50 Band



The screenshot shows a window titled "DataEntry" with a "Booking" form. The form contains the following fields:

- Seat: E11
- Day: 1
- Price: £12.5
- Disabled:

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£7.25 Band

The image shows a screenshot of a software window titled "DataEntry" with a subtitle "Booking". The window contains a form with the following elements:

- A "Seat" label followed by a text input field containing "L10".
- A "Day:" label followed by a text input field containing "1".
- A "Price:" label followed by a text input field containing "£7.25".
- A checkbox labeled "Disabled" which is currently unchecked.

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Data Testing

LoginForm

Test No.	Testing Field	Reason for test	Test data	Expected outcome	Outcome	Reference to evidence
1	Username	To test username authentication	Username: "user" Password: "password"	Username check will fail and an error message will be shown	The username check failed and an error message was shown	1
2	Password	To test password authentication	Username: "admin" Password: "abcde"	Password check will fail and an error message will be shown	The password check failed and an error message was shown	2

DataEntry

Test No.	Testing Field	Reason for test	Test data	Expected outcome	Outcome	Reference to evidence
3	First Name	To ensure entered text with numbers or symbols is not accepted	First Name: "M477h3w£*"	The text box will be red and the book button will not be enabled	The text box turned red and the book button was not enabled	3
4	Surname	To ensure entered text with numbers or symbols is not accepted	Surname: "€u7713r\$"	The text box will be red and the book button will not be enabled	The text box turned red and the book button was not enabled	4

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5	House Name/Num	To ensure only valid text is accepted	House Name/Num: "\$a\$h4 €10\$3"	The text box will be red and the book button will not be enabled	The text box turned red and the book button was not enabled	5
6	Address Line 1	To ensure only valid text is accepted	Address Line 1: "20 £ road"	The text box will be red and the book button will not be enabled	The text box turned red and the book button was not enabled	6
7	Address Line 2	To ensure only valid text is accepted	Address Line 2: "50% Avenue"	The text box will be red and the book button will not be enabled	The text box turned red and the book button was not enabled	7
8	Address Line 2	To ensure that the field can be left blank	Address Line 2: ""	The text box will be green	The text box turned green	8
9	Town	To ensure entered text with numbers or symbols is not accepted	Town: "\$u77on €oldfi31d"	The text box will be red and the book button will not be enabled	The text box turned red and the book button was not enabled	9
10	County	To ensure entered text with numbers or symbols is not accepted	County: "3a\$t M1dland\$"	The text box will be red and the book button will not be enabled	The text box turned red and the book button was not enabled	10
11	Postcode	To ensure only valid UK postcodes are accepted	Postcode: "B6 223" + "J67 4R4"	The text box will be red and the book button will not be enabled	The text box turned red and the book button was not enabled	11

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12	Email	To ensure only valid email addresses are accepted	Email: "happy@net" + "Matthew@Cutler.c"	The text box will be red and the book button will not be enabled	The text box turned red and the book button was not enabled	12
13	Contact No.	To ensure only valid telephone numbers are accepted	Contact No.: "012165722887" + "1223145774930" + "1775ou18375-a"	The text box will be red and the book button will not be enabled	The text box turned red and the book button was not enabled	13

ViewCRecords

Test No.	Testing Field	Reason for test	Test data	Expected outcome	Outcome	Reference to evidence
14	CustomerID Radio Button	To ensure sorting works correctly	Clicking the radio button	The CustomerID field would be sorted in ascending order	The CustomerID field was sorted in ascending order	14
15	Surname Radio Button	To ensure sorting works correctly	Clicking the radio button	The Surname field would be sorted in ascending order	The Surname field was sorted in ascending order	15
16	Search Box	To check that when the CustomerID field is selected in the dropdown menu, the textbox only accepts numbers to filter with	SearchBox: "two" and "West Midlands"	The filter will not be applied to the table.	The filter was not applied to the table	16

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ViewSRecords

Test No.	Testing Field	Reason for test	Test data	Expected outcome	Outcome	Reference to evidence
17	CustomerID Radio Button	To ensure sorting works correctly	Clicking the radio button	The CustomerID field would be sorted in ascending order	The CustomerID field was sorted in ascending order	17
18	SeatID Radio Button	To ensure sorting works correctly	Clicking the radio button	The SeatID field would be sorted in ascending order	The SeatID field was sorted in ascending order	18
19	Search Box	To check that when the CustomerID field is selected in the dropdown menu, the textbox only accepts numbers to filter with	SearchBox: "two" and "West Midlands"	The filter will not be applied to the table.	The filter was not applied to the table	19

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ReportForm

Test No.	Testing Field	Reason for test	Test data	Expected outcome	Outcome	Reference to evidence
20	Report	To check that the report is displayed on screen.	N/A	The report would be displayed to the screen correctly	The report was displayed on screen correctly	20
21	Report	To check that the reports can be printed correctly	N/A	The report will print correctly	The report was correctly printed	21
22	Calculations	To check that the calculations the reports perform are correct	12.5+12.5+10+7.25+12.5 =54.75	The calculation would output 54.75	The outcome was 54.75	22
23	Calculations	To check that the calculations the reports perform are correct	7.25+12.5+10+7.25+7.25+ 12.5 =56.75	The calculation would output 56.75	The outcome was 56.75	23

Navigational Testing

MainForm

Test No.	Testing Field	Reason for test	Expected outcome	Outcome
24	Book a seat button	To make sure the button opens the SeatingPlan form	The SeatingPlan form opens	The correct form opened
25	ViewCustomerRecords button	To make sure the button opens the ViewCRecords form	The ViewCRecords form opens	The correct form opened

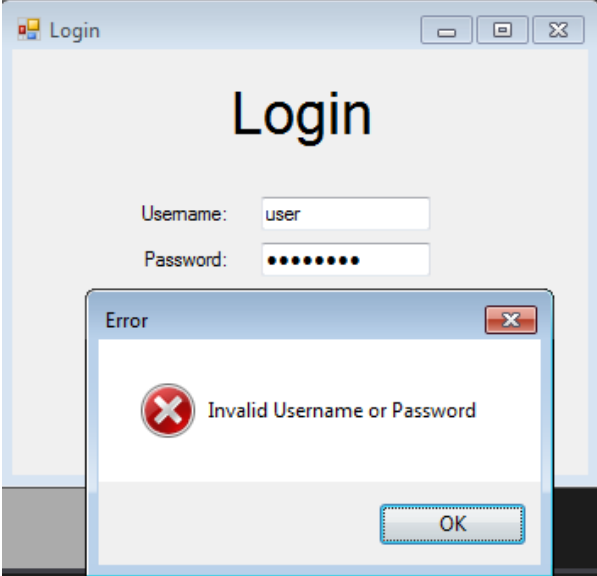
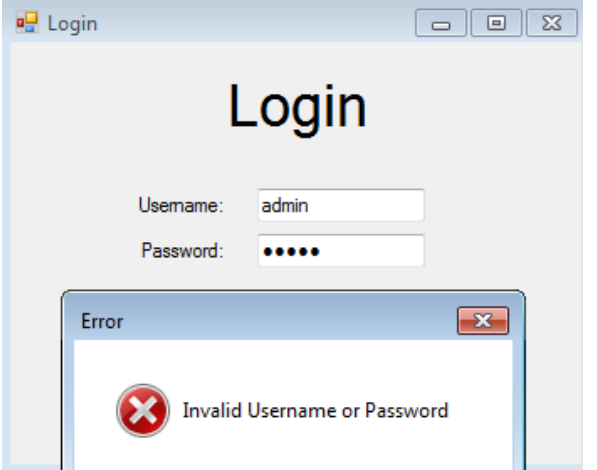
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26	ViewSeatRecords button	To make sure the button opens the ViewSRecords form	The ViewSRecord form opens	The correct form opened
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SeatingPlan

Test No.	Testing Field	Reason for test	Expected outcome	Outcome
27	Tabs	To make sure that using the tab buttons takes you to either the day1 seating plan or day2 seating plan dependant on which one is clicked	The tab buttons correctly link to the correct seating plans for each day	The tab buttons linked correctly
28	Seat buttons	To ensure that clicking an unbooked seat button will open up the DataEntry form.	The DataEntry form will be shown when the Seat button is clicked	The DataEntry form opened correctly

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Reference to evidence

Reference	Screenshot
1	 <p>A screenshot of a web browser window titled "Login". The page has a light gray background and the word "Login" in a large, bold, black font at the top center. Below the title, there are two input fields: "Username:" with the text "user" and "Password:" with seven black dots. An "Error" dialog box is overlaid on the page, featuring a red circle with a white 'X' icon and the text "Invalid Username or Password". An "OK" button is located at the bottom right of the dialog box.</p>
2	 <p>A screenshot of a web browser window titled "Login". The page has a light gray background and the word "Login" in a large, bold, black font at the top center. Below the title, there are two input fields: "Username:" with the text "admin" and "Password:" with five black dots. An "Error" dialog box is overlaid on the page, featuring a red circle with a white 'X' icon and the text "Invalid Username or Password".</p>

The screenshot shows a software window titled "DataEntry" with a sub-header "Booking". The window contains several input fields and a "Book" button. The "First Name" field is highlighted in red and contains the text "M47h3wE*", indicating an error. A message at the bottom of the window states "One or more fields contain incorrect information".

Seat:	J11	Day:	1
Price:	7.25	<input type="checkbox"/> Disabled	
Title:	[Dropdown menu]		
First Name:	M47h3wE*		
Surname:	[Empty field]		
House Name/No:	[Empty field]		
Address Line 1:	[Empty field]		
Address Line 2:	[Empty field]		
Town:	[Empty field]		
County:	[Empty field]		
Postcode:	[Empty field]		
Email:	[Empty field]		
Contact No:	[Empty field]		

Buttons: Cancel, Book

Message: One or more fields contain incorrect information

DataEntry Booking

Seat: J11 Day: 1

Price: 7.25

Disabled

Title: [dropdown]

First Name: [text box]

Surname: **0u7713r\$**

House Name/No: [text box]

Address Line 1: [text box]

Address Line 2: [text box]

Town: [text box]

County: [text box]

Postcode: [text box]

Email: [text box]

Contact No: [text box]

Cancel One or more fields contain incorrect information Book

5

Booking

Seat: J11 Day: 1

Price: 7.25

Disabled

Title:

First Name:

Surname:

House Name/No: **\$a\$h4 €10\$3**

Address Line 1:

Address Line 2:

Town:

County:

Postcode:

Email:

Contact No:

Cancel One or more fields contain incorrect information Book

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The screenshot shows a software window titled "DataEntry" with a sub-header "Booking". The window contains several input fields and a checkbox. The "Seat" field contains "J11" and the "Day" field contains "1". The "Price" field contains "7.25". There is a "Disabled" checkbox which is unchecked. Below these are fields for "Title" (a dropdown menu), "First Name", "Surname", "House Name/No.", "Address Line 1", "Address Line 2", "Town", "County", "Postcode", "Email", and "Contact No.". The "Address Line 1" field contains the text "20 E road" and is highlighted with a red background, indicating an error. At the bottom, there is a "Cancel" button, a message "One or more fields contain incorrect information", and a "Book" button.

Seat:	J11	Day:	1
Price:	7.25	<input type="checkbox"/> Disabled	
Title:	[Dropdown]		
First Name:	[Text Field]		
Surname:	[Text Field]		
House Name/No:	[Text Field]		
Address Line 1:	20 E road		
Address Line 2:	[Text Field]		
Town:	[Text Field]		
County:	[Text Field]		
Postcode:	[Text Field]		
Email:	[Text Field]		
Contact No:	[Text Field]		

Buttons: Cancel, Book

Message: One or more fields contain incorrect information

The screenshot shows a software window titled "DataEntry" with a sub-header "Booking". The window contains several input fields and a checkbox. At the bottom, there is a "Cancel" button, a message "One or more fields contain incorrect information", and a "Book" button.

Seat:	<input type="text" value="J11"/>	Day:	<input type="text" value="1"/>
Price:	<input type="text" value="7.25"/>	<input type="checkbox"/> Disabled	
Title:	<input type="text"/>		
First Name:	<input type="text"/>		
Surname:	<input type="text"/>		
House Name/No:	<input type="text"/>		
Address Line 1:	<input type="text"/>		
Address Line 2:	<input type="text" value="50% Avenue"/>		
Town:	<input type="text"/>		
County:	<input type="text"/>		
Postcode:	<input type="text"/>		
Email:	<input type="text"/>		
Contact No:	<input type="text"/>		

Buttons:

Message: One or more fields contain incorrect information

DataEntry Booking

Seat: Day:

Price:

Disabled

Title:

First Name:

Surname:

House Name/No:

Address Line 1:

Address Line 2:

Town:

County:

Postcode:

Email:

Contact No:

One or more fields contain incorrect information

The screenshot shows a software window titled "DataEntry" with a sub-header "Booking". The window contains several input fields and a validation message. The "Town" field is highlighted in red, indicating an error.

Seat:	J11	Day:	1
Price:	7.25	<input type="checkbox"/> Disabled	
Title:	[Dropdown menu]		
First Name:	[Text field]		
Surname:	[Text field]		
House Name/No:	[Text field]		
Address Line 1:	[Text field]		
Address Line 2:	[Text field]		
Town:	£u77on £oldfi31d		
County:	[Text field]		
Postcode:	[Text field]		
Email:	[Text field]		
Contact No:	[Text field]		

Buttons: Cancel, Book

Message: One or more fields contain incorrect information

The screenshot shows a software window titled "DataEntry" with a sub-header "Booking". The window contains several input fields and a validation message. The "Seat" field contains "J11" and the "Day" field contains "1". The "Price" field contains "7.25". There is a "Disabled" checkbox which is unchecked. Below these are fields for "Title" (a dropdown menu), "First Name", "Surname", "House Name/No", "Address Line 1", "Address Line 2", "Town", "County" (with "3a\$ Midland\$" selected), "Postcode", "Email", and "Contact No". At the bottom, there are "Cancel" and "Book" buttons. A validation error message reads: "One or more fields contain incorrect information".

Seat:	J11	Day:	1
Price:	7.25	<input type="checkbox"/> Disabled	
Title:	[Dropdown Menu]		
First Name:	[Text Field]		
Surname:	[Text Field]		
House Name/No:	[Text Field]		
Address Line 1:	[Text Field]		
Address Line 2:	[Text Field]		
Town:	[Text Field]		
County:	3a\$ Midland\$		
Postcode:	[Text Field]		
Email:	[Text Field]		
Contact No:	[Text Field]		

Buttons: Cancel, Book

Message: One or more fields contain incorrect information

The screenshot shows a software window titled "DataEntry" with a sub-header "Booking". The window contains several input fields and a checkbox. The "Seat" field contains "J11" and the "Day" field contains "1". The "Price" field contains "7.25". There is a "Disabled" checkbox which is unchecked. Below these are fields for "Title" (a dropdown menu), "First Name", "Surname", "House Name/No", "Address Line 1", "Address Line 2", "Town", "County", "Postcode" (containing "B6 223" in a red box), "Email", and "Contact No". At the bottom, there is a "Cancel" button, a message "One or more fields contain incorrect information", and a "Book" button.

Seat:	J11	Day:	1
Price:	7.25	<input type="checkbox"/> Disabled	
Title:	[Dropdown]		
First Name:	[Text Field]		
Surname:	[Text Field]		
House Name/No:	[Text Field]		
Address Line 1:	[Text Field]		
Address Line 2:	[Text Field]		
Town:	[Text Field]		
County:	[Text Field]		
Postcode:	B6 223		
Email:	[Text Field]		
Contact No:	[Text Field]		

Buttons: Cancel, Book

Message: One or more fields contain incorrect information

The image shows a screenshot of a software application window titled "DataEntry" with a sub-header "Booking". The window contains several input fields and a "Book" button. The "Postcode" field is highlighted in orange, indicating an error. A message at the bottom states "One or more fields contain incorrect information".

Field	Value
Seat	J11
Day	1
Price	7.25
Disabled	<input type="checkbox"/>
Title	[Dropdown]
First Name	[Empty]
Surname	[Empty]
House Name/No	[Empty]
Address Line 1	[Empty]
Address Line 2	[Empty]
Town	[Empty]
County	[Empty]
Postcode	J67 4R4
Email	[Empty]
Contact No	[Empty]

Buttons: Cancel, Book

Message: One or more fields contain incorrect information

The image shows a software window titled "DataEntry" with a subtitle "Booking". The window contains several input fields and a checkbox. The "Seat" field contains "J11" and the "Day" field contains "1". The "Price" field contains "7.25". There is a "Disabled" checkbox which is unchecked. Below these are fields for "Title" (a dropdown menu), "First Name", "Surname", "House Name/No", "Address Line 1", "Address Line 2", "Town", "County", "Postcode", "Email" (containing "happy@net"), and "Contact No". At the bottom, there are "Cancel" and "Book" buttons. A message in the center of the bottom says "One or more fields contain incorrect information".

Seat	J11	Day	1
Price	7.25	<input type="checkbox"/> Disabled	
Title	[Dropdown]		
First Name	[Text Field]		
Surname	[Text Field]		
House Name/No	[Text Field]		
Address Line 1	[Text Field]		
Address Line 2	[Text Field]		
Town	[Text Field]		
County	[Text Field]		
Postcode	[Text Field]		
Email	happy@net		
Contact No	[Text Field]		

Buttons: Cancel, Book

Message: One or more fields contain incorrect information

The image shows a software window titled "DataEntry" with a sub-header "Booking". The window contains several input fields for booking information. At the top, there are fields for "Seat" (containing "J11") and "Day" (containing "1"). Below these is a "Price" field (containing "7.25") and a "Disabled" checkbox which is unchecked. The lower section of the form includes a "Title" dropdown menu, followed by text input fields for "First Name", "Surname", "House Name/No", "Address Line 1", "Address Line 2", "Town", "County", "Postcode", "Email", and "Contact No". The "Email" field contains the text "Matthew@Cutler.c" and is highlighted with a red background, indicating a validation error. At the bottom of the window, there are "Cancel" and "Book" buttons. A message in the center of the bottom area reads "One or more fields contain incorrect information".

Booking

Seat: J11 Day: 1

Price: 7.25

Disabled

Title: [Dropdown]

First Name: [Text Field]

Surname: [Text Field]

House Name/No: [Text Field]

Address Line 1: [Text Field]

Address Line 2: [Text Field]

Town: [Text Field]

County: [Text Field]

Postcode: [Text Field]

Email: Matthew@Cutler.c

Contact No: [Text Field]

Cancel One or more fields contain incorrect information Book

The screenshot shows a software window titled "DataEntry" with a sub-header "Booking". The window contains several input fields and a checkbox. The "Seat" field contains "J11" and the "Day" field contains "1". The "Price" field contains "7.25". There is a "Disabled" checkbox which is unchecked. Below these are fields for "Title" (a dropdown menu), "First Name", "Surname", "House Name/No", "Address Line 1", "Address Line 2", "Town", "County", "Postcode", and "Email". The "Contact No" field contains "012165722887" and is highlighted in red. At the bottom, there is a "Cancel" button, a message "One or more fields contain incorrect information", and a "Book" button.

Seat	J11	Day	1
Price	7.25	<input type="checkbox"/> Disabled	
Title	[Dropdown]		
First Name	[Text Field]		
Surname	[Text Field]		
House Name/No	[Text Field]		
Address Line 1	[Text Field]		
Address Line 2	[Text Field]		
Town	[Text Field]		
County	[Text Field]		
Postcode	[Text Field]		
Email	[Text Field]		
Contact No	012165722887		

Buttons: Cancel, Book

Message: One or more fields contain incorrect information

The image shows a software window titled "DataEntry" with a sub-header "Booking". The window contains several input fields and a checkbox. The "Seat" field contains "J11" and the "Day" field contains "1". The "Price" field contains "7.25". There is a "Disabled" checkbox which is unchecked. Below these are fields for "Title" (a dropdown menu), "First Name", "Surname", "House Name/No", "Address Line 1", "Address Line 2", "Town", "County", "Postcode", and "Email". The "Contact No" field contains "1223145774930" and is highlighted in red. At the bottom, there is a "Cancel" button, a message "One or more fields contain incorrect information", and a "Book" button.

Seat:	J11	Day:	1
Price:	7.25	<input type="checkbox"/> Disabled	
Title:	[Dropdown]		
First Name:	[Text Field]		
Surname:	[Text Field]		
House Name/No:	[Text Field]		
Address Line 1:	[Text Field]		
Address Line 2:	[Text Field]		
Town:	[Text Field]		
County:	[Text Field]		
Postcode:	[Text Field]		
Email:	[Text Field]		
Contact No:	1223145774930		

Buttons: Cancel, Book

Message: One or more fields contain incorrect information

DataEntry

Booking

Seat: J11 Day: 1

Price: 7.25

Disabled

Title:

First Name:

Surname:

House Name/No:

Address Line 1:

Address Line 2:

Town:

County:

Postcode:

Email:

Contact No: 1775ou18375-a

Cancel One or more fields contain incorrect information Book

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ViewCustomerRecords

Customer Details

1 of 7

CustomerID	Title	FirstName	Surname	Date	HouseNumName	Address 1
1	Mr	Daniel	McLoser	22/01/2013	18	Thanet Grove
2	Mrs	Ardam	Zaman	13/01/2013	6	Sandwell Place
3	Mr	Joseph	Zolna	31/01/2013	80	Anstey Road
19	Mrs.	Ardam	Dardam	04/02/2013 12:39	200	Pizza Lane
20	Dr.	Jamie	Bragninggan	04/02/2013 12:44	40	Sixty Road
22	Mr.	Simon	Brickwell	27/02/2013 09:32	12	Fredrick Road
23	Miss	Ardam	Zaman	15/03/2013 10:34	Night House	Thai Lane

Sorting: CustomerID Surname

Search/Filter: Surname

Print Report

Close

15

ViewCustomerRecords

Customer Details

1 of 7

CustomerID	Title	FirstName	Surname	Date	HouseNumName	Address 1
20	Dr.	Jamie	Bragninggan	04/02/2013 12:44	40	Sixty Road
22	Mr.	Simon	Brickwell	27/02/2013 09:32	12	Fredrick Road
19	Mrs.	Ardam	Dardam	04/02/2013 12:39	200	Pizza Lane
1	Mr	Daniel	McLoser	22/01/2013	18	Thanet Grove
2	Mrs	Ardam	Zaman	13/01/2013	6	Sandwell Place
23	Miss.	Ardam	Zaman	15/03/2013 10:34	Night House	Thai Lane
3	Mr	Joseph	Zolna	31/01/2013	80	Anstey Road

Sorting: CustomerID Surname

Search/Filter: Surname

Print Report

Close

ViewCustomerRecords

Customer Details

1 of 7

CustomerID	Title	FirstName	Surname	Date	HouseNumName	Address1
1	Mr	Daniel	McLoser	22/01/2013	18	Thanet Grove
2	Mrs	Ardam	Zaman	13/01/2013	6	Sandwell Place
3	Mr	Joseph	Zolna	31/01/2013	80	Anstey Road
19	Mrs.	Ardam	Dardam	04/02/2013 12:39	200	Pizza Lane
20	Dr.	Jamie	Bragninggan	04/02/2013 12:44	40	Soty Road
22	Mr.	Simon	Brickwell	27/02/2013 09:32	12	Fredrick Road
23	Misc	Ardam	Zaman	15/03/2013 10:34	Night House	Thai Lane

Sorting: CustomerID Surname

Search/Filter: CustomerID Two

ViewCustomerRecords

Customer Details

1 of 7

CustomerID	Title	FirstName	Surname	Date	HouseNumName	Address1
1	Mr	Daniel	McLoser	22/01/2013	18	Thanet Grove
2	Mrs	Ardam	Zaman	13/01/2013	6	Sandwell Place
3	Mr	Joseph	Zolna	31/01/2013	80	Anstey Road
19	Mrs.	Ardam	Dardam	04/02/2013 12:39	200	Pizza Lane
20	Dr.	Jamie	Bragninggan	04/02/2013 12:44	40	Soty Road
22	Mr.	Simon	Brickwell	27/02/2013 09:32	12	Fredrick Road
23	Misc	Ardam	Zaman	15/03/2013 10:34	Night House	Thai Lane

Sorting: CustomerID Surname

Search/Filter: CustomerID West Midlands

ViewSRecords

Seat Details

Day1 Day2

1 of 198

CustomerID	SeatID	Price	Disabled
0	H16	7.25	<input type="checkbox"/>
0	H17	7.25	<input type="checkbox"/>
0	H18	7.25	<input type="checkbox"/>
0	H19	7.25	<input type="checkbox"/>
0	J1	7.25	<input type="checkbox"/>
0	J2	7.25	<input type="checkbox"/>
0	J3	7.25	<input type="checkbox"/>
0	J4	7.25	<input type="checkbox"/>
0	J5	7.25	<input type="checkbox"/>
0	J6	7.25	<input type="checkbox"/>
0	J7	7.25	<input type="checkbox"/>
0	J9	7.25	<input type="checkbox"/>
0	J10	7.25	<input type="checkbox"/>
0	J11	7.25	<input type="checkbox"/>
0	J12	7.25	<input type="checkbox"/>
0	J13	7.25	<input type="checkbox"/>
0	J14	7.25	<input checked="" type="checkbox"/>
0	J15	7.25	<input checked="" type="checkbox"/>
0	J16	7.25	<input type="checkbox"/>

Sorting

CustomerID SeatID

Search/Filter: SeatID

Print Report Close

ViewSRecords

Seat Details

Day1 Day2

1 of 198

CustomerID	SeatID	Price	Disabled
0	A1	10	<input type="checkbox"/>
0	A10	10	<input type="checkbox"/>
0	A11	10	<input checked="" type="checkbox"/>
0	A12	10	<input checked="" type="checkbox"/>
0	A13	10	<input type="checkbox"/>
0	A14	10	<input type="checkbox"/>
0	A15	10	<input type="checkbox"/>
0	A2	10	<input type="checkbox"/>
0	A3	10	<input type="checkbox"/>
0	A4	10	<input type="checkbox"/>
0	A5	10	<input type="checkbox"/>
0	A6	10	<input type="checkbox"/>
0	A7	10	<input type="checkbox"/>
3	A8	10	<input type="checkbox"/>
0	A9	10	<input type="checkbox"/>
0	B1	10	<input type="checkbox"/>
0	B10	10	<input type="checkbox"/>
0	B11	10	<input type="checkbox"/>
0	B12	10	<input checked="" type="checkbox"/>

Sorting: CustomerID SeatID

Search/Filter: SeatID

Print Report Close

ViewSRecords

Seat Details

Day1 Day2

1 of 198

CustomerID	SeatID	Price	Disabled
0	A1	10	<input type="checkbox"/>
0	A10	10	<input type="checkbox"/>
0	A11	10	<input checked="" type="checkbox"/>
0	A12	10	<input checked="" type="checkbox"/>
0	A13	10	<input type="checkbox"/>
0	A14	10	<input type="checkbox"/>
0	A15	10	<input type="checkbox"/>
0	A2	10	<input type="checkbox"/>
0	A3	10	<input type="checkbox"/>
0	A4	10	<input type="checkbox"/>
0	A5	10	<input type="checkbox"/>
0	A6	10	<input type="checkbox"/>
0	A7	10	<input type="checkbox"/>
3	A8	10	<input type="checkbox"/>
0	A9	10	<input type="checkbox"/>
0	B1	10	<input type="checkbox"/>
0	B10	10	<input type="checkbox"/>
0	B11	10	<input type="checkbox"/>
0	B12	10	<input checked="" type="checkbox"/>

Sorting: CustomerID SeatID

Search/Filter: CustomerID two

Print Report Close

ViewSRRecords

Seat Details

Day1 Day2

1 of 198

CustomerID	SeatID	Price	Disabled
0	A1	10	<input type="checkbox"/>
0	A10	10	<input type="checkbox"/>
0	A11	10	<input checked="" type="checkbox"/>
0	A12	10	<input checked="" type="checkbox"/>
0	A13	10	<input type="checkbox"/>
0	A14	10	<input type="checkbox"/>
0	A15	10	<input type="checkbox"/>
0	A2	10	<input type="checkbox"/>
0	A3	10	<input type="checkbox"/>
0	A4	10	<input type="checkbox"/>
0	A5	10	<input type="checkbox"/>
0	A6	10	<input type="checkbox"/>
0	A7	10	<input type="checkbox"/>
3	A8	10	<input type="checkbox"/>
0	A9	10	<input type="checkbox"/>
0	B1	10	<input type="checkbox"/>
0	B10	10	<input type="checkbox"/>
0	B11	10	<input type="checkbox"/>
0	B12	10	<input checked="" type="checkbox"/>

Sorting

CustomerID

SeatID

Search/Filter: CustomerID West Midlands

Print Report Close

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ReportForm

Customer Details | Seat Details Day 1 | Seat Details Day 2

1 of 1 | 100% | Find | Next

Customer Details

Customer	Title	First Name	Surname	House Num Name	Address 1	Address 2	Postcode	Email	Contact
1	Mr	Daniel	McLoser	18	Thanet Grove		B74 3RS	cesque@lol.com	0792
2	Mrs	Ardam	Zaman	6	Sandwell Place		S41 1EL	Drad.am.com	0719
3	Mr	Joseph	Zolna	80	Anstey Road		B44 8AL	josephzolna@hotmail.co.uk	0766
19	Mrs.	Ardam	Dardam	200	Pizza Lane	Hamburger	P45 7AO	ardam@darmda.com	0293
20	Dr.	Jamie	Bragninggan	40	Sixty Road		T07 7UT	jamie@bran.com	0791
23	Miss.	Ardam	Zaman	Night House	Thai Lane		P47 2YF	ilikeflowers@hotmail.com	0721
22	Mr.	Simon	Brickwell	12	Fredrick Road		B6 6DJ	web@keaston.bham.sch.uk	0123
24	Prof.	Charles	Lee	168	Chester Road		NG10 6RW	charles.lee@gmail.com	0782
25	Dr.	Pizza	Hamburgers	10	Hug End		B42 1SS	pizza@hmaburges.com	0722
26	Dr.	Victor	Von Steel	No.1 Volcano	Bleached Corridor, Secret Base	Secret Island	N42 1SS	TakingOverTheWorld@aol.com	0557
27	Mr.	Matthew	Brownie	1899	Crumpton Lane		L32 6TR	M.B@gmail.com	0126
28	Miss.	Beasleia	Beasley	69	SWAG	YOLO	B421HB	NO@NO.NO	0121

Page Setup | Print Report | Close

21

Assessed by the teacher to have printed correctly

The screenshot shows a software window titled "ReportForm" with three tabs: "Customer Details", "Seat Details Day 1", and "Seat Details Day 2". The "Seat Details Day 1" tab is active, displaying a table with the following data:

Customer ID	Seat ID	Price	Disabled
1	E14	£12.5	False
2	E15	£12.5	True
3	A8	£10	False
25	G4	£7.25	False
28	D13	£12.5	False
Total Income:		£54.75	

Below the table, there are three buttons: "Page Setup", "Print Report", and "Close". The window also features a navigation bar at the top with "1 of 1" and "Find | Next" options.

The screenshot shows a software window titled "ReportForm" with three tabs: "Customer Details", "Seat Details Day 1", and "Seat Details Day 2". The "Seat Details Day 2" tab is active, displaying a table titled "Seat Table Day 2". The table has four columns: "Customer ID", "Seat ID", "Price", and "Disabled". The data rows are as follows:

Customer ID	Seat ID	Price	Disabled
20	J11	£7.25	False
23	F15	£12.5	True
24	C2	£10	False
26	L14	£7.25	False
27	G6	£7.25	False
29	D13	£12.5	False
Total Income:		£56.75	

At the bottom of the window, there are three buttons: "Page Setup", "Print Report", and "Close". The window also features a navigation bar at the top with "1 of 1" and "Find | Next" options.

Usability

I gave the questionnaire to a few people in my computing class to rate the usability of the program. This is a good measure of the quality of the program as those completing the questionnaire have a good idea of what a good program consists of.

I also gave my questionnaire to people outside of my computing class so that I could find out the usability for those less familiar with the program.

	Navigation	Booking	Deleting	Sorting	Searching	Printing
Adam Zaman	5	5	5	5	4	5
Daniel James	5	4	4	5	5	5
Daniel Beasley	5	5	4	5	5	5
Jamie Brannigan	5	5	4	5	5	5

As the results of the questionnaire are all either 4 or 5, I can conclude that the usability of the program is very good. The feedback was very positive and it was said that the program was very easy to navigate and use in all areas except for the deletion of bookings which users had a slightly more difficult time to locate. But once located, the deletion of bookings was easy.

Suitability

The main aims of my project were:

- Allow customer details such as name, email, address etc. to be input and stored into a database.
- Display all the available seats and show if they have disabled access or not so that it is easy to tell which seats are available.
- Enable seats to be booked for each day so that the same seat can have multiple days on which it is booked.
- Ensure that seats are not double booked as this would cause several problems.
- Store and retrieve the details of all the bookings made by a customer for use in contacting the customer and viewing total income.
- Output the total ticket sales for each performance so the company can tell if they will make a profit.

The solution successfully addresses each of these aims and performs them to a good standard and therefore the suitability of the solution is excellent.

Huw Talliss

Performance

All the tests I carried out as to whether the solution performed correctly were passed by the solution apart from an issue where the colours of seats were not updated at the correct times but this has now been fixed.

Several bugs including syntax bugs occurred during the creation of the program but at this point there are no syntax errors or warnings.

As there are no major problems with the program left, I consider the program to perform extremely well.

Future Improvements

The solution performs very well for the particular seating plan and number of days that is required by SADS. A future improvement could be to easily edit the seating plan or add multiple seating plans and allow a greater number of days to be added.

A greater security system could be implemented to allow access to different areas of the system dependent of the login information entered. This could enable the information of the system to be more secure and protect it from editing to a further extent than is currently implemented.

The method of deleting a booking could be made more evident to the user and more sophisticated through a redesign or through information displayed on the form itself.

Finally, the forms for viewing records could be better designed and the record viewer could be made to change size to fill the size of the window allowing the user to increase the size of the window and for the form's layout to still be correct.