

2021

Information Technology PAT



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Topic & Scope

Topic

The Children's Hospital Trust is an independent and local non-profit organization situated in Rondebosch, Cape Town. It raises funds to support specific projects and programmes to help advance child healthcare through the Red Cross War Memorial Children's Hospital. The Trust raises funds for the upgrade and expansion of the Hospital's buildings, the purchase of state-of-the-art medical equipment as well as continues providing life-changing and life-saving care for children. The Trust relies on donations and fundraising events in order to fund these needs. The problem that the organization is facing is that the organization is not able to keep track of the donations received, how many volunteers have volunteered in the organization as well as the amount of money has been accumulated from the bake sale.

Solution

The management of Children's Hospital Trust has asked me to develop a software application to manage their operations (Events, Donations and Volunteers) by keeping the records of the bake sale, the donations and the information of the volunteers. This will allow all bake sale orders to be sent out on time as well. The software application will also be able to calculate the amount of money that has been accumulated from donations as well as from the bake sale.

Scope

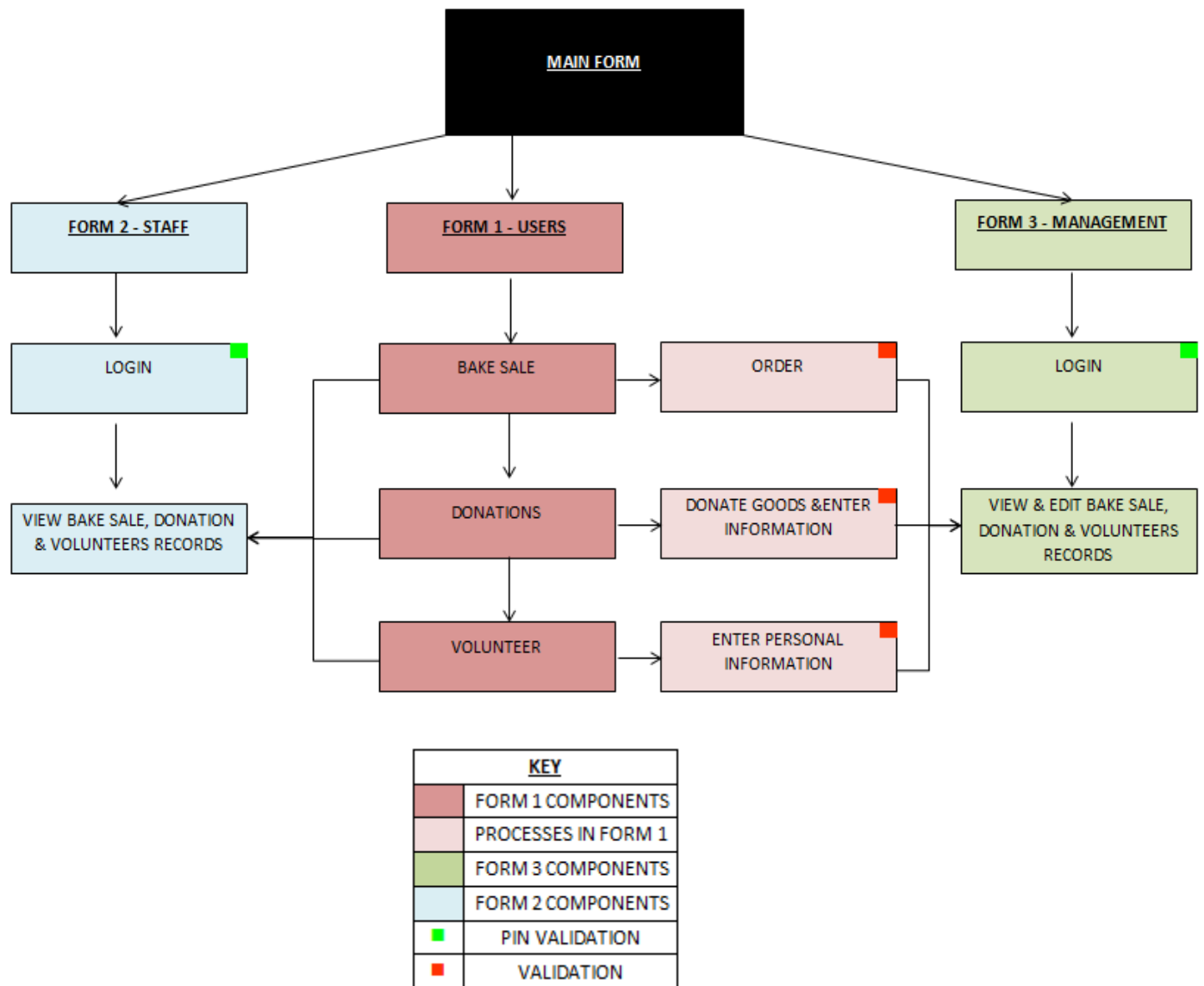
This system is designed for a locally based organization which will be used by the personnel based in Cape Town; although they may want to expand in the near future.

(207 words)

User Requirements

<u>Role</u>		<u>Activity</u>	<u>Limitations</u>
<u>Client</u>	Clients for the services offered	<ul style="list-style-type: none">• Order specific baked goods• Decide whether it will be for a delivery or not• Donate money and goods• Volunteer to work for the Children's hospital programme• View the order that they have placed, view this donations that they have donated, view all the personal information they have entered to be a volunteer.	<ul style="list-style-type: none">• Cannot edit other client's information
<u>Manager</u>	Maintain and oversee the processes that happens in the organization	<ul style="list-style-type: none">• View all orders• View & edit details of the donator and donations• View & edit records about the volunteer• Delete any records about the donor, client or volunteer that is incorrect.• Add another person's record directly from the organization• Calculate how many money donations were accumulated• Calculate the amount of money the customer has to pay for the order	<ul style="list-style-type: none">• No limitations
<u>Staff</u>	Oversee the processes that happens in the organization	<ul style="list-style-type: none">• View all the orders• View all the records of the donations received• View all the volunteers records	<ul style="list-style-type: none">• Cannot edit information

Navigation



Database Design

TABLE 1: BAKE SALE CUSTOMERS

This table will hold the records of all details of the customers that have placed an order.

<u>Attributes</u>	<u>Data Type</u>	<u>Description</u>	<u>Example</u>	<u>Field Size</u>	<u>Constraints</u>
CustID(PK)	Text	Uniquely Identifies a customer	BP16	4	Cannot be null
First_Name	Text	Name of Customer	Bella	20	
Contact_Number	Text	Contact number of Customer	085 452 6325	10	
Address	Text	The address of where the order needs to be delivered	16 Blue Street	30	
Delivery	Boolean: Yes/No	Whether the customer would like a delivery or not	Yes	**	
DateOfDropOff	Date/Time	The date that the order will be collected or delivered	09/05/2021	**	
Total	Text	The total of the order	R25 .00	9	

TABLE 2: ORDERS

This table will hold all the orders that the customer has placed.

This table is linked to Table 1: Bake Sale Customers, in which all orders pertaining to a certain customer will be displayed.

<u>Attributes</u>	<u>Data Type</u>	<u>Description</u>	<u>Example</u>	<u>Field Size</u>	<u>Constraints</u>
OrderID	Text	A unique Number given when an order has been placed	O10	3	No Constraints
Product	Text	The type of delicacy ordered	Chocolate Cake Rainbow Macaroons	225	
Quantity	Number	The quantity of the delicacy	2	2	
Cookie_Pack	Text	The compulsory Pack of cookies	2	2	
CustID(PK)	Text	Uniquely Identifies a customer	BP16	4	

TABLE 3: DONATIONS

This table will hold the Donations that will be received.

<u>Attributes</u>	<u>Data Type</u>	<u>Description</u>	<u>Example</u>	<u>Field Size</u>	<u>Constraints</u>
DonationCustomer(PK)	Text	Uniquely Identifies a donator	BP22	4	Cannot be null
First_Name	Text	Name of Donator	Bella	20	
Last_Name	Text	Surname of Donator	Park	20	
Contact_Number	Text	Contact number of Donator	085 452 6325	20	
Donation	Text	The donation to be donated	Clothing	15	
Other_Donation	Text	Any other non-specified donation	None	15	
Date_Of_DropOff	Text	Date for the goods to be dropped off	16/07/2021	10	

TABLE 4: VOLUNTEERS

This table will store all the information about potential volunteers

<u>Attributes</u>	<u>Data Type</u>	<u>Description</u>	<u>Example</u>	<u>Field Size</u>	<u>Constraints</u>
VolunteerID(PK)	Text	Uniquely Identifies a Volunteer	BP52	4	Cannot be null
First_Name	Text	Name of Volunteer	Bella	20	
Last_Name	Text	Surname of Volunteer	Park	20	
Age	Text	Age of Volunteer	18	2	
DateOfBirth	Text	D.O.B of Volunteer	16/07/2002	10	
Contact_Number	Text	Contact number of Volunteer	085 452 6325	10	
Email	Text	Email of Volunteer	BellaPark@gmail.com	20	
Address	Text	Address of Volunteer	162 Blue Crescent	30	
Education	Text	Education of Volunteer	Claremont High	30	
DateOfApplication	Text	Date of which the application was made	18/04/2021	10	
VolunteeringReason	Text	Reason for volunteering	Would like some volunteer experience and help the community	255	
MedicalConditions	Text	Any medical conditions of Volunteer	Asthma	255	
Medication	Text	Any current medication of Volunteer	Albuterol Inhaler	255	
PreviousVolunteerWork	Text	Any previous work of of Volunteer	None	255	

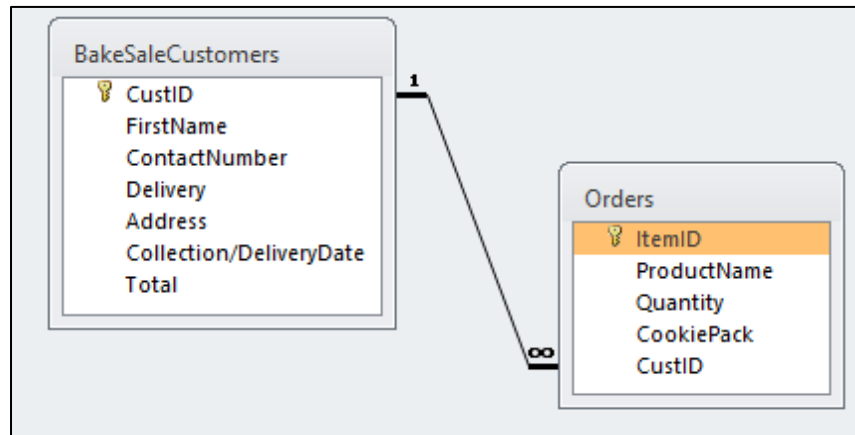
RELATIONSHIPS

Table Bake Sale Customers and Table Orders will be linked using a common field named CustID.

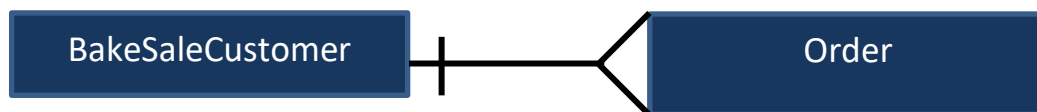
Parent Table: Bake Sale Customers

Child Table: Bake Sale Orders

Relationship: One - to- Many



DB DIAGRAM



Data Dictionary

Classes

Form 1 - frmRedCrossChildrenHospital - clsRedCross

This will calculate the total that the Customer will have to pay according to what they order. This class will be getting the quantity of each dessert and multiply it by the price of that dessert and display the total on the form. It will instantiate the object (Total) in the class, where it will be able to be called in the main form.

TRedCross			
Attributes	- - -	fQuantity :integer fPrice :real fTotal : real	<u>Scope:</u> Private
Methods	+ + + +	Constructor Create (iQuantity:integer, rPrice: real,rTotal:real; Function CalculateTotal:real; Function getPrice :real procedure setQuantity(iCupcakes,iMeringues,iTrifle,iMacaroons,iCake:integer) ; Function toString: string	<u>Scope:</u> Public

Text Files

There will be 3 text files used in the program, namely BakeSaleRecords, VolunteerRecords and DonationRecords.

BakeSaleRecords.txt	<ul style="list-style-type: none">• This will effectively record all the orders placed by customers for the organization to view in case a problem occurs in the future. A problem that could occur would be the business being sued for unethical behaviour; these records will be proof of their ethicality.• These records will also be able to be accessed at any given time by the manager if the manager would like to see how many orders have been placed or how many donations were received so that he/ she may roll out a future plan for the organization in terms of improving the state of the organization. These records are static and all information cannot be edited therefore making it more accurate for referencing.
VolunteerRecords.txt	
DonationRecords.txt	

Arrays/Advanced Programming Skill

1D ARRAY

There will be a one dimensional array used to check whether the correct password was entered for a specific username. This array is in frmRedCrossStaff .

<u>Name of Array</u>	arrStaffPin
<u>How many elements the array has</u>	10
<u>The data type of the array</u>	String
arrStaffPin: array [1 .. 10] of string = ('RCS2001', 'RCS2002', 'RCS2003', 'RCS2004', 'RCS2005', 'RCS2006', 'RCS2007', 'RCS2008', 'RCS2009', 'RCS2010');	

2D ARRAY

Since the donation verification has been done online, a code will be generated and used to verify their donation when they drop off the donations at a site.

<u>Name of Array</u>	arrCode
<u>How many elements the array has</u>	4 in total
<u>The data type of the array</u>	Integer
arrCode[i, j] := Random(10);	sgdCode.Cells[i, j] := IntToStr(arrCode[i, j])

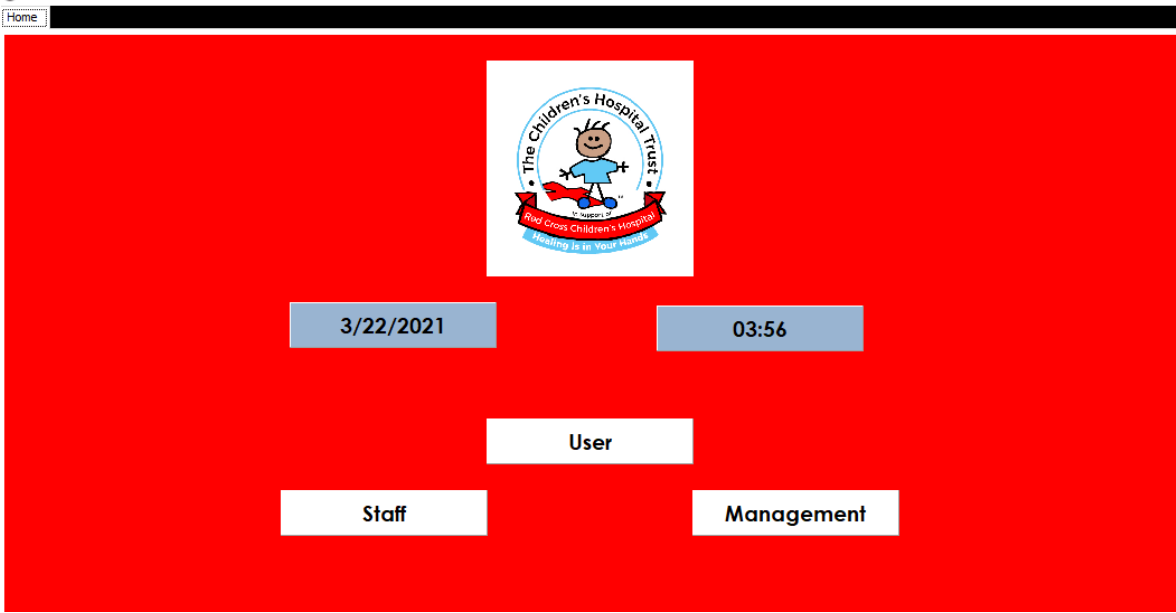
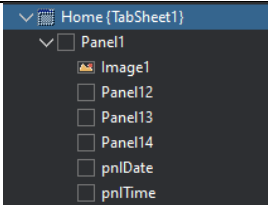
Databases

There will be 1 database (Red Cross Children's Hospital Database.mdb) with 4 tables (Bake Sale, Bake Sale Orders, Donations and Volunteers), two of which are linked using a common field being the CustID (Bake Sale & Bake Sale Orders)

The use of the databases has been explained under database design in this document (Pages: 5-9)

GUI Design

FORM 1 - USERS ONLY

<p>Design:</p> 	
<p>Purpose/Use:</p>	<p>This is the main form - allowing 3 different users access</p>
<p>Components:</p>	
<p>Data Validation:</p>	<p>NONE</p>

Design:

frmRedCross

Menu



Purpose/Use:

This form is the menu for users - this allows them to either order from the bake sale, donate or volunteer

Components:

Menu (TabSheet2)

Panel2

Image12

Image13

Image14

Image2

Data Validation:

NONE

Design:

frmRedCross

Bake Sale

Chocolate Cupcakes
 R 5.00

0

Strawberry Cheesecake
 R 10.00

0

Rainbow Macaroons
 R 6.00

0

Chocolate Cake
 R 11.00

0

Assorted Donuts
 R 8.00

0

Heart Meringue
 R 7.00

0

Fruit Trifle
 R 15.00

0

Strawberry Cookies
 R 5.00

0

NOTE: A HOSPITAL THEMED COOKIE PACK IS COMPULSORY TO BE BOUGHT WITH EACH ORDER!!! THIS IS TO CONTRIBUTE TO THE PLANNING AND RUNNING COSTS OF THE BAKE SALE.

☐ R 3.00

☐ R 3.00

Confirm Order

Help

Home

Purpose/Use:

The different desserts the user may order

Components:

Bake Sale (TabSheet3)

Panel3

btnHome

btnSaleConfirm

cbxAD

cbxCC

cbxCCake

cbxCookie1

cbxCookie2

cbxFT

cbxHM

cbxRM

cbxSb

cbxSC

Image10

Image3

Image4

Image5

Image6

Image7

Image8

Image9

imgCookie1

imgCookie2

Label1

Label10

Label2

Label3

Label4

Label5

Label6

Label7

Label8

lblCake

lblCookiest

lblCupca

lblDnu

lblMeringue

lblMeringue

lblPack

lblRainbw

lblSTrw

lblTrifle

spnCake

spnCheesecake

spnCookies

spnCupcakes

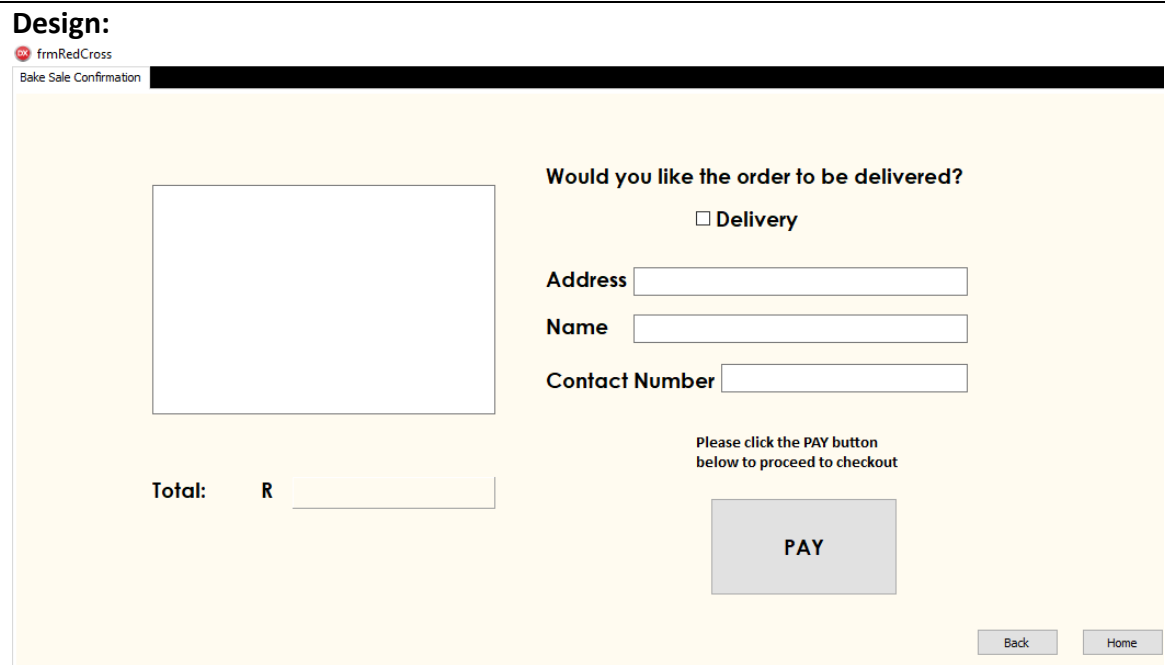
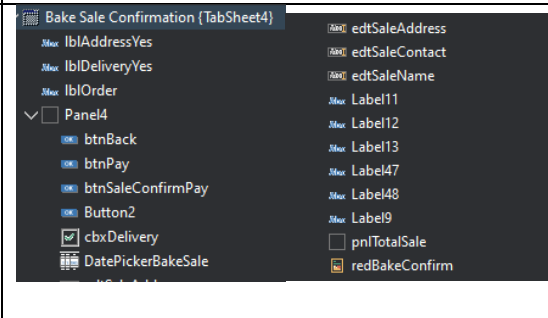
spnDonuts

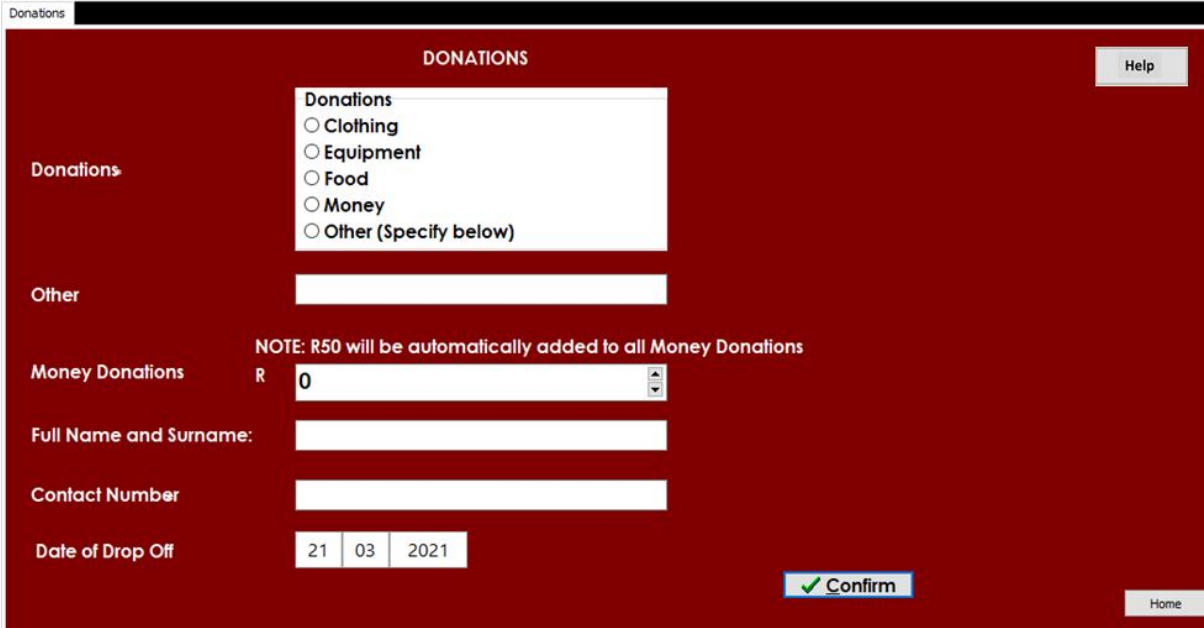
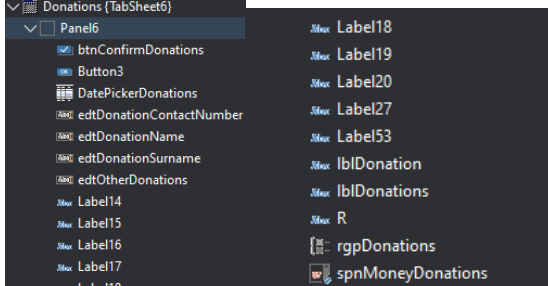
spnMacaroons

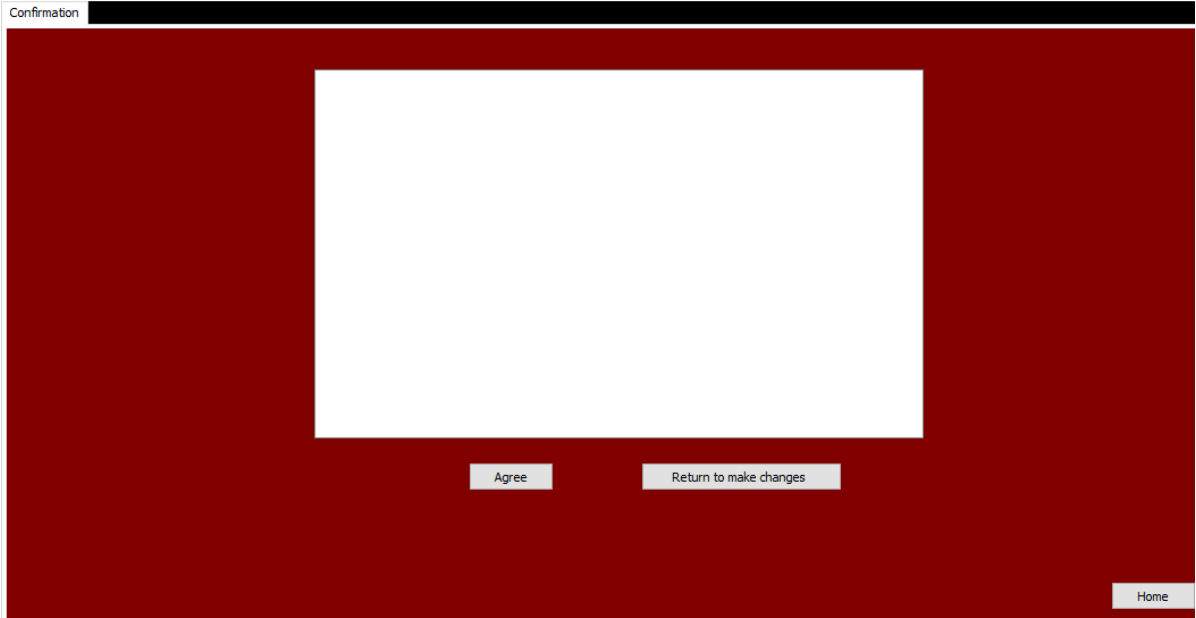
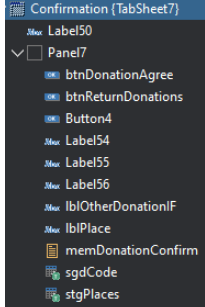
spnMeringue

Data Validation:

**Validates whether a cookie pack has been selected or not
If not selected an error message will appear**

<p>Design:</p> 	
<p>Purpose/Use:</p>	<p>A confirmation tab that will appear once an order has been processed</p>
<p>Components:</p>	
<p>Data Validation:</p>	<p>Validates whether the name, contact number and address fields are entered.</p> <p>Validates that a correct bank account number has been entered.</p>

<p>Design:</p> 	
<p>Purpose/Use:</p>	<p>This is a donation tab where users may enter what type of donations they would like to donate.</p>
<p>Components:</p>	
<p>Data Validation:</p>	<p>Validates that a type of donation has been chosen and that all the fields have been correctly entered. Validates that in the contact number field, only numbers may be entered</p>

Design: 	
Purpose/Use:	This is the confirmation for users to confirm their donation
Components:	
Data Validation:	NONE

Design:

frmRedCross

Volunteers

VOLUNTEERS

Help

Name

Date Of Application

21032021

Surname

Why would you like to volunteer?

(MAX 300 Characters)

Age

0

Date Of Birth

21032021

Medical Conditions

Contact Number

Current Medication

Email

Previous Volunteer Work

Address

Education

PLEASE ENSURE THAT ALL INFORMATION IS CORRECT BEFORE SUBMITTING

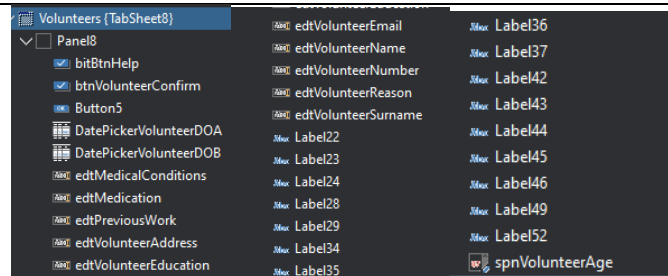
Submit

Home

Purpose/Use:

This is the volunteers tab where users may enter their information if they would like to volunteer

Components:



Data Validation:

Validates whether all the fields have been entered as well as a correct ID and Email address has been entered.

Design:

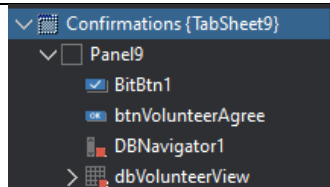
frmRedCross

Confirmations

Purpose/Use:

A confirmation tab will appear once information has been processed.

Components:



Data Validation:

NONE

FORM 2 - STAFF ONLY

<div style="border: 1px solid black; padding: 10px; background-color: #f0f0f0;"> Design: <div style="display: flex; justify-content: space-between; align-items: center;"> <div> frmRedCrossStaff </div> <div> — □ × </div> </div> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 5px;">Staff</div> <div style="background-color: #800000; color: white; padding: 20px; text-align: center; margin-top: 10px;"> <div style="display: flex; flex-direction: column; align-items: center; margin-top: 20px;"> <div style="display: flex; align-items: center; margin-bottom: 10px;"> Username <input style="width: 150px; height: 25px; border: 1px solid white;" type="text"/> </div> <div style="display: flex; align-items: center; margin-bottom: 10px;"> Password <input style="width: 150px; height: 25px; border: 1px solid white;" type="password"/> </div> <div style="margin-bottom: 10px;"> <input style="background-color: #ccc; color: black; padding: 5px 15px; border: none;" type="button" value="Enter"/> </div> </div> </div> </div>	
Purpose/Use:	The log in page for staff
Components:	<div style="background-color: #333; color: white; padding: 5px;"> Staff (TabSheet1) <ul style="list-style-type: none"> Panel2 <ul style="list-style-type: none"> btnStaffAccess edtStaffPassword edtStaffUsername Image1 Label1 Label3 </div>
Data Validation:	Validates that the correct password for a specific staff member has been entered

<p>Design:</p> <p>frmRedCrossStaff</p> <p>Menu</p> 	
<p>Purpose/Use:</p>	<p>Staff may choose what records they would like to see</p>
<p>Components:</p>	
<p>Data Validation:</p>	<p>Validates whether a password has been entered correctly or not If not an error message will appear until the correct password has been entered</p>

Design:

frmRedCrossStaff

Bake Sale

CustID(PK)	First_Name	Contact_Number	ChocolateCupcakes	StrawberryCheesecake	RainbowMacaroons	ChocolateCake	AssortedD
B95	Bella	084 526 2653	2	0	2	0	
J90	Jungkook	025 215 6352	2	0	2	0	
J77	Jimin	015 251 5156	0	0	0	0	
J12	Hosoek	012 253 6263	2	2	2	0	
Y54	Yoongi	014 256 2546	0	0	0	0	
K10	Taehyung	012 351 5263	2	0	2	0	
K48	Namjoon	056 545 4152	0	0	0	2	
C99	Claire	041 525 5236	0	2	0	2	
M63	Mitchell	096 451 1424	2	2	2	0	
H78	Hyungsik	012 523 8963	0	0	0	0	

Find record with the name:

FIND

SORT BY NAME (ASCENDING)

SORT BY CUSTOMER ID (DESCENDING)

MENU **Close**

Purpose/Use:

The staff will be able to see the records related to the bake sale as well as find a specific record

Components:

Bake Sale (TabSheet3)
 Panel3
 BitBtn2
 btnBSFind
 btnMenu
 btnsortBSAsc
 btnsortBSDesc
 dbgStaffBS
 edtFindBS

Data Validation:

Validates/Locates whether the name is valid and present in the table above

Design:

The screenshot shows a Windows form titled "frmRedCrossStaff" with a tab labeled "Donations". The form contains a table with the following data:

DonationCustomer(PK)	First_Name	Last_Name	Contact_Number	Donation	Other_Donation
BJ45	Beryy	Mellow	012 536 2536	Money	None
DJ52	Daisy	Jacobs	063 264 3611	Clothing	None
NJ42	Noah	Jakes	062 362 4123	Clothing	None
JM89	Jerry	Miller	056 625 5456	Food	None
BB45	Ben	Brown	023 564 5684	Clothing	None
JP45	Jimmy	Park	063 658 5484	Food	None
NB78	Salma	Jaffer	078 489 6566	Equipment	None
CM89	Liam	Johnson	096 121 5455	Food	None
FF86	Ferry	Fou	012 523 6523	Food	None

Below the table, there is a search section with the text "Find record with the name:" followed by a text input field and a "FIND" button. To the right of the input field are two buttons: "SORT BY NAME (ASCENDING)" and "SORT BY CUSTOMER ID (DESCENDING)". At the bottom right of the form are "MENU" and "Close" buttons.

Purpose/Use:

The staff will be able to see the records related to the donations as well as find a specific record

Components:

Donations (TabSheet4)
 Panel4
 BitBtn3
 btnDonationFind
 btnSortDonationID
 btnSortDonationName
 Button1
 > dbgStaffD
 edtFindDonation

Data Validation:

Validates/Locates whether the name is valid and present in the table above

Design:

frmRedCrossStaff


Volunteers

VolunteerID(PK)	First_Name	Last_Name	Age	DateOfBirth	ContactNumber	Email	Address
GH41	Kim	Lee	29	5/5/1991	066 536 4158	Zhang@gmail.com	green
GF41	Zhang	Wei	42	1/20/1978	023 663 5211	LiWei@gmail.com	5 Blue
YU12	Mia	Jo	42	2/2/1978	075 256 1253	Ahmad@gmail.com	29 Mil
YH99	Fatima	Ahmed	22	7/16/1998	053 125 3621	LiXiu@gmail.com	9108
AM22	Azaan	Mohammed	22	6/6/1998	063 536 1253	Yui@gmail.com	12 Be
II12	Mahi	Kumar	21	2/28/1999	025 322 2536	Mahi@gmail.com	6 Ani
IP56	Meera	Kumar	20	2/28/2000	014 545 1256	Meera@gmail.com	16 Gc
KL55	Yui	Kim	23	7/17/1997	023 632 2054	FatimaJ@gmail.com	195 V
HK77	Fatima	Jafer	23	9/19/1997	026 145 2536	Azaan@gmail.com	25 Ja
HJ89	Li Xiu	Ying	26	8/17/1994	012 264 1253	Fatima@gmail.com	14 Pu
HJ02	Ahmed	Rawoot	25	4/27/1995	023 023 1425	Mia@gmail.com	16 Bl
dd33	daisy	do	18	44276	0125648484	daisy.do@gmail.com	daisyl

Find record with the name:

SORT BY NAME (ASCENDING)

SORT BY CUSTOMER ID (DESCENDING)

MENU  Close

Purpose/Use:

The above 3 forms- allow the staff to view the records of the bake sale, donations and volunteers.

Components:

Volunteers (TabSheet5)




- > dbgStaffV
- Panel5
 - BitBtn4
 - BitBtn5
 - btnSortVolunteerID
 - btnSortVolunteerName
 - btnVolunteerFind
 - Button2
 - edtFindVolunteer

Data Validation:

Validates/Locates whether the name is valid and present in the table above

FORM 3 - MANAGER ONLY

<div style="border: 1px solid black; padding: 10px; background-color: #f0f0f0;"> Design: <div style="display: flex; justify-content: space-between; align-items: center;"> <div> frmRedCrossManagement </div> <div> — □ × </div> </div> <div style="background-color: #d3d3d3; padding: 2px; margin-top: 5px;">Manager</div> <div style="background-color: #800000; color: white; padding: 50px 10px; text-align: center;"> <div style="display: flex; flex-direction: column; align-items: center; margin-top: 20px;"> <div style="display: flex; align-items: center; gap: 10px;"> Username <input style="background-color: white; color: black; width: 150px; height: 25px;" type="text"/> </div> <div style="display: flex; align-items: center; gap: 10px; margin-top: 10px;"> Password <input style="background-color: white; color: black; width: 150px; height: 25px;" type="password"/> </div> <div style="margin-top: 10px;"> <input style="background-color: #d3d3d3; border: 1px solid black; padding: 5px 20px;" type="button" value="Enter"/> </div> </div> </div> </div>	
Purpose/Use:	Manager Login
Components:	<div style="background-color: #333; color: white; padding: 5px;"> ▼ Manager (TabSheet1) <div style="background-color: #444; color: white; padding: 5px; margin-top: 5px;"> ▼ Panel2 <div style="background-color: #555; color: white; padding: 5px; margin-top: 5px;"> btnStaffAccess edtManagerPassword edtManagerUsername Image1 Label1 Label3 </div> </div> </div>

<div data-bbox="175 191 1409 940"> <div>Design:</div> <div>frmRedCrossManagement</div> <div>Menu</div> <div> <div>Records</div> <div>  <div>Bake Sale Records</div> </div> <div>  <div>Donation Records</div> </div> <div>  <div>Volunteer Records</div> </div> <div>VIEW ALL RECORDS</div> <div>Close</div> </div> </div>	
Purpose/Use:	Manager may choose what records they would like to see
Components:	<div data-bbox="537 1222 782 1493"> <div>Menu {TabSheet2}</div> <div> <div>Panel1</div> <div> <div>BitBtn1</div> <div>Image12</div> <div>Image13</div> <div>Image14</div> <div>Label4</div> <div>Label5</div> <div>Label6</div> <div>Label7</div> <div>Panel7</div> </div> </div> </div>
Data Validation:	Validates whether a password has been entered correctly or not If not an error message will appear until the correct password has been entered

Design:

frmRedCrossManagement

Bake Sale

CustID(PK)	First_Name	Contact_Number	ChocolateCupcakes	StrawberryCheesecake	RainbowMacaroons	ChocolateCake	Assorte
B95	Bella	084 526 2653	2	0	2	0	
J90	Jungkook	025 215 6352	2	0	2	0	
J77	Jimin	015 251 5156	0	0	0	0	
J12	Hosoek	012 253 6263	2	2	2	0	
Y54	Yoongi	014 256 2546	0	0	0	0	
K10	Taehyung	012 351 5263	2	0	2	0	
K48	Namjoon	056 545 4152	0	0	0	2	
C99	Claire	041 525 5236	0	2	0	2	

Delete Record

MENU

Close

frmRedCrossManagement

Donations

DonationCustomer(PK)	First_Name	Last_Name	Contact_Number	Donation	Other_Donation
BJ45	Beryy	Mellow	012 536 2536	Money	None
DJ52	Daisy	Jacobs	063 264 3611	Clothing	None
NJ42	Noah	Jakes	062 362 4123	Clothing	None
JM89	Jerry	Miller	056 625 5456	Food	None
BB45	Ben	Brown	023 564 5684	Clothing	None
JP45	Jimmy	Park	063 658 5484	Food	None
NB78	Salma	Jaffer	078 489 6566	Equipment	None
CM89	Liam	Johnson	096 121 5455	Food	None

Add Record

Delete Record

MENU

Close

frmRedCrossManagement

Volunteers

VolunteerID(PK)	First_Name	Last_Name	Age	DateOfBirth	ContactNumber	Email
GH41	Kim	Lee	29	5/5/1991	066 536 4158	Zhang@gmail.com
GF41	Zhang	Wei	42	1/20/1978	023 663 5211	LiWei@gmail.com
YU12	Mia	Jo	42	2/2/1978	075 256 1253	Ahmad@gmail.com
YH99	Fatima	Ahmed	22	7/16/1998	053 125 3621	LiXiu@gmail.com
AM22	Azaan	Mohammed	22	6/6/1998	063 536 1253	Yui@gmail.com
II12	Mahi	Kumar	21	2/28/1999	025 322 2536	Mahi@gmail.com
IP56	Meera	Kumar	20	2/28/2000	014 545 1256	Meera@gmail.com
KL55	Yui	Kim	23	7/17/1997	023 632 2054	FatimaJ@gmail.com
HK77	Fatima	Jafer	23	9/19/1997	026 145 2536	Azaan@gmail.com

☐ Would you like to edit a volunteer?

Volunteer ID

NAME

SURNAME

AGE

DATE OF BIRTH

EMAIL

ADDRESS

EDUCATION

CONTACT NUMBER

DATE OF APPLICATION

MEDICAL CONDITIONS

MEDICATION

PREVIOUS WORK

REASON

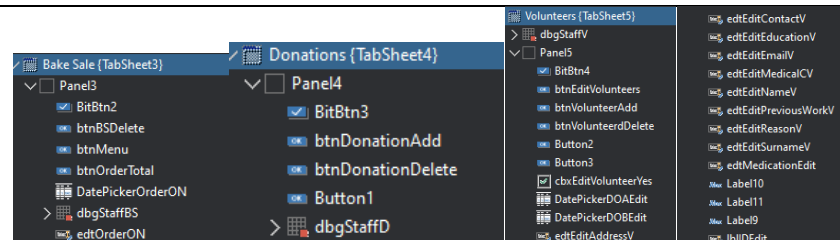
Add Record
Delete Record
Edit Record

MENU
Close

Purpose/Use:

The above 3 forms allow the manager to view and edit records.

Components:



Data Validation:

NONE

Design:

frmRedCrossManagement

All Records

All Records

Donation Records

View

Bake Sale Records

View

Purpose/Use:	This form allows the manager to view all the information/records	
Components:	<div> <div>All Records (TabSheet6)</div> <div> <div>BitBtn5</div> <div>btnBSView</div> <div>btnDV</div> <div>Label13</div> <div>memBakeSaleRecords</div> <div>memDonationRecords</div> <div>Panel6</div> <div>Label12</div> <div>Label14</div> <div>Label15</div> </div> </div>	
Data Validation:	NONE	

Software Tool - IPO

IPO - Detailed Table

TASK:	INPUT						PROCESSING		OUTPUT		
	General			Validation							
	Source (GUI Component)	Data Type	Format	What	Method	Feedback	What	How	What	Form at	Object
INTERFACE 1											
BAKE SALE	N/A								Date and Time Display	Date (dd/mm/yyyy) Time (hh:mm)	Panel
	Keyboard (Spin Edit for each delicacy)	Integer	Numeric	N/A			Stores the amount of per delicacy ordered	idelicacy ← spnDelicacies.value	The bake sale order of the customer	Text	Memo
	Mouse Click (cbxCookiePack)	Boolean	True/False	Checked or not	if (cbxCookie1.Checked) OR	'Please select a compulsory Cookie	N/A				

					(cbxCookie2.Checked) then	Pack!					
	Mouse Click (cbxDelivery)	Boolean	True/False	N/A			Stores the name, Delivery Confirmation, contact number of the customer placing an order	sName ← edtName.text sNumber ← edtNumber.text delivery ← cbxDelivery.Checked.			
	Keyboard (edtAddress, edtName, edtNumber)	String	Text	Empty fields or not	If edtName.text = '' then	'Please fill in required fields'	The information the customer entered will be stored in a text file and database which will be accessed by the management	Write to textfile Database.insert			
	Keyboard (edtOtherDonation, edtName, edtContactNumber)	String	Text	Empty fields or not	If edtName.text = '' then	'Please fill in required fields'	This will save all the details about the donation in the database and textfile	Database.insert Write to textfile	Donations Information will	Text	Memo

	Mouse Click (dtpDateOfDropOff)	TDate	Regional Settings (dd/mm/yyyy)	N/A (Built in date)			N/A		be displayed		
DONATIONS	Mouse Click (rgpDonation)	Items	ItemIndex	If no donation type is specified	if rgpDonations = -1 then	‘Please Select a donation type’	N/A				
	Keyboard (spnMoney)	integer	Numeric	N/A			The amount of money donated will be calculated to be displayed at a later stage	rTotal← rTotal+r Money	The amount that the customer has to pay	Text Currency	Panel
	Mouse Click (dtpDOB)	TDate	Regional Settings (dd/mm/yyyy)	N/A (Built in date)			N/A		N/A	N/A	N/A

VOLUNTEERS	Keyboard (edtNumber,edtEmail,edtAddress,edtBackground,edtReason,edtConditions,edtMedication,edtPrevious work)	String	Text	If all the fields are not entered	If edtNumber.text= ' ' then	'Please fill in all required fields'	The details of the volunteer will be stored in a textfile and database	Write to textfile Database.insert	Volunteers Information will be displayed	Text	Memo
				Validates Email Address	Loop through email to find @ then Display warning message if not found	'Please enter a correct email address!'					
INTERFACE 2											
MANAGEMENT ACCESS	Keyboard (edtUsername,edtPassword)	String	Text	If password is correct	If username is incorrect then Display warning message	'Enter Correct Password !!'	N/A		Records of the bake sale, donation and volunteers	Grid	Data grid

	Keyboard (sGuestPassword,sPaymentsPassword,sExtrasPassword)	String	Text	If the Bake Sale Password is correct If the Donation Password is correct If the Volunteer Password is correct	If username is incorrect then Display warning message	'Password Incorrect!'			N/A				
	NO INPUT REQUIRED					Deleting a record from the bake sale records	If sDelete = edtDelete then tblBakeSale.delete						
						Adding an Order to the Donation Records	Insert into database table						
						Determining	SELECT	Displ				Integ	Label

		how many orders for a specific day	* FROM table WHERE Date=15 /06/202 1	ay amo unt of order s for that day	er Valu e	
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