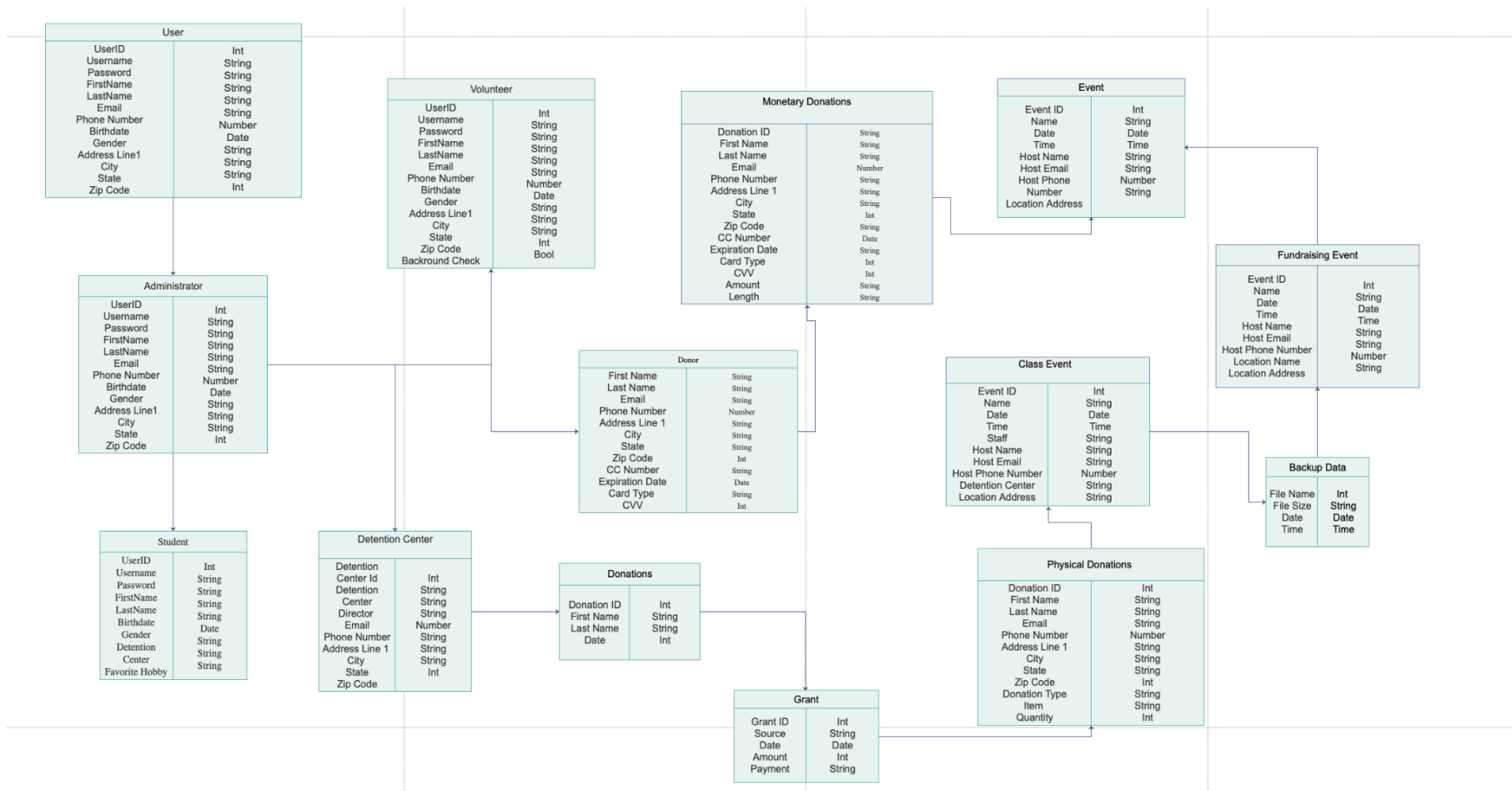


Database Design & Data Definitions

This diagram shows the associations between the classes and attributes that are required for the Thomson Project database in 3NF. Each table lists the attributes for each class which have been presented with no partial or transitive dependencies. The class attributes, attribute definitions, sizes, types, and primary/foreign key statuses are listed in the tables beneath the ERD.



User				
Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary/Foreign Key?
User ID	Unique identifier for system users	2 Bytes	Int	Primary
Username	Username for system login	Max 25 Bytes	String	N/A
Password	Password for system login	Max 50 Bytes	String	N/A
First Name	User's First Name	Max 25 Bytes	String	N/A
Last Name	User's Last Name	Max 25 Bytes	String	N/A
Email	User's Email	Max 50 Bytes	String	N/A
Phone Number	User's Phone Number	10 Bytes	Number	N/A
Birthdate	User's Birthdate	10 Bytes	Date	N/A
Gender	User's Gender	Max 25 Bytes	String	N/A
Address Line 1	User's Address Line 1	Max 50 Bytes	String	N/A
City	User's City	Max 25 Bytes	String	N/A
State	User's State	2 Bytes	String	N/A
ZIP Code	User's ZIP Code	5 Bytes	Int	N/A

Administrator				
Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary/Foreign Key?
User ID	Unique identifier for administrators	2 Bytes	Int	Primary
Username	Username for admin login	Max 25 Bytes	String	N/A
Password	Password for admin login	Max 50 Bytes	String	N/A
First Name	Administrator's First Name	Max 25 Bytes	String	N/A
Last Name	Administrator's Last Name	Max 25 Bytes	String	N/A
Email	Administrator's Email	Max 50 Bytes	String	N/A
Phone Number	Administrator's Phone Number	10 Bytes	Number	N/A
Birthdate	Administrator's Birthdate	10 Bytes	Date	N/A
Gender	Administrator's Gender	Max 25 Bytes	String	N/A
Address Line 1	Administrator's Address Line 1	Max 50 Bytes	String	N/A
City	Administrator's City	Max 25 Bytes	String	N/A
State	Administrator's State	2 Bytes	String	N/A

ZIP Code	Administrator's ZIP Code	5 Bytes	Int	N/A
Is Admin?	Administrator privileges are verified in system	3 Bytes	Bool	N/A

Volunteer				
Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary/Foreign Key?
User ID	Unique identifier for volunteers	2 Bytes	Int	Primary
Username	Username for volunteer login	Max 25 Bytes	String	N/A
Password	Password for volunteer login	Max 50 Bytes	String	N/A
First Name	Volunteer's First Name	Max 25 Bytes	String	N/A
Last Name	Volunteer's Last Name	Max 25 Bytes	String	N/A
Email	Volunteer's Email	Max 50 Bytes	String	N/A
Phone Number	Volunteer's Phone Number	10 Bytes	Number	N/A
Birthdate	Volunteer's Birthdate	10 Bytes	Date	N/A
Gender	Volunteer's Gender	Max 25 Bytes	String	N/A
Address Line 1	Volunteer's Address Line 1	Max 50 Bytes	String	N/A
City	Volunteer's City	Max 25 Bytes	String	N/A
State	Volunteer's State	2 Bytes	String	N/A
ZIP Code	Volunteer's ZIP Code	5 Bytes	Int	N/A
Background Check on File?	Background check for volunteer is verified	3 Bytes	Bool	N/A

Donor				
Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary/Foreign Key?
First Name	Donor's First Name	Max 25 Bytes	String	N/A
Last Name	Donor's Last Name	Max 25 Bytes	String	N/A
Email	Donor's Email	Max 50 Bytes	String	N/A
Phone Number	Donor's Phone Number	10 Bytes	Number	N/A
Address Line 1	Donor's Address Line 1	Max 50 Bytes	String	N/A
City	Donor's City	Max 25 Bytes	String	N/A
State	Donor's State	2 Bytes	String	N/A
ZIP Code	Donor's ZIP Code	5 Bytes	Int	N/A
CC Number	Donor's CC Number	Max 16 Bytes	String	N/A

Expiration Date	Expiration Date on CC	6 Bytes	Date	N/A
Card Type	Type of Card	Max 10 Bytes	String	N/A
CVV	Security code for CC	4 Bytes	Int	N/A

Student				
Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary/Foreign Key?
User ID	Unique identifier for students	2 Bytes	Int	Primary
Username	Username for student login	Max 25 Bytes	String	N/A
Password	Password for student login	Max 50 Bytes	String	N/A
First Name	Student's First Name	Max 25 Bytes	String	N/A
Last Name	Student's Last Name	Max 25 Bytes	String	N/A
Birthdate	Student's Birthdate	10 Bytes	Date	N/A
Gender	Student's Gender	Max 25 Bytes	String	N/A
Detention Center	Name of detention center the student is located in	Max 50 Bytes	String	Foreign
Favorite Hobby	Student's favorite hobby	Max 50 Bytes	String	N/A

Detention Center				
Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary/Foreign Key?
Detention Center ID	Unique identifier for detention center	6 Bytes	Int	Primary
Detention Center	Name of Detention Center	Max 50 Bytes	String	Foreign
Director	Name of Detention Center's Director	Max 50 Bytes	String	N/A
Email	Director's Email	Max 50 Bytes	String	N/A
Phone Number	Director's Phone Number	10 Bytes	Number	N/A
Address Line 1	Director's Address Line 1	Max 50 Bytes	String	N/A
City	Detention Center City	Max 25 Bytes	String	N/A
State	Detention Center State	2 Bytes	String	N/A
ZIP Code	Detention Center ZIP Code	5 Bytes	Int	N/A

Donation				
Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary/Foreign Key?
Donation ID	Unique Identifier for donation	6 Bytes	Int	Primary
First Name	Donor's First Name	Max 25 Bytes	String	N/A
Last Name	Donor's Last Name	Max 25 Bytes	String	N/A
Date	Date of Donation	10 Bytes	Int	N/A

Monetary Donation				
Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary/Foreign Key?
Donation ID	Unique Identifier for donation	6 Bytes	Int	Primary
First Name	Donor's First Name	Max 25 Bytes	String	N/A
Last Name	Donor's Last Name	Max 25 Bytes	String	N/A
Email	Donor's Email	Max 50 Bytes	String	N/A
Phone Number	Donor's Phone Number	10 Bytes	Number	N/A
Address Line 1	Donor's Address Line 1	Max 50 Bytes	String	N/A
City	Donor's City	Max 25 Bytes	String	N/A
State	Donor's State	2 Bytes	String	N/A
ZIP Code	Donor's ZIP Code	5 Bytes	Int	N/A
CC Number	Donor's CC Number	Max 16 Bytes	String	N/A
Expiration Date	Expiration Date on CC	6 Bytes	Date	N/A
Card Type	Type of Card	Max 10 Bytes	String	N/A
CVV	Security code for CC	4 Bytes	Int	N/A
Amount	Amount of Donation	Max 25 Bytes	Int	N/A
Account	Account type for donation	Max 10 Bytes	String	N/A
Length	Duration of recurring donations	Max 50 Bytes	String	N/A

Physical Donation				
Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary/Foreign Key?
Donation ID	Unique Identifier for donation	6 Bytes	Int	Primary
First Name	Donor's First Name	Max 25 Bytes	String	N/A
Last Name	Donor's Last Name	Max 25 Bytes	String	N/A
Email	Donor's Email	Max 50 Bytes	String	N/A
Phone Number	Donor's Phone Number	10 Bytes	Number	N/A
Address Line 1	Donor's Address Line 1	Max 50 Bytes	String	N/A
City	Donor's City	Max 25 Bytes	String	N/A
State	Donor's State	2 Bytes	String	N/A
ZIP Code	Donor's ZIP Code	5 Bytes	Int	N/A
Donation Type	Type of Donation	Max 25 Bytes	String	N/A
Item	Item Donated	Max 25 Bytes	String	N/A
Quantity	Number of Items Donated	10 Bytes	Int	N/A

Grant				
Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary/Foreign Key?
Grant ID	Unique Identifier for grant	6 Bytes	Int	Primary
Source	Name of grant source	Max 50 Bytes	String	N/A
Date	Date of grant award	10 Bytes	Date	N/A
Amount	Amount of Donation	Max 25 Bytes	Int	N/A
Payment	Payment method for grant	Max 25 Bytes	String	N/A

Event				
Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary/Foreign Key?
Event ID	Unique Identifier for event	6 Bytes	Int	Primary

Name	Name/Title of Event	Max 50 Bytes	String	N/A
Date	Date of event	10 Bytes	Date	N/A
Time	Time of event	6 Bytes	Time	N/A
Host Name	Host's name	Max 50 Bytes	String	N/A
Host Email	Host's Email	Max 50 Bytes	String	N/A
Host Phone Number	Host's Phone Number	10 Bytes	Number	N/A
Location Address	Event Address	Max 50 Bytes	String	N/A

Fundraising Event				
Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary/Foreign Key?
Event ID	Unique Identifier for event	6 Bytes	Int	Primary
Name	Name/Title of Fundraising Event	Max 50 Bytes	String	N/A
Date	Date of fundraising event	10 Bytes	Date	N/A
Time	Time of fundraising event	6 Bytes	Time	N/A
Host Name	Host's name	Max 50 Bytes	String	N/A
Host Email	Host's Email	Max 50 Bytes	String	N/A
Host Phone Number	Host's Phone Number	10 Bytes	Number	N/A
Location Name	Name of event location	Max 50 Bytes	String	N/A
Location Address	Event Address	Max 50 Bytes	String	N/A

Class Event				
Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary/Foreign Key?
Event ID	Unique Identifier for event	6 Bytes	Int	Primary
Name	Name/Title of class Event	Max 50 Bytes	String	N/A
Date	Date of class event	10 Bytes	Date	N/A
Time	Time of class event	6 Bytes	Time	N/A
Staff	Staff members involved in class event	Max 100 Bytes	String	N/A
Host Name	Host's name	Max 50 Bytes	String	N/A
Host Email	Host's Email	Max 50 Bytes	String	N/A
Host Phone Number	Host's Phone Number	10 Bytes	Number	N/A
Detention Center	Name of Detention Center where class takes place	Max 50 Bytes	String	Foreign
Location Address	Class Address	Max 50 Bytes	String	N/A

Backup Data				
Attribute	Attribute Definition	Attribute Size	Attribute Type	Primary/Foreign Key?
File Name	Name of backup file	Max 50 Bytes	Int	Primary
File Size	Size of backup file	Max 50 Bytes	String	N/A
Date	Date of backup	10 Bytes	Date	N/A
Time	Time of backup	6 Bytes	Time	N/A