ITERATION 5

KY HBPA IT Project

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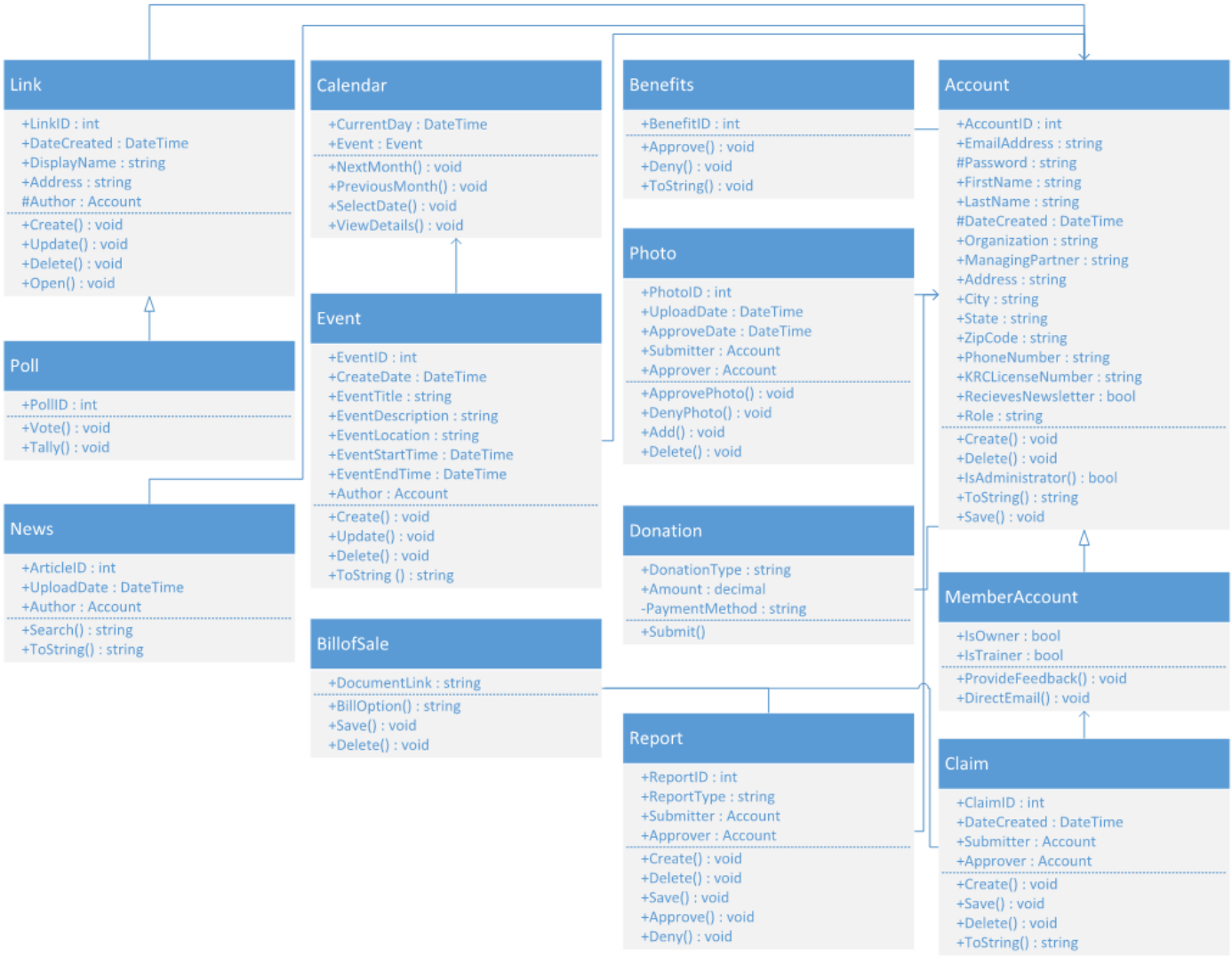
Class Diagram

Explanation

The class diagram is a visual representation of the classes that will be used to build the system. Below, we model the classes and their relationships to visually demonstrate the interconnectivity of this system. This class diagram is dependent on the 'Account' class leaving signatures in other classes to mark who authored and approved what. It was derived using noun-verb analysis.

Diagram

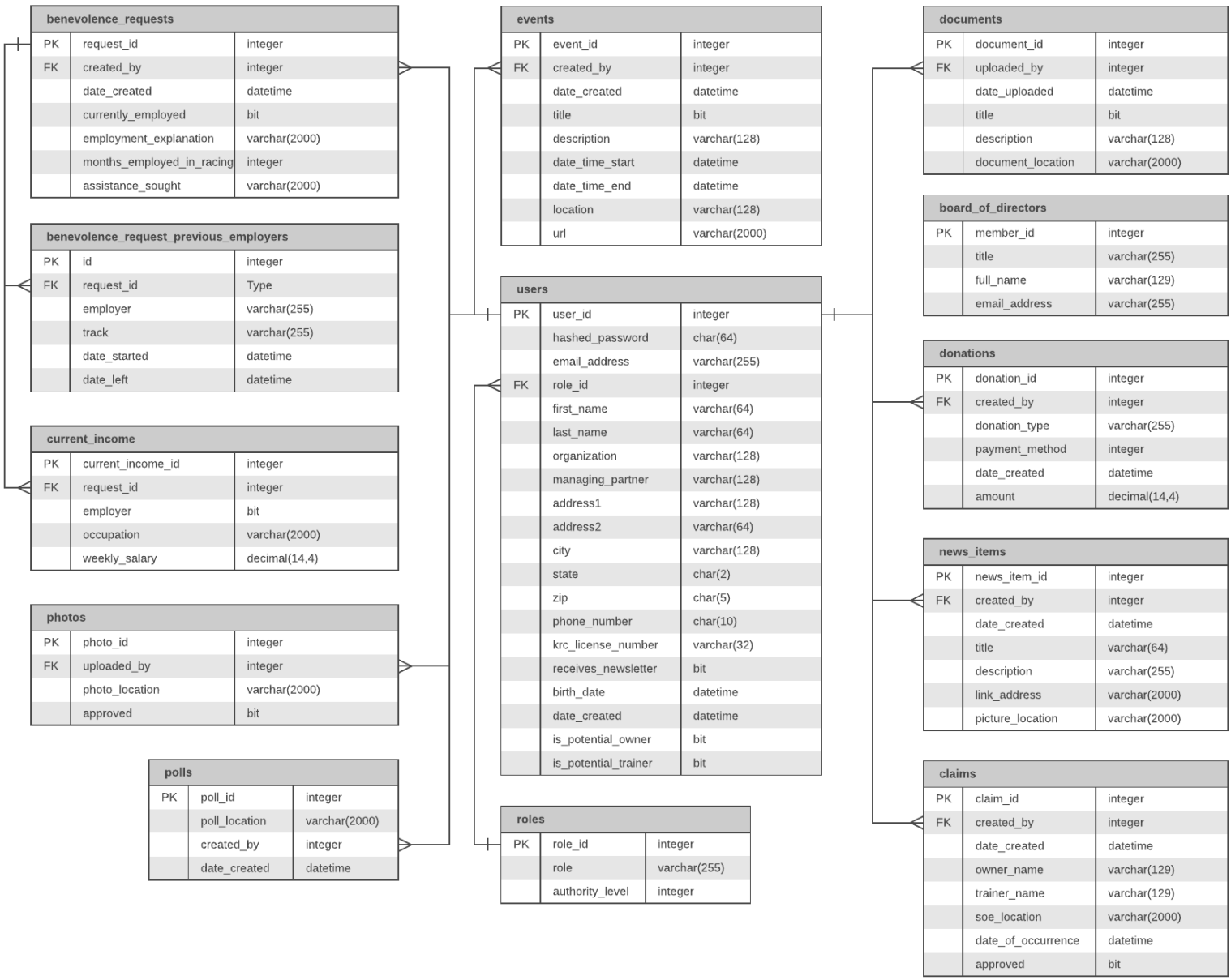


Database Design

Explanation

The database design below is in the third normal form (abbreviated 3NF). In simple terms, this means that each field in each table depends directly on the primary key and only on the primary key. Attributes related to each atomic entity are stored in their own tables. For example all users have roles, and roles have authority levels. So you could say that all users have authority levels, but the authority level is dependent on the role, **not** on the user. For this reason *roles* is its own table, and each user has a role id. Doing this eliminates transitive dependence which is very important for ensuring data consistency.

Data Management Layer Diagram



Data Dictionary

benevolence_request_previous_employers

KEY	ATTRIBUTE NAME	DESCRIPTION	DATA TYPE	SIZE
PK	id	auto-numbered unique identifier for a benevolence_request_previous_employers record	integer	
FK	request_id	unique identifier of the related benevolence request	integer	
	employer	name of previous employer	varchar	255
	track	name of track where requestor was previously employed	varchar	255
	date_started	the date employment started with this employer	datetime	
	date_left	the date employment ended with this employer	datetime	

benevolence_requests

KEY	ATTRIBUTE NAME	DESCRIPTION	DATA TYPE	SIZE
PK	request_id	auto-numbered unique identifier for a benevolence request	integer	
FK	created_by	user_id of benevolence request creator	integer	
	date_created	date and time of benevolence request creation	datetime	
	currently_employed	true if the requestor is currently employed, false otherwise	bit	
	employment_explanation	text explanation of the reason the requestor is not employed, if currently_employed is false	varchar	2000
	months_employed_in_racing	total number of months the requestor has been employed in racing	integer	
	assistance_sought	the type of assistance the requestor is seeking	varchar	2000

board_of_directors

KEY	ATTRIBUTE NAME	DESCRIPTION	DATA TYPE	SIZE
PK	member_id	unique identifier of a board member	integer	
	title	board member's title	varchar	255
	full_name	board member's full name	varchar	129
	email_address	board member's email address	varchar	255

claims

KEY	ATTRIBUTE NAME	DESCRIPTION	DATA TYPE	SIZE
PK	claim_id	unique identifier of a claim	integer	
FK	created_by	user_id of the claim creator	integer	
	date_created	date and time of claim creation	datetime	
	owner_name	name of horse owner involved in claim	varchar	129
	trainer_name	name of horse trainer involved in claim	varchar	129
	soe_location	statement of euthenasia location in UNC format	varchar	2000
	date_of_occurrence	date and time of claim-relevant event occurence	datetime	
	approved	true if claim is approved, false otherwise	bit	

current_income

KEY	ATTRIBUTE NAME	DESCRIPTION	DATA TYPE	SIZE
PK	current_income_id	auto-numbered unique identifier for a current_income record	integer	
FK	request_id	unique identifier of the related benevolence request	integer	
	employer	name of current employer	varchar	255
	occupation	title of current occupation	varchar	2000
	weekly_salary	weekly salary in dollars	decimal	14,4

documents

KEY	ATTRIBUTE NAME	DESCRIPTION	DATA TYPE	SIZE
PK	document_id	unique identifier of a document	integer	
FK	uploaded_by	user_id of document uploader	integer	
	date_uploaded	date and time document was uploaded	datetime	
	title	title of document	varchar	255
	description	description of document	varchar	128
	document_location	location of document in UNC format ex: \\Server\Volume\File	varchar	128

donations

KEY	ATTRIBUTE NAME	DESCRIPTION	DATA TYPE	SIZE
PK	donation_id	unique identifier of a donation record	integer	
FK	created_by	user_id of donator	integer	
	donation_type	type of donation (one time, recurring, etc..)	varchar	255
	payment_method	method of payment (credit card, paypal)	varchar	255
	date_created	date and time donation was made	datetime	
	amount	donation amount	decimal	14,4

events

KEY	ATTRIBUTE NAME	DESCRIPTION	DATA TYPE	SIZE
PK	event_id	unique identifier of an event record	integer	
FK	created_by	user_id of event creator	integer	
	date_created	date and time of event creation	datetime	
	title	title of event	varchar	64
	description	description of event	varchar	128
	date_time_start	start date and time of event	datetime	
	date_time_end	end date and time of event	datetime	
	location	location (address) of event	varchar	128
	url	url of event website, if relevant	varchar	2000

news_items

KEY	ATTRIBUTE NAME	DESCRIPTION	DATA TYPE	SIZE
PK	news_item_id	unique identifier of a news item	integer	
FK	created_by	user_id of the news item poster	integer	
	date_created	date and time the news item was posted	datetime	
	title	title of the news item	varchar	128
	description	text description of the news item	varchar	128
	link_address	URL the news item points to where relevant	varchar	2000
	picture_location	location of news item related picture in UNC format (where relevant)	varchar	2000

photos

KEY	ATTRIBUTE NAME	DESCRIPTION	DATA TYPE	SIZE
PK	photo_id	unique identifier of the photo	integer	
FK	uploaded_by	user_id of the photo uploader	integer	
	photo_location	location of the uploaded photo in UNC format ex: \\Server\Volume\File	varchar	2000
	approved	true or false indicator of current approval status for a photo	bit	

roles

KEY	ATTRIBUTE NAME	DESCRIPTION	DATA TYPE	SIZE
PK	role_id	unique identifier of a role	integer	
	role	name of the role (administrator, member)	varchar	255
	authority_level	numeric indicator of relative power level of a given role	integer	

users

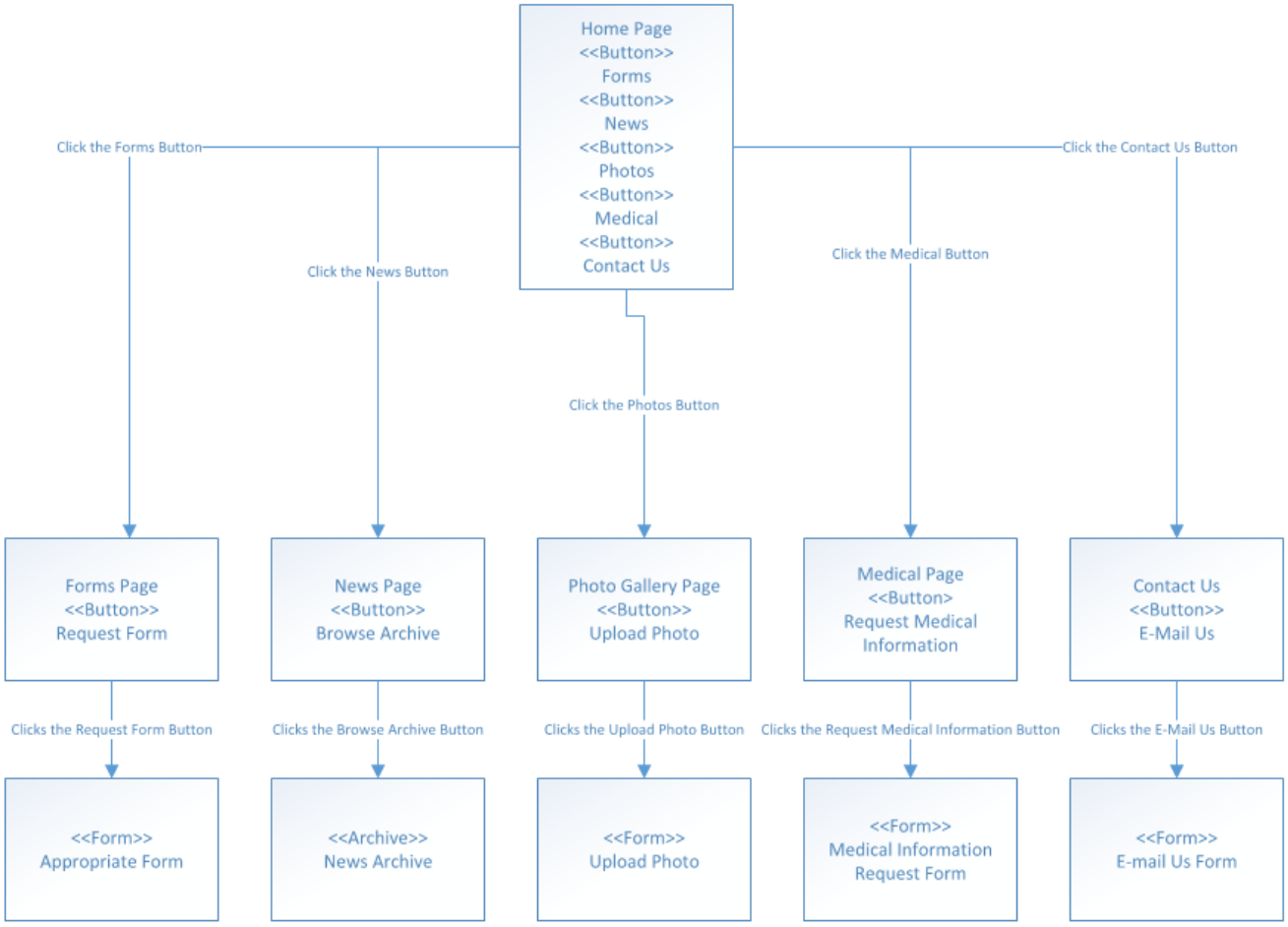
KEY	ATTRIBUTE NAME	DESCRIPTION	DATA TYPE	SIZE
PK	user_id	auto-numbered unique identifier for a user	integer	
	hashed_password	hashed password tied to user account	char	64
	email_address	email address of user	varchar	255
	role_id	user's role in system (member, administrator, etc…)	integer	
	first_name	user's first name	varchar	64
	last_name	user's last name	varchar	64
	organization	user's organization (stable, corporation, syndicate, farm)	varchar	128
	managing_partner	user's managing partner	varchar	128
	address1	user's street address	varchar	128
	address2	line 2 of user's address (apt / suite / bldg)	varchar	64
	city	user's city	varchar	128
	state	user's state	char	2
	zip	user's zip code	char	5
	phone_number	user's phone number	char	10
	krc_license_number	user's Kentucky racing commission license number	varchar	32
	receives_newsletter	true if the user has checked that they would like to receive the newsletter, false otherwise	bit	
	birth_date	user's date of birth	datetime	
	date_created	date user account was created	datetime	
	is_potential_owner	true if the user has indicated that they are a potential owner	bit	
	is_potential_trainer	true if the user has indicated that they are a potential trainer	bit	

links

KEY	ATTRIBUTE NAME	DESCRIPTION	DATA TYPE	SIZE
PK	link_id	unique identifier of a link item	integer	
FK	created_by	user id of the link creator	integer	
	date_created	date and time link was created	datetime	
	title	title of the link	varchar	128
	href	URL reference the link points to	varchar	2000

User Interface

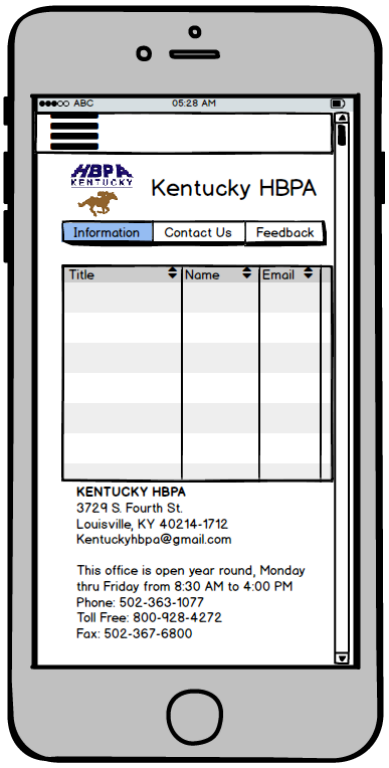
Navigation Diagram



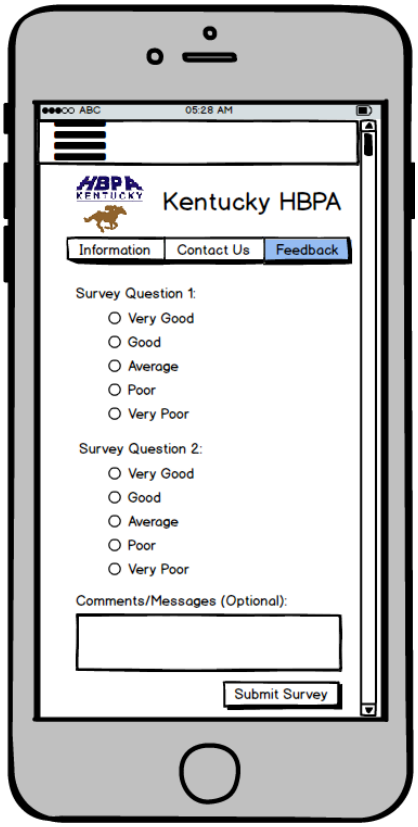
Screen Layouts

This following section will be featuring screen layouts, this is how we imagine the site to look when taking in and displaying information that either the user or admin gives. We divide these prototypes into two different kinds, reports which give information, and forms which need to be given information.

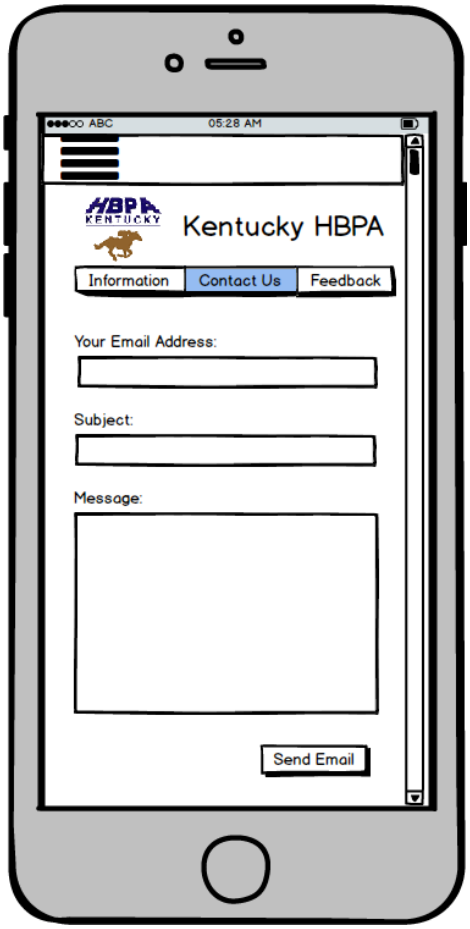
This is the layout we will use to display a calendar of events. In this prototype, we have already set up a fictitious event and filled in all needed areas. One of the big features that the Kentucky HBPA wanted was an easy to use calendar and we believe that this one will work just fine.



This will be what the contact us page will look like. This report will obviously be filled in with actual people from the Kentucky HBPA, but for now we have it as an unpopulated table. It will allow for easy lookup of Kentucky HBPA administrators.

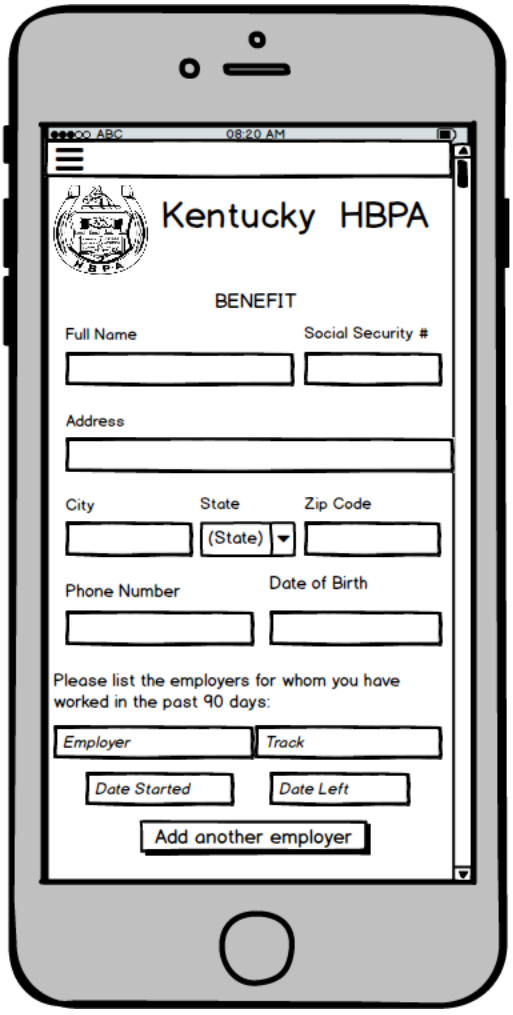


This is a form for giving feedback to the administrators about whatever it is you may be asking. This will be very similar to the form that will be used to poll your membership basis. Surveying the membership population was certainly one of the main points they stressed as well.

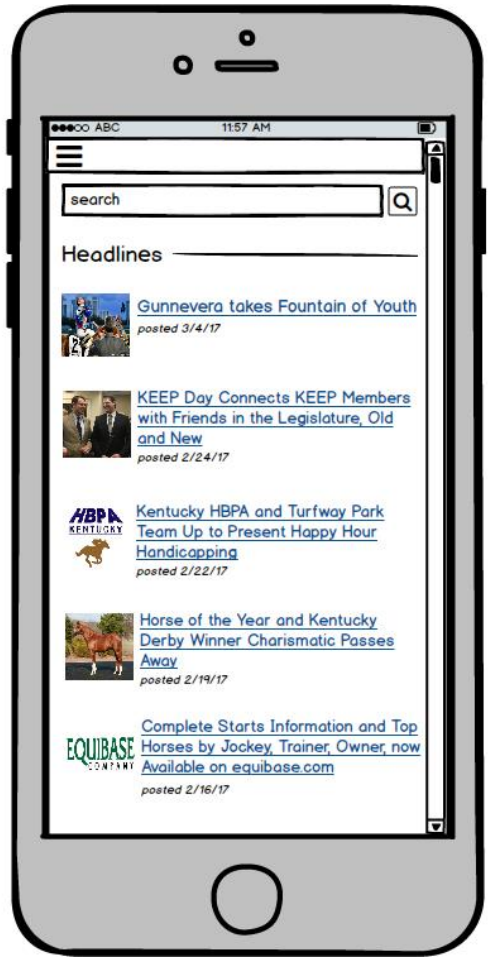


This will be another contact us, this time in a form instead of a report. This will allow a user to send an e-mail to the Kentucky HBPA and ask them any potential questions they may have.

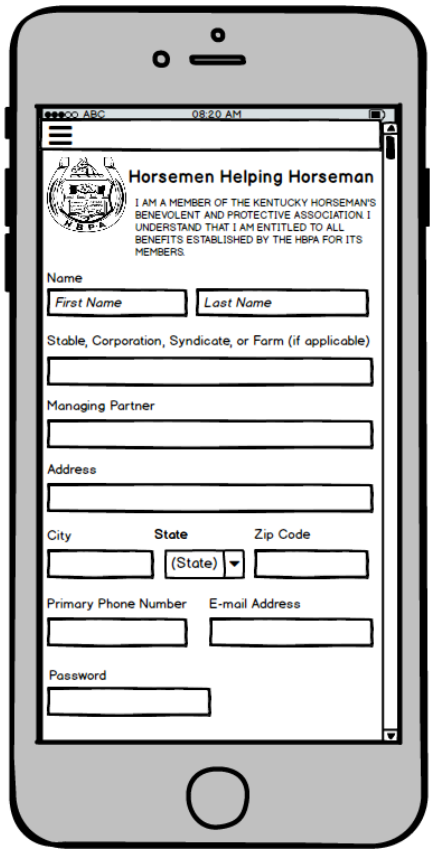
Here we have the create an event in form, unlike the previous prototype, this will be what we imagine the screen will look like when someone is creating an event. It will be simple enough, just pick dates and give it a title and description with a location.



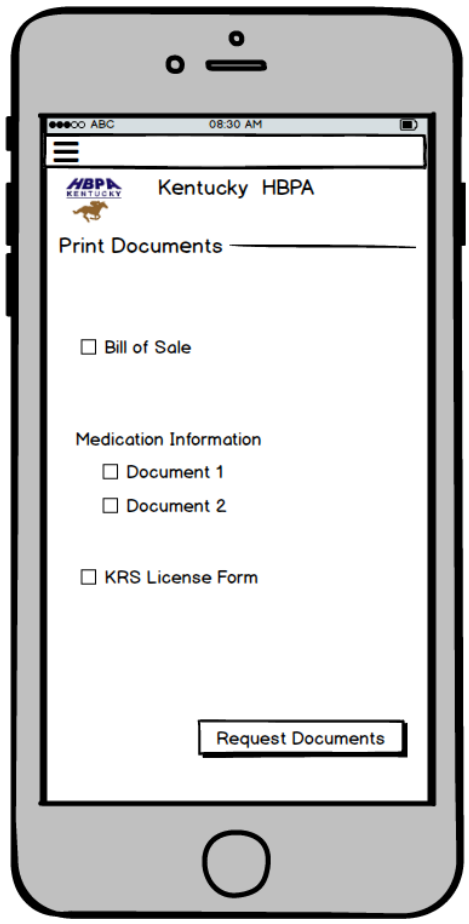
Here is the form layout for the submit benefits. In this view you can see what will be needed, such as your name, SSN, address and so on. We believe that with the ease of access and use, it will encourage more people to sign up with the Kentucky HBPA.



This will be our report view for when a user searches through the news and what we believe the screen should look like afterwards. This page allows for a clean view of whatever articles a person my need, as well as a sample picture to help discern what the article may be about.



This will be our form view for joining the Kentucky HBPA, once again requiring people to input the information in the following fields. This will allow for administrators to easily pull up all needed info once the form is completed and let the back-end database store the new account easily.



This will be our form view for when the members want to find some document or report and be able to print it out. Being able to select multiple ones to download lets the user just have one quick trip to the site where he or she can get all the documents they may need in one co

Gantt Chart

Narrative

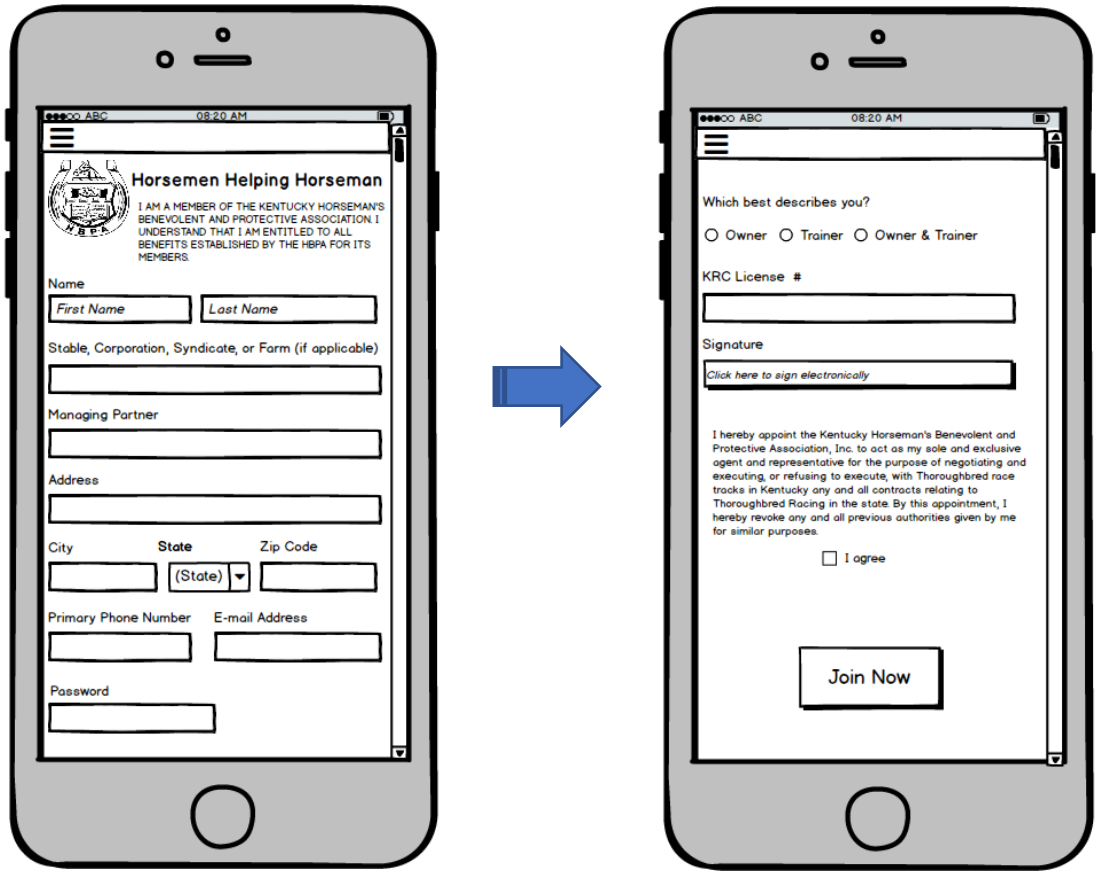
This Gantt Chart has been organized in chronological order of task assignments for each class deadline and the times we began the tasks and had them done by. Everyone in the group Serious Business was given their fair share of use cases and other deliverables to make this portion of the project successful, and organizing meeting times and spare time to work on these certain tasks was not a problem during this phase. We hope that we can keep our desired schedule the way it is leading up to the presentation date, and hope that our new ideas are worth implementing to the Kentucky HBPA.

Chart

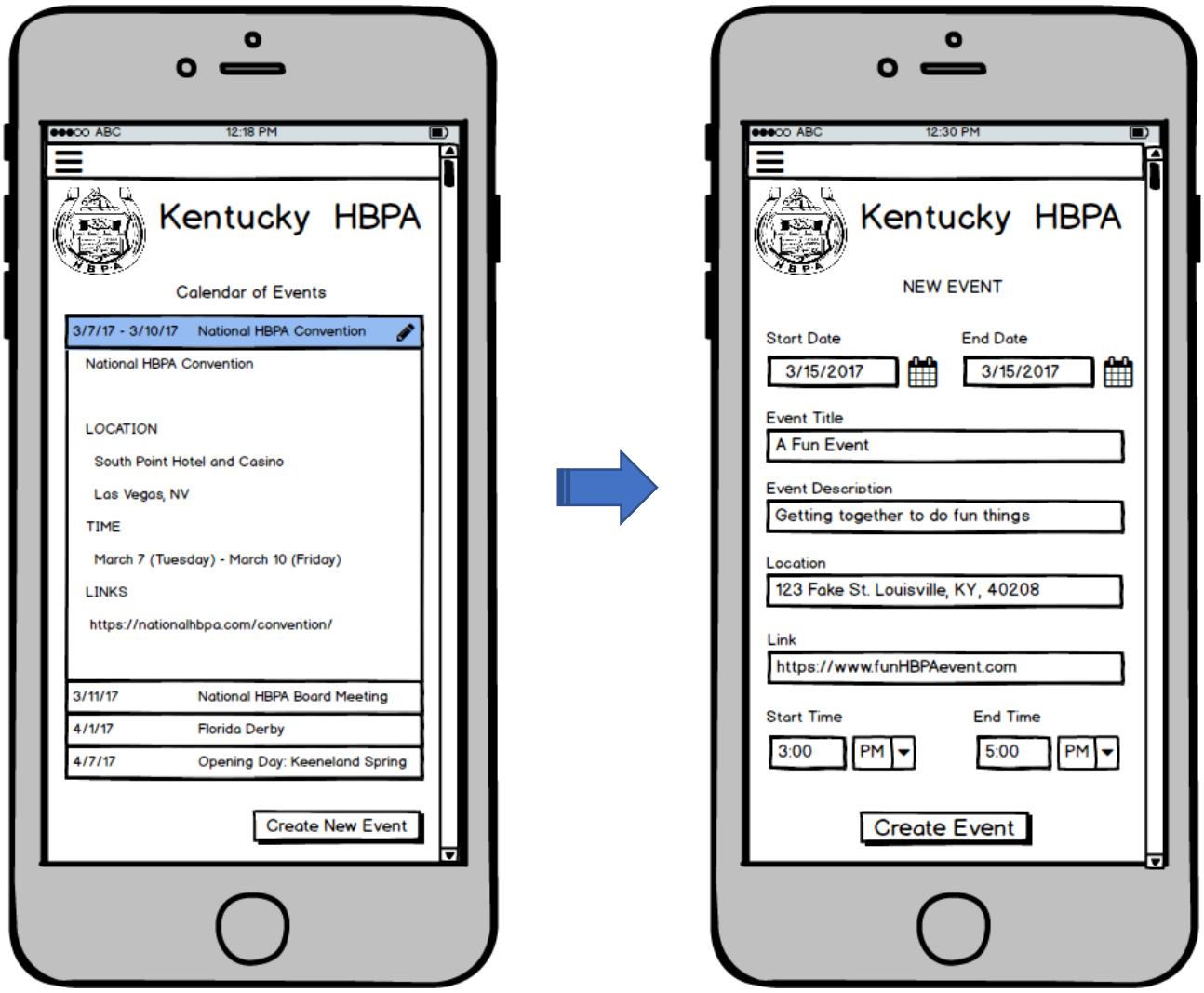
ID	Tasks	Task Responsibility	Task Dependencies	20-Mar	22-Mar	29-Mar	3-Apr	5-Apr	10-Apr	12-Apr
	Iteration 4									
1	Use Cases (Main Flows)	All	Assigned Use Cases							
2	Use Case Diagram	All	Assigned Use Cases							
3	Class Diagram	All	Assigned Use Cases							
4	Sequence Diagram	All	Assigned Use Cases							
5	Use Case Prototypes	All	Assigned Use Cases							
	Iteration 5									
6	Class Diagram	Joe (assembles All)	ID_1							
7	Database Design	Alex	ID_3							
8	Data Definitions	Alex	ID_7							
9	User Interface Navigation Diagram	Evan	ID_1, ID_5							
10	Screen Layouts	Evan	ID_1, ID_9							
11	Gantt Chart	Kimberly	(N/A)							
12	User Interface Prototypes	All	ID_1							
13	Presentation	All	I5 deliverables							
	Iteration 6: Elaboration Spec									
14	System Requirements	Alex	Inception Spec							
15	Use Case Diagram	Kimberly	ID_1, ID_2							
16	Trace Matrix	Alex	ID_1, ID_14							
17	Use Cases	Evan	(N/A)							
18	Sequence Diagrams	Kimberly	ID_1, ID_4							
19	Class Diagram(s)	Joe (assembles All)	ID_1, ID_3							
20	Presentation	All	I6 deliverables							

User Interface Prototypes

Prototype: Create Account



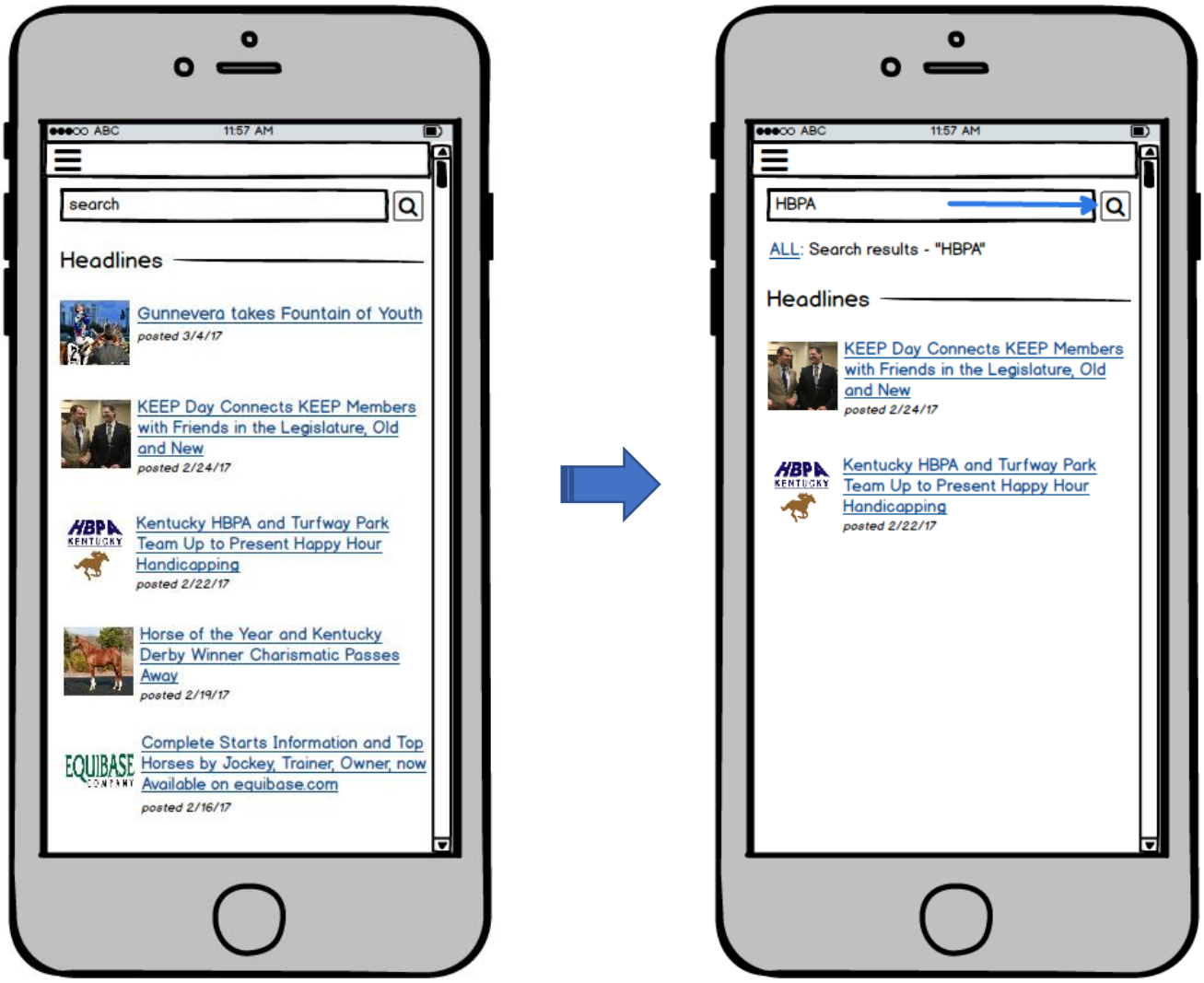
Prototype: Create an Event



Screen 1

Screen 2

Prototype: Search News Archives



Screen 1

Screen 2

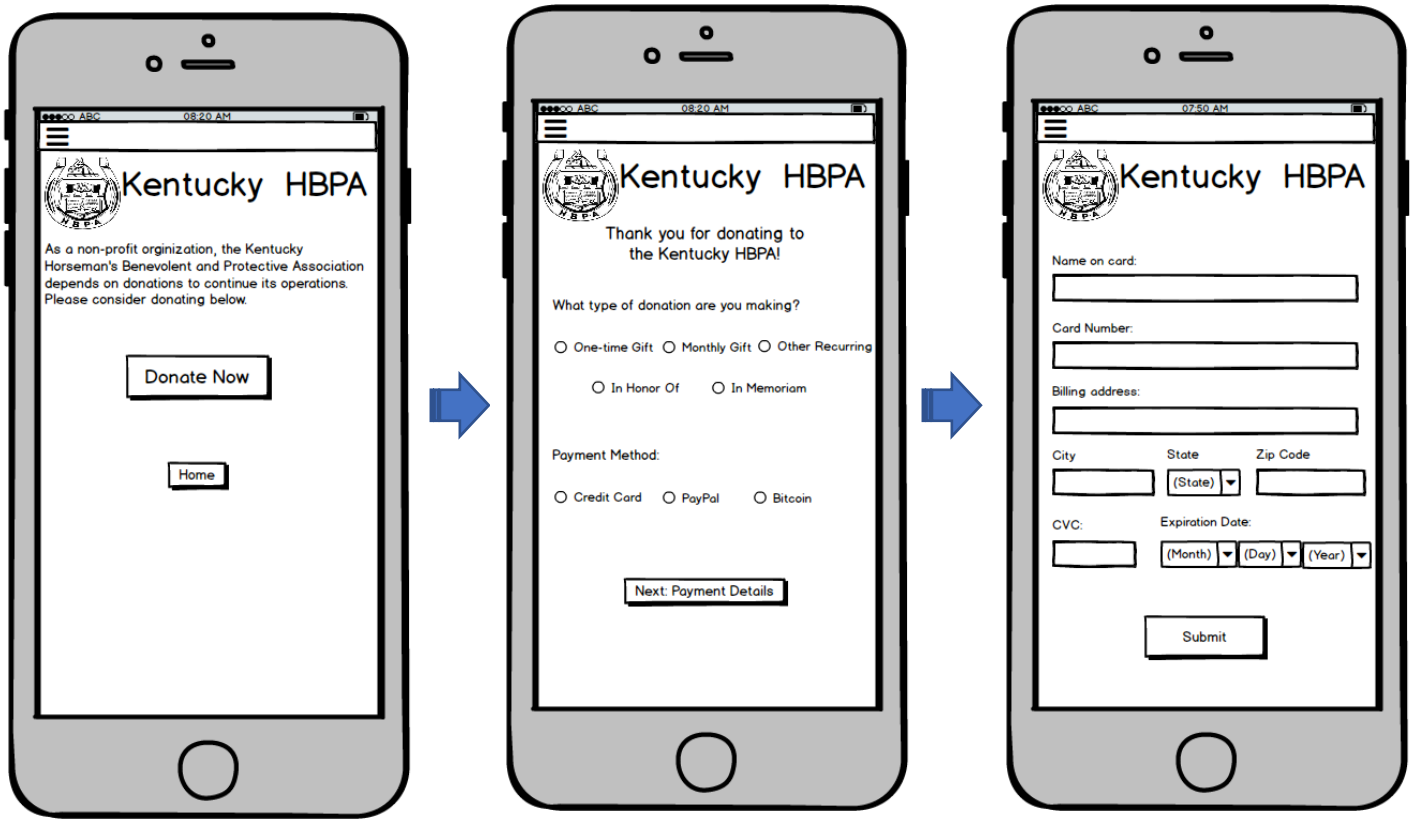
Prototype: Upload a Photo

Screen 1

Screen 2

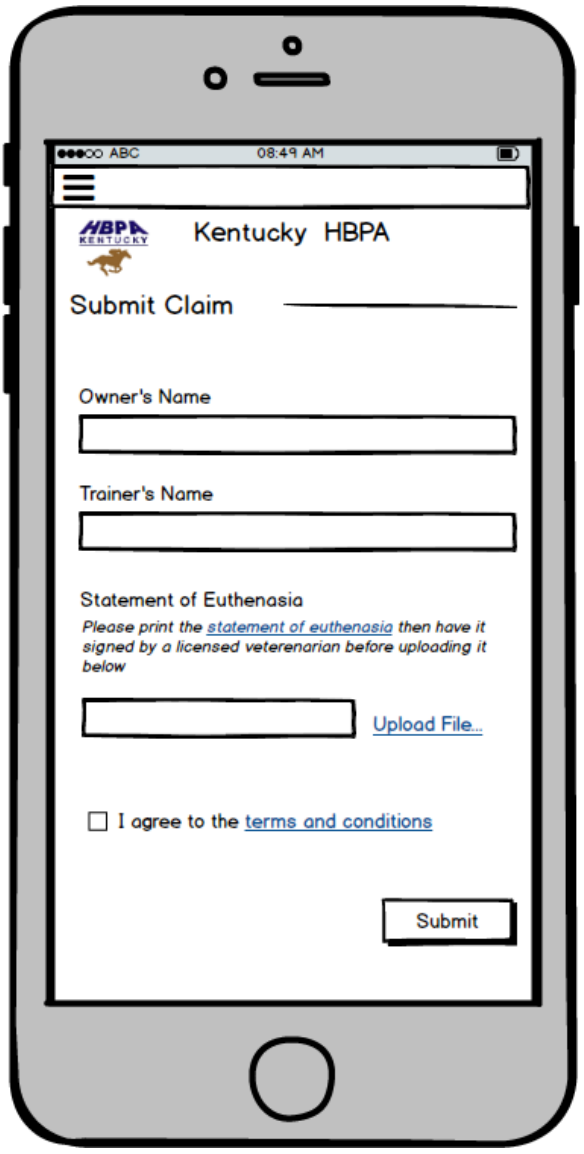
Screen 3

Prototype: Makes a Donation

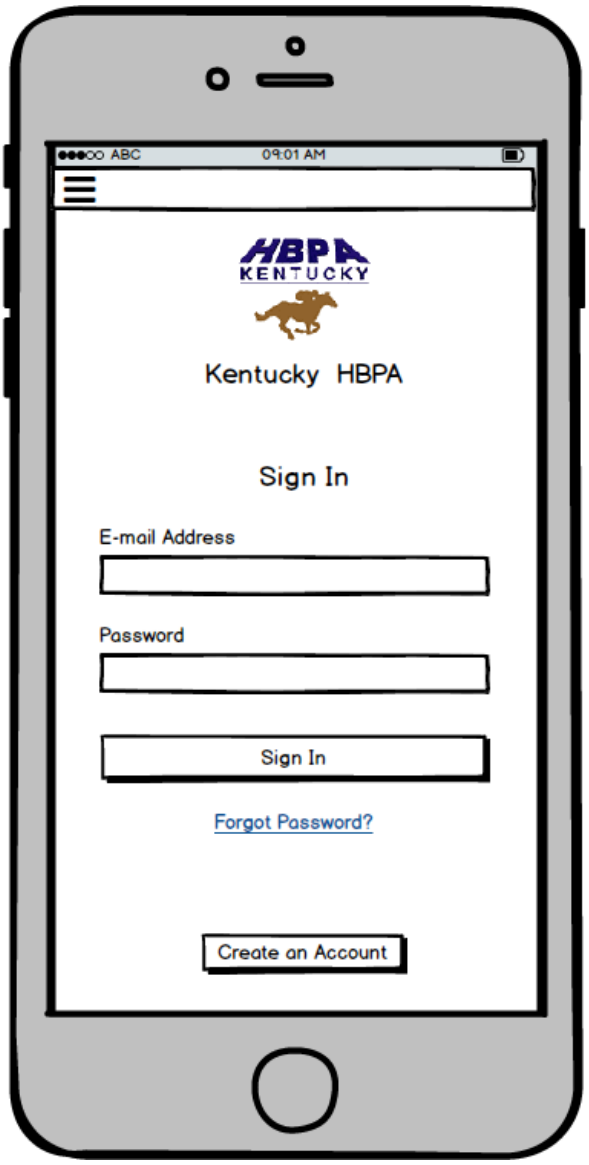


Prototype: Posts a News Item

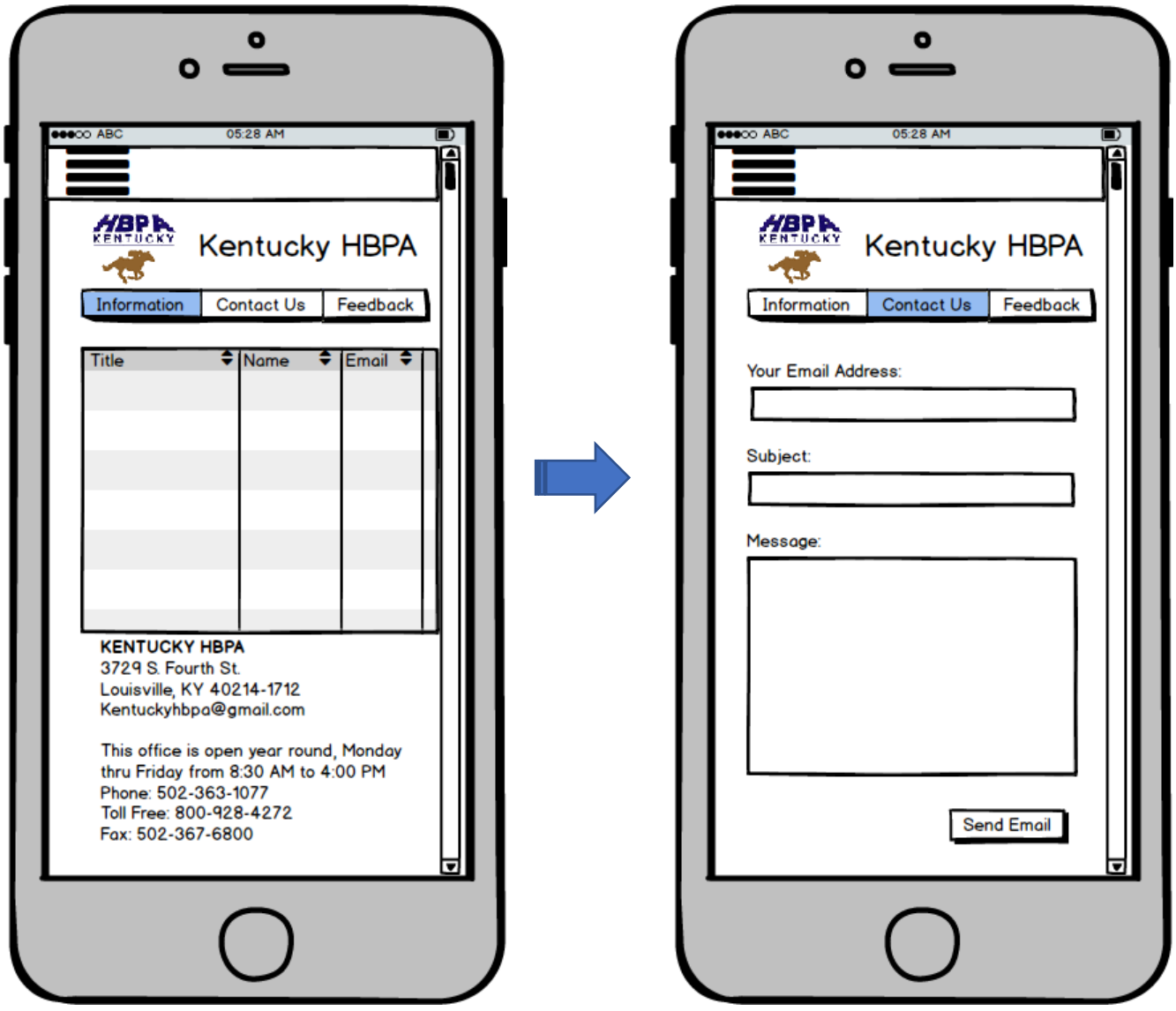
Prototype: Submits a Claim



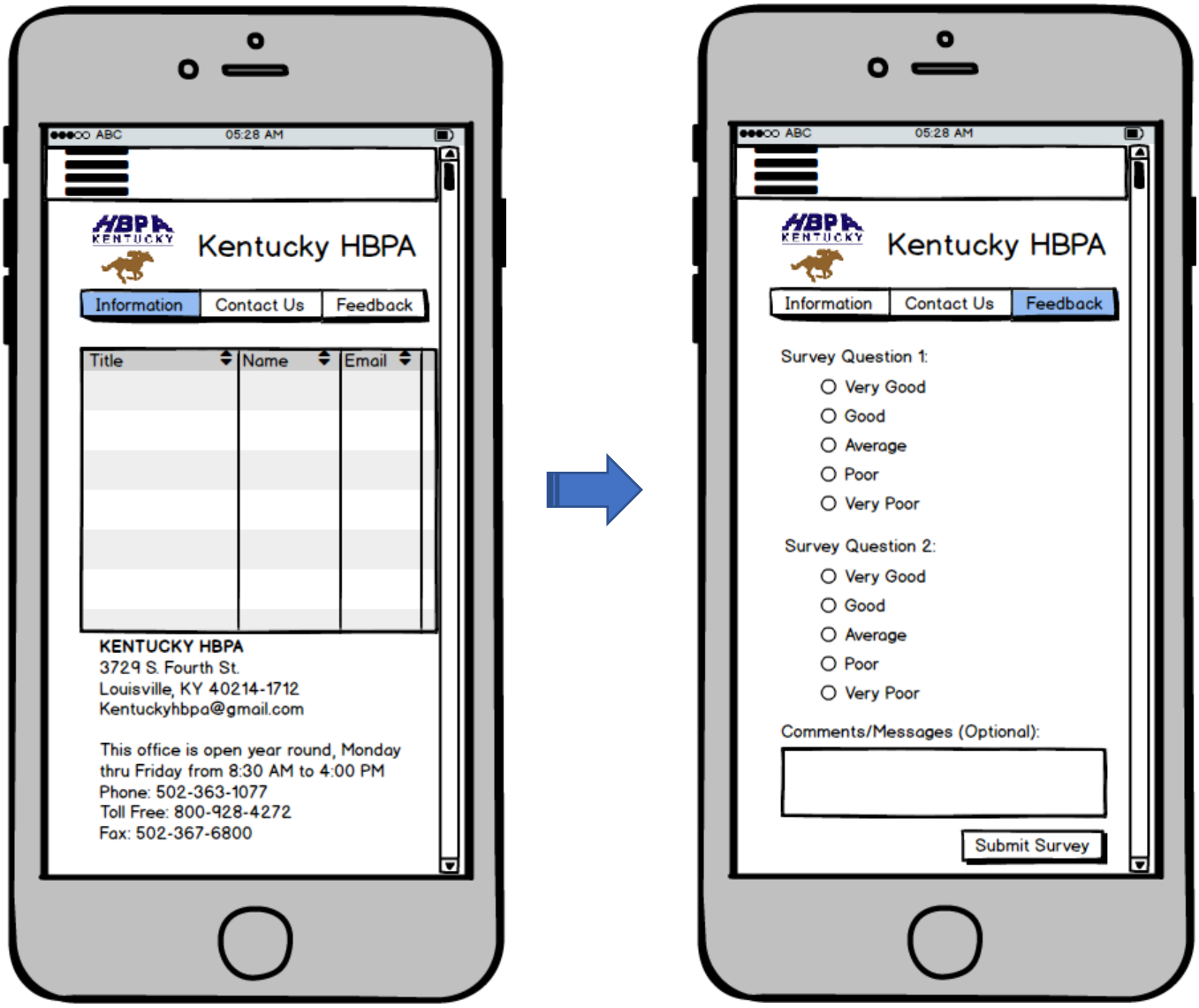
Prototype: Signs In



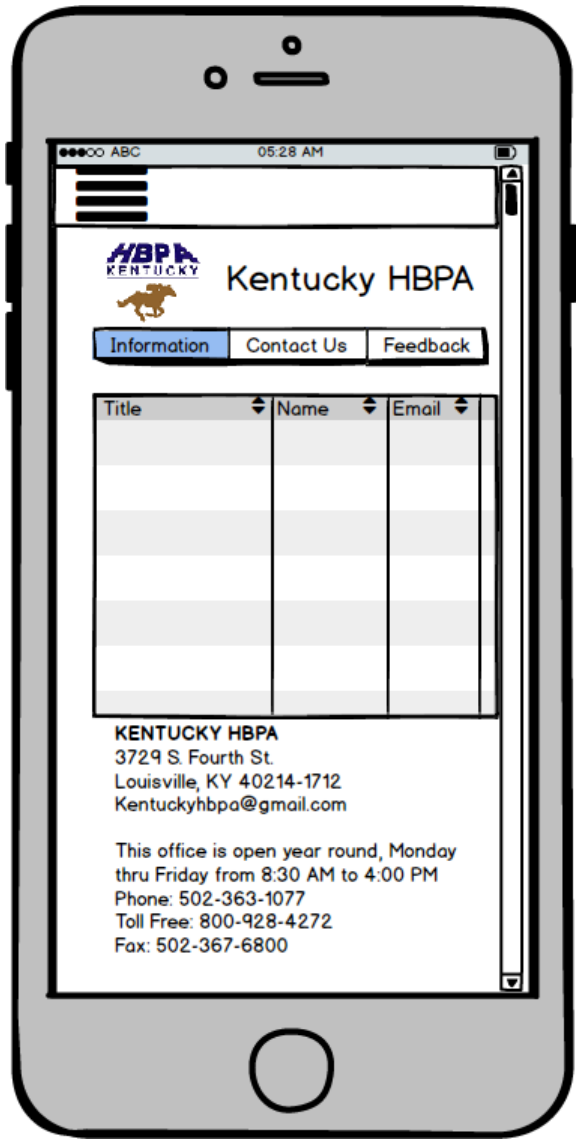
Prototype: Contact KY HBPA



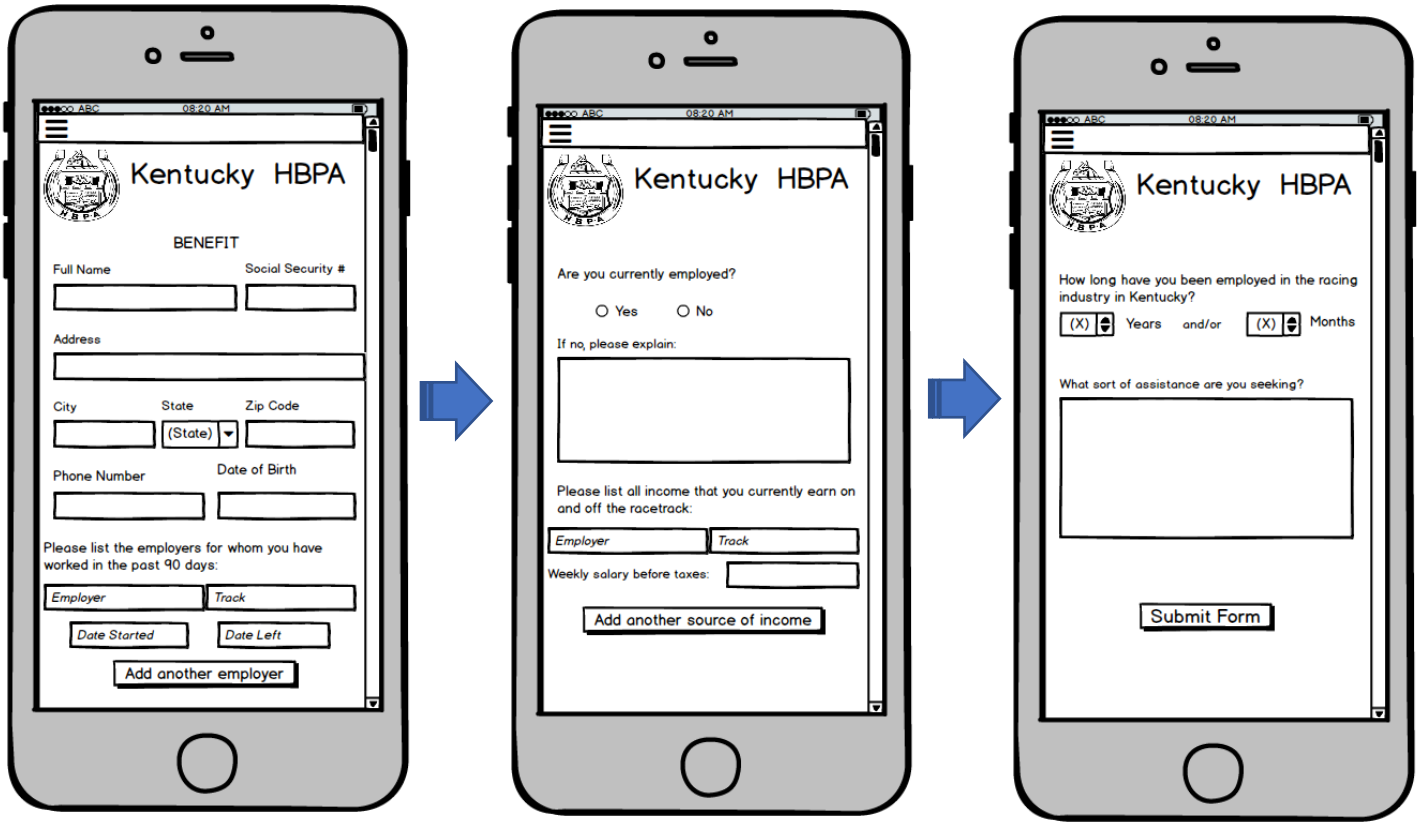
Prototype: Provide Feedback



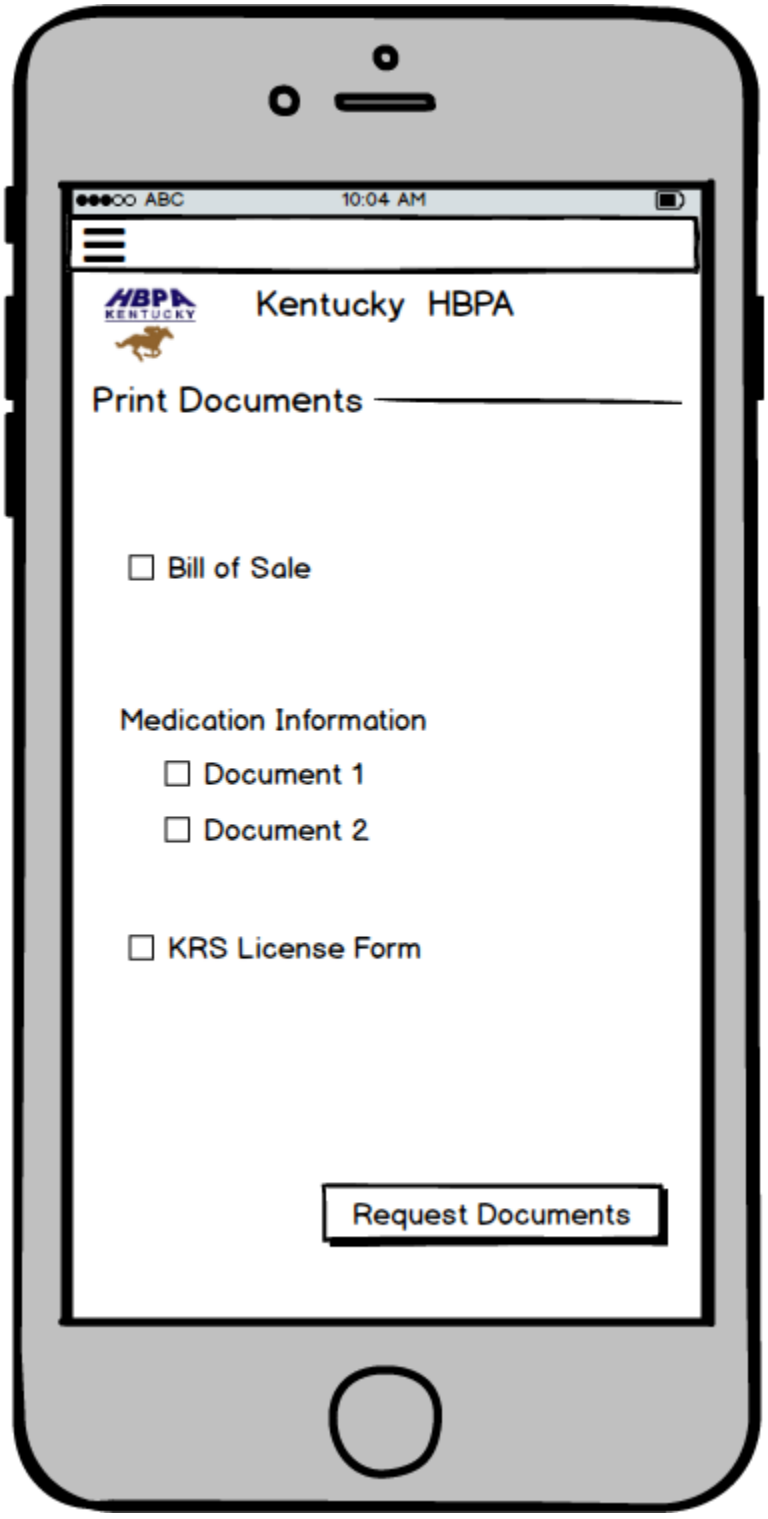
Prototype: Request Contact Info



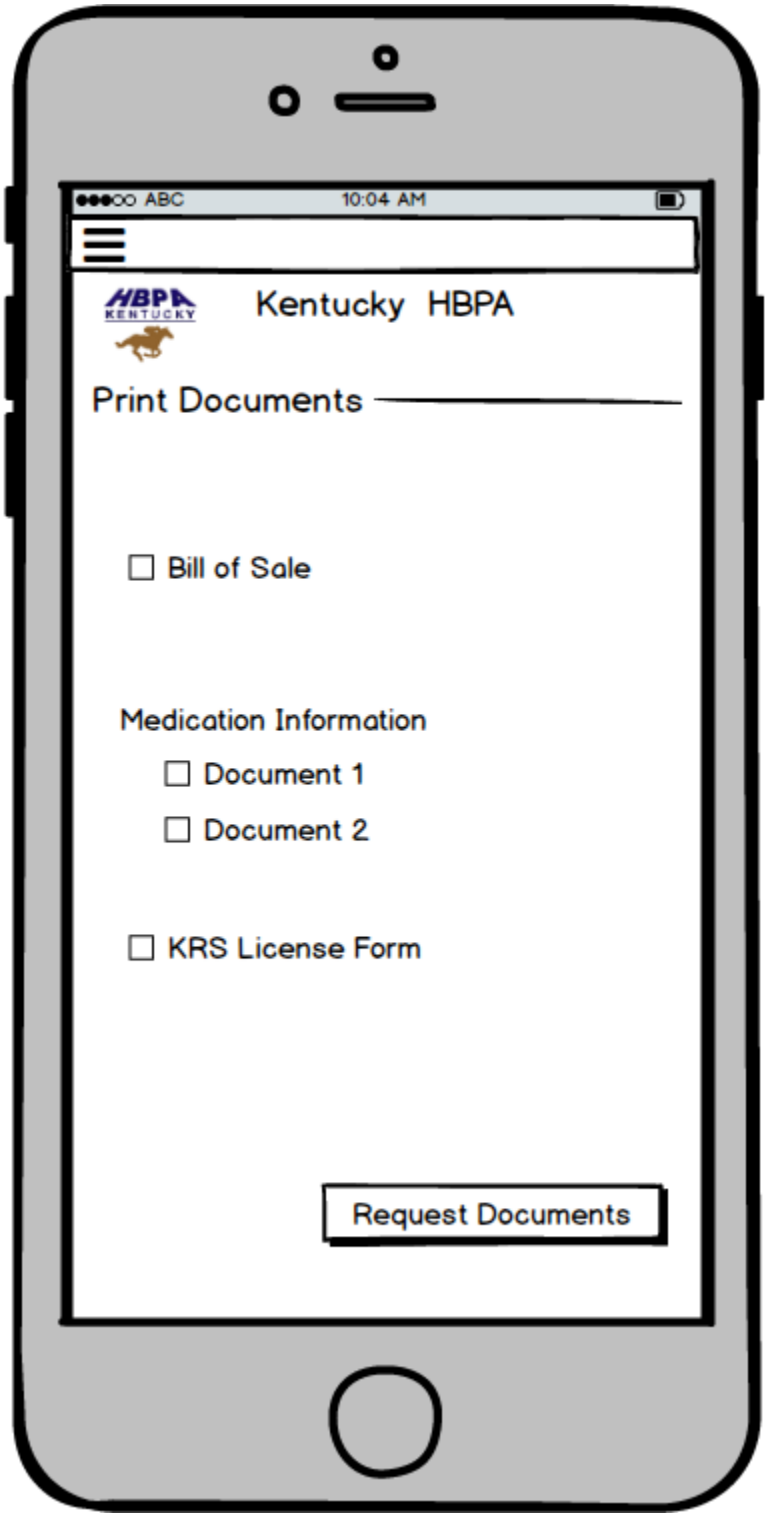
Prototype: Submit Benefits Form



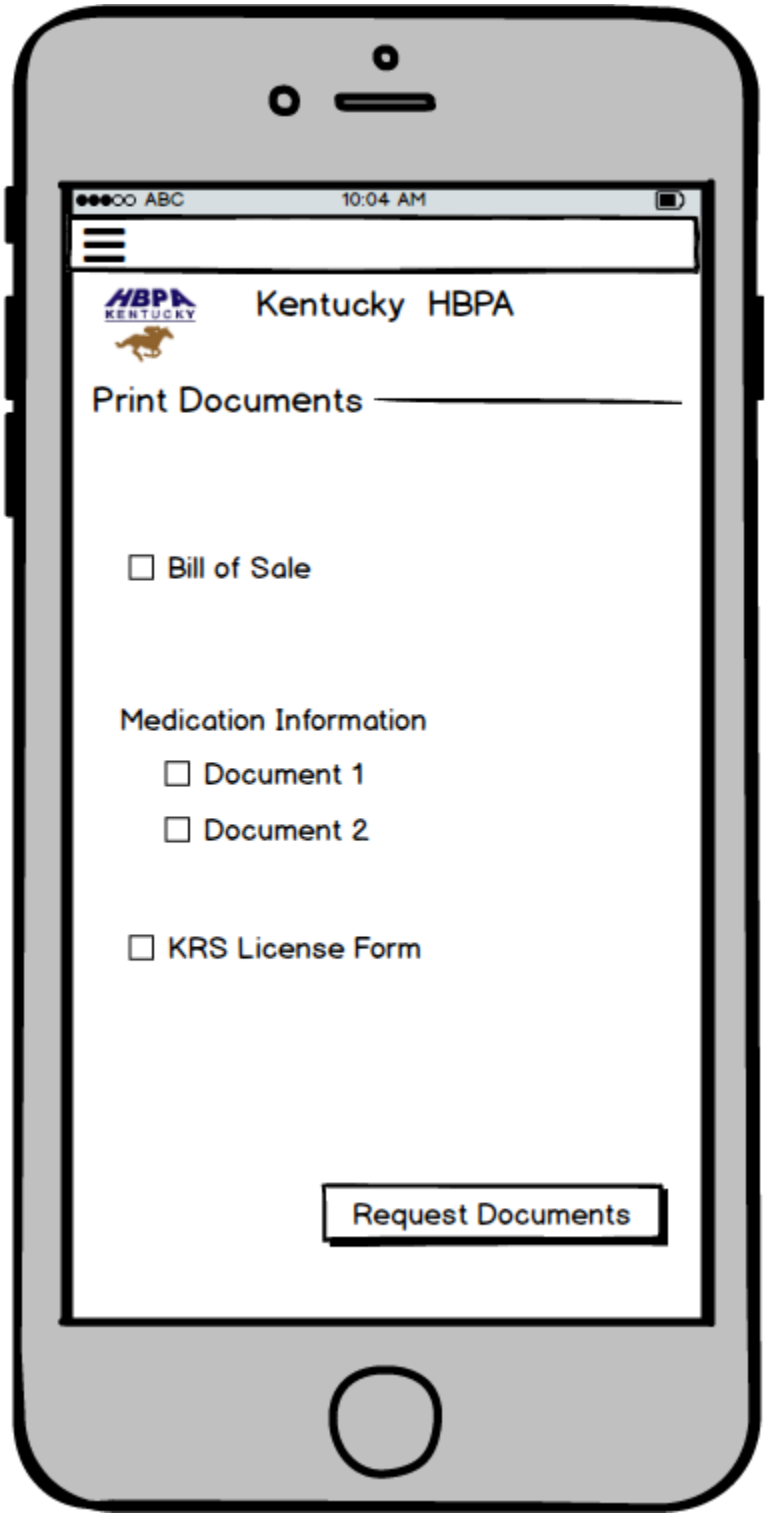
Prototype: Request Medication Information



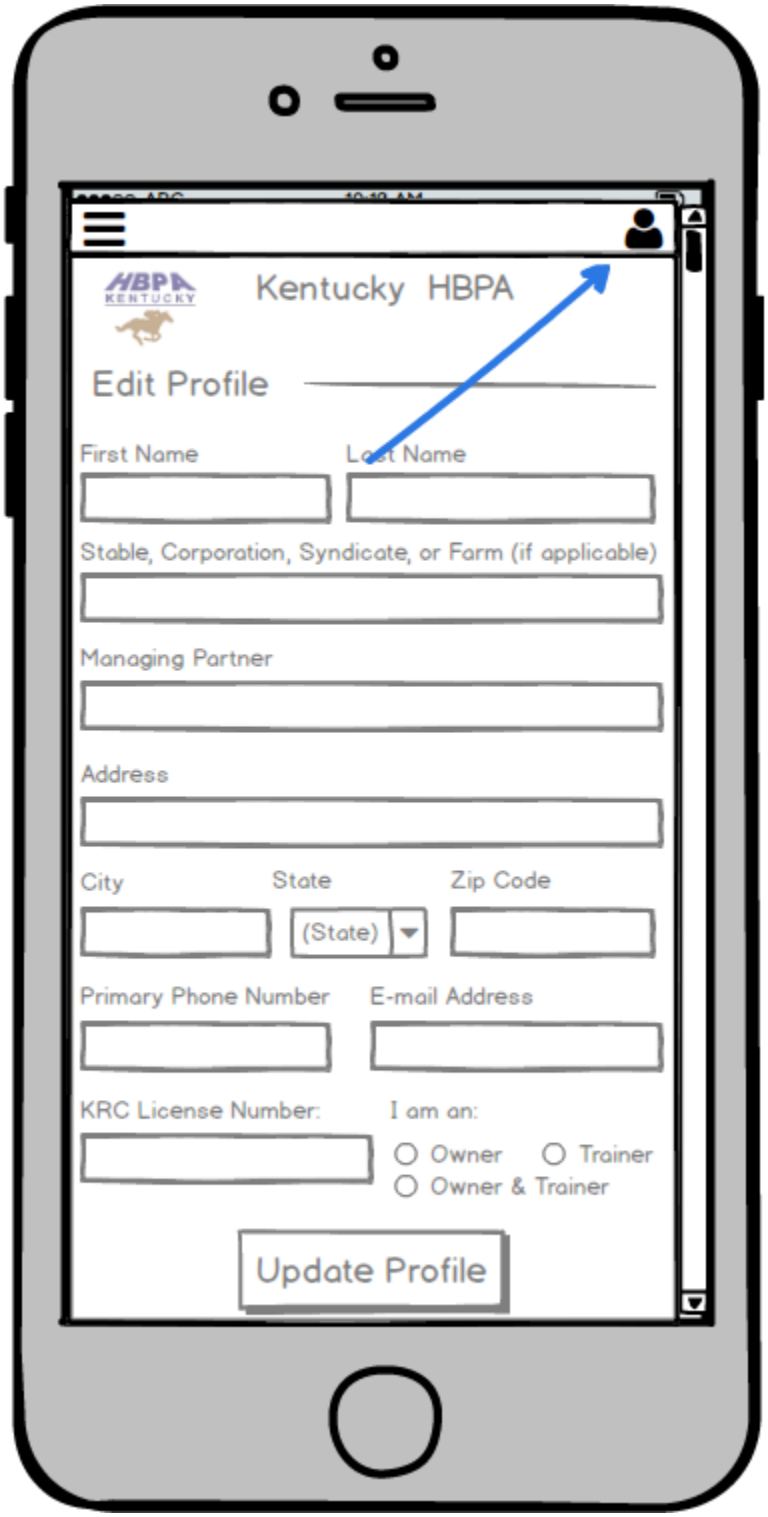
Prototype: Request License Form



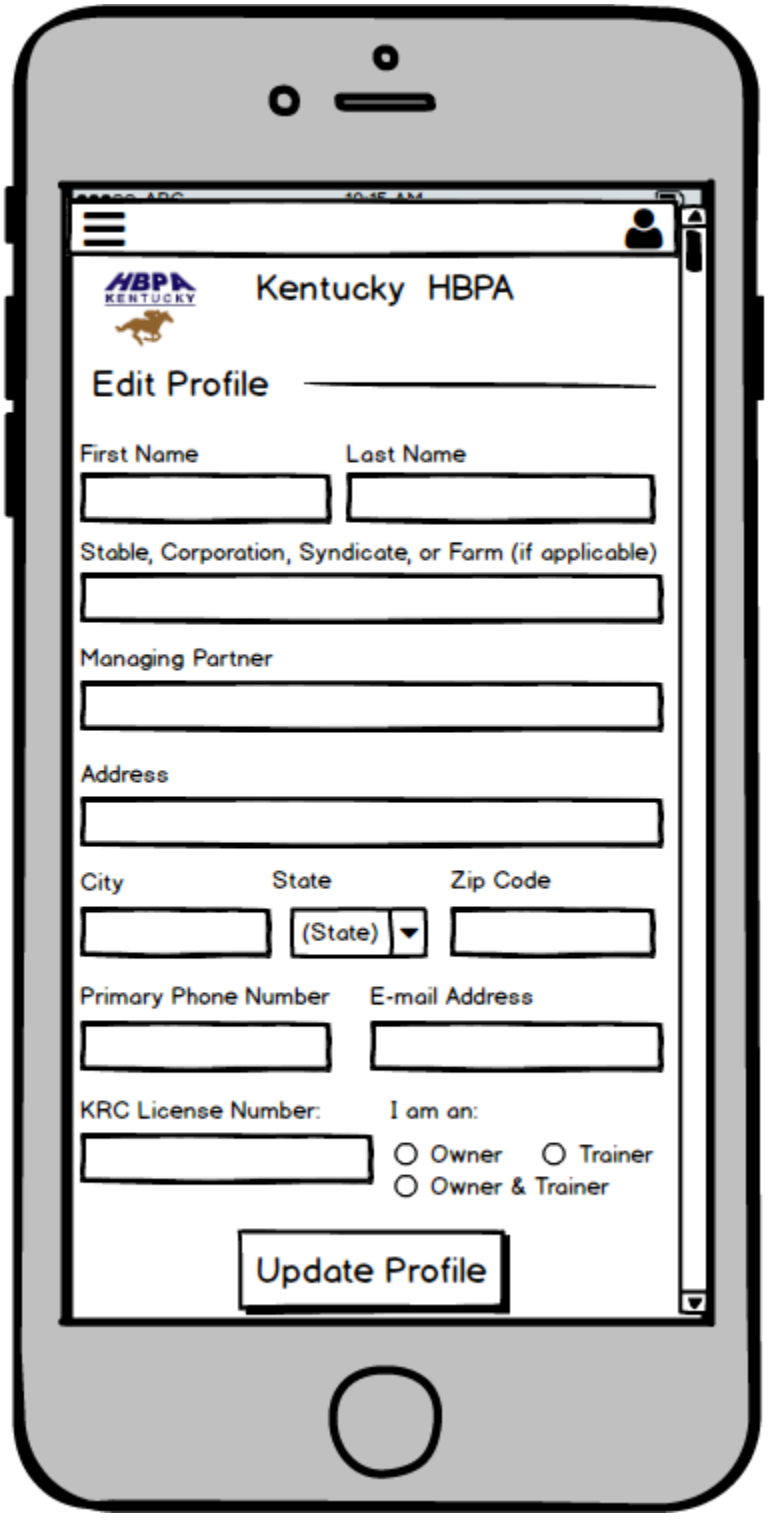
Prototype: Request Bill of Sale



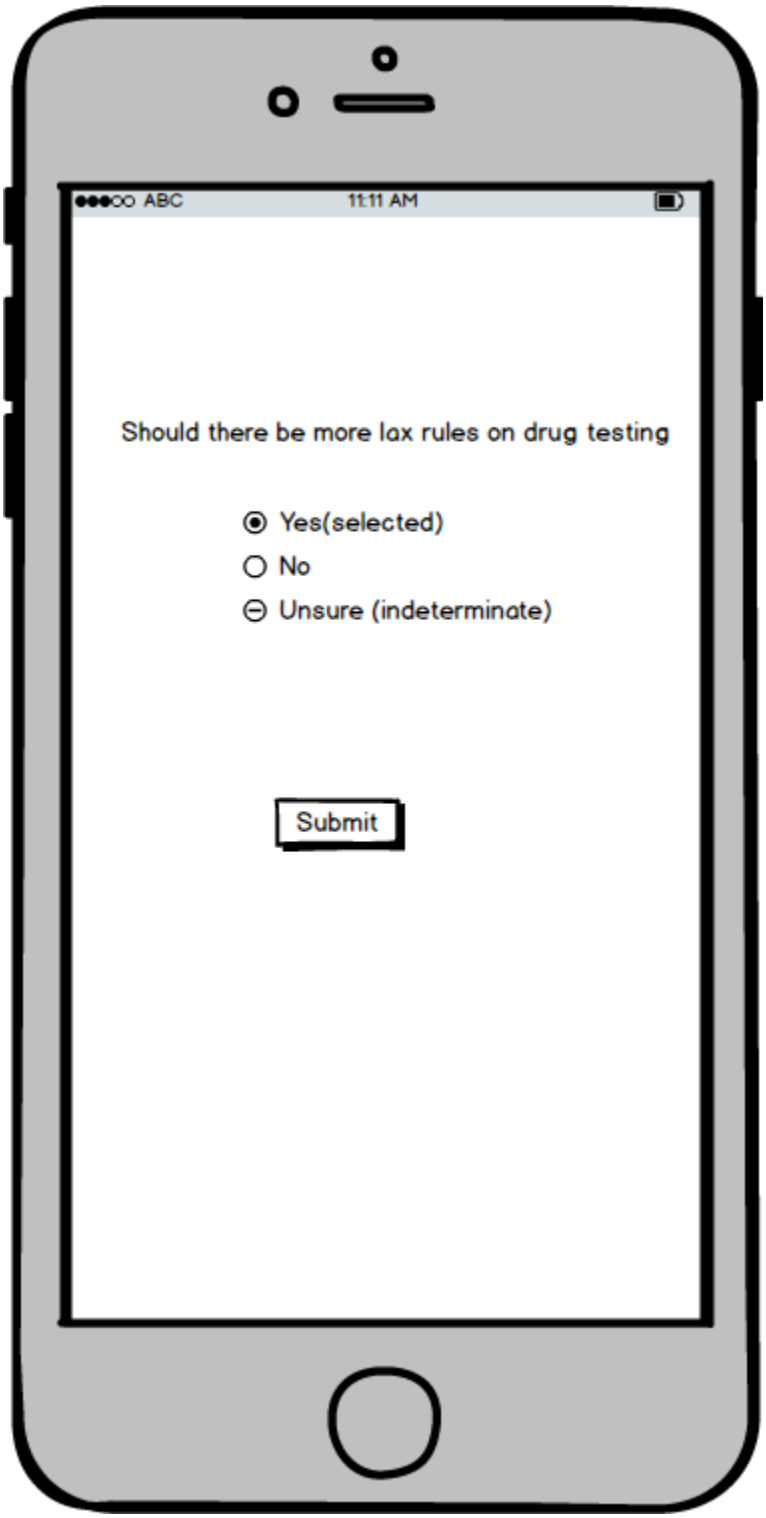
Prototype: Request Profile Info



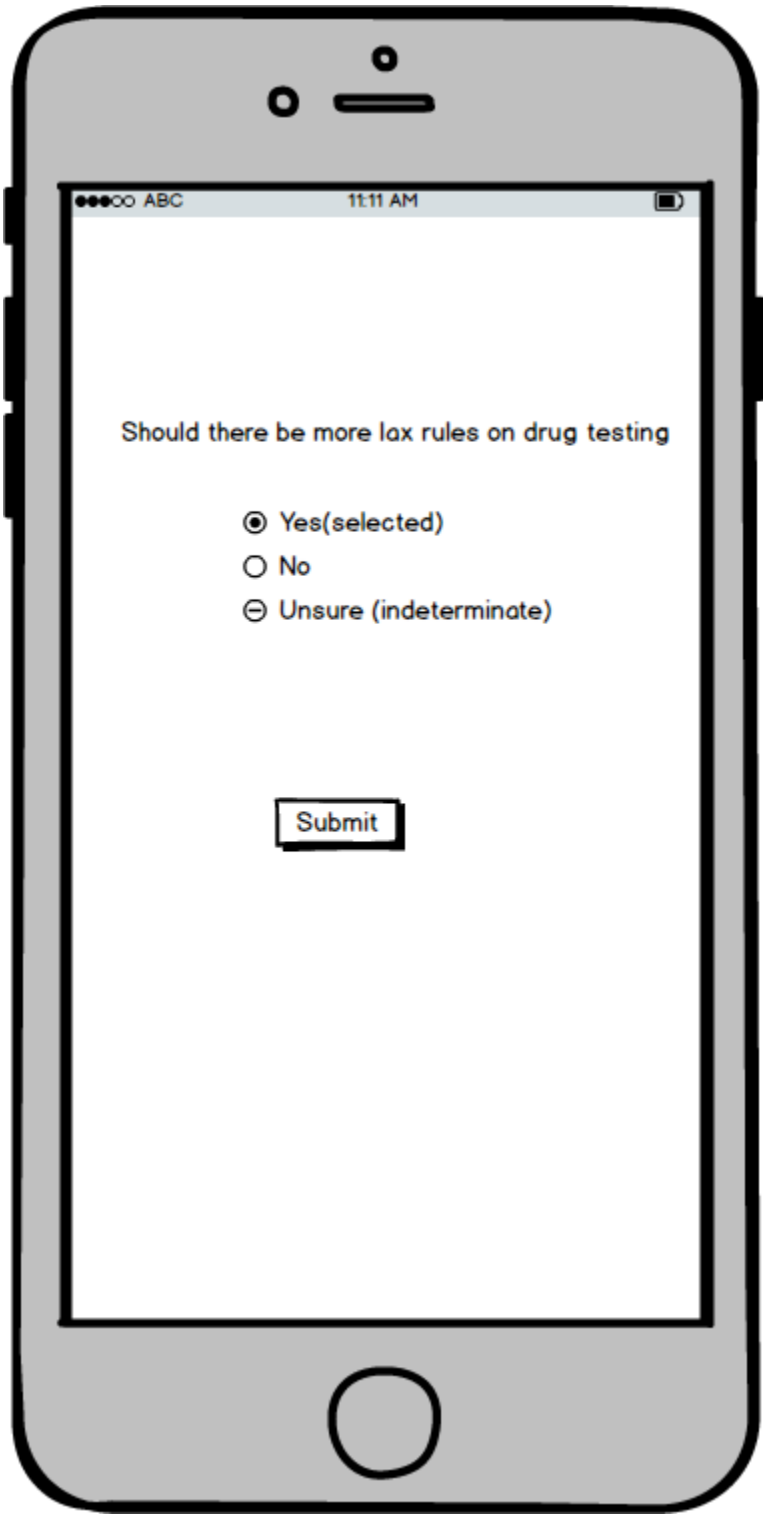
Prototype: Edit Profile Info



Prototype: Creates a Poll



Prototype: Votes on a Poll



Prototype: Posts a Link