//Header//

Name: Zhe Wang

Project: Milk Weights

Project Description: This project stores the statistics of the milk production of different farms, and are able to provide the farm report base on the farm and different time periods base on the user input.

//

2.Class Summary:

enum, interface, class, abstract class	**Name of the type**	**Description of use or purpose of this type**
Interface	DataStructureADT	defines required operations for my data structure
class	Application	Defined required operation for the MilkData calss
Class	DataStorage implements DataStructureADT	Implements DataStructureADT and read and stores the farm id, date, and weight properly from the files.
Class	Main extends application	The class that contains the main method to execute the program.
class	Farm	Create a class object base on the specific farm id, with an array that stores the weight of its milk production, used in DataStorage
Enum	Months	Enum that contains different months that can be used to identify the String input from the user.

3.Class Table:

DataStorage:

Public Fields:

Public Farm [] farmArray	The array that stores the farm objects, valid for all farm objects.

Private int size; private int arraySize; private String [] farmID;	

Constructor:

No parameter required.

Public Methods:

Return type	Public Method name	Parameter	Description	
int	monthTotalWeight	(int, int)	Returns the total milk production of the specific month of all farms.	
int	annualTotalWeight	(int)	Returns the total milk weight of all farms of a specific year	
int	farmYearWeight	(String farmID, int year)	Returns the total milk weight of a specific farm of a specific year.	
void	insert()	(String filename)	Let users add data of farms from a file	
void	remove()	(String farmID,)	Remove the specific farm information from the farmArray	
boolean	Contains()	(String farmID)	Check if the DataStorage have the information of such farm.	
int	Size()	()	Return the number of farms	
farm	Get()	(String farmID)	Return the farm object base on the farmID.	
Farm []	sortingAscend	(int[] weights, String [] farmID.)	Sort the information in ascending order	
void	caculatePercentage	(int [] farmWeight, int, totalWeight)	Calculate the percentage of the farm to the totalWeight, and store the value in the int[] percentage	

Farm:

Fields:

Private String farmID	The farmID of the farm.
Private Int [] milkWeight	The array that stores the milk production of different days.
Private String [] date	The array that stores days that collected the milk.

Constructor:

Parameter: requires the farmID of the farm

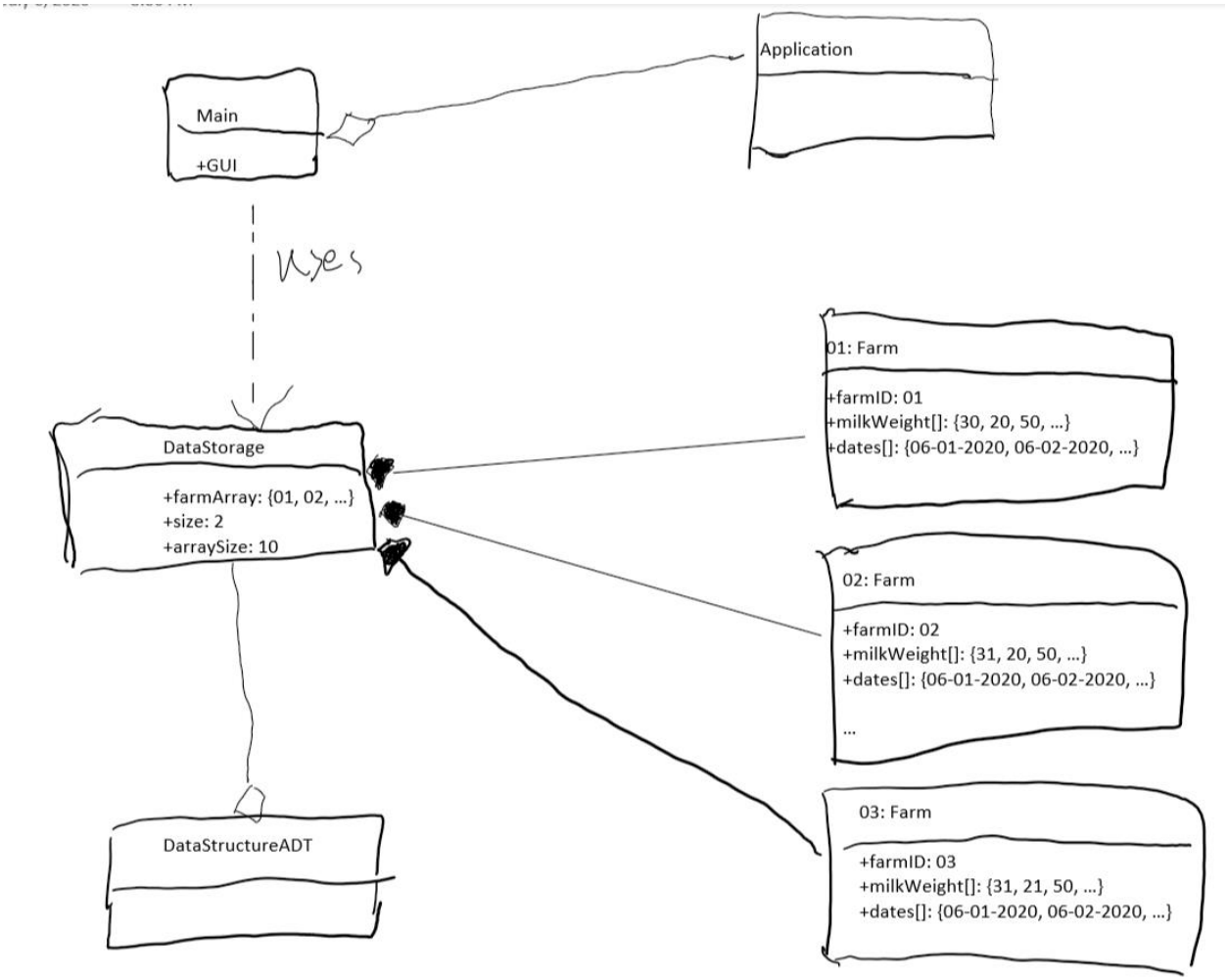
Public method:

Return Type	Method Name	Parameter	Description
int	farmMonthWeight	(String month)	Returns the total milk production of the month
int	farmAnnualWeight	(int year)	Returns the total milk production of the year

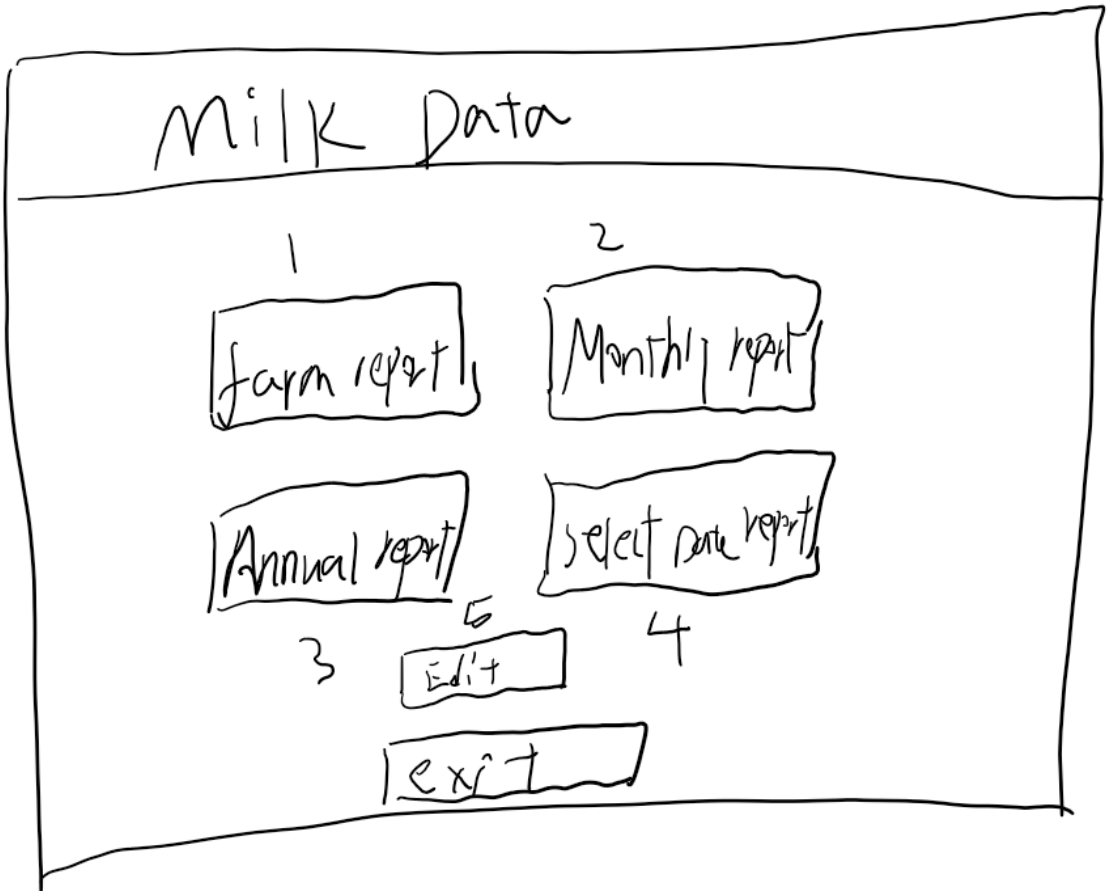
Main:

Public Method name	Parameter	Return type	Description
start	(stage primaryStage)	Void	Display labels and information of farms
Main			Execute the program

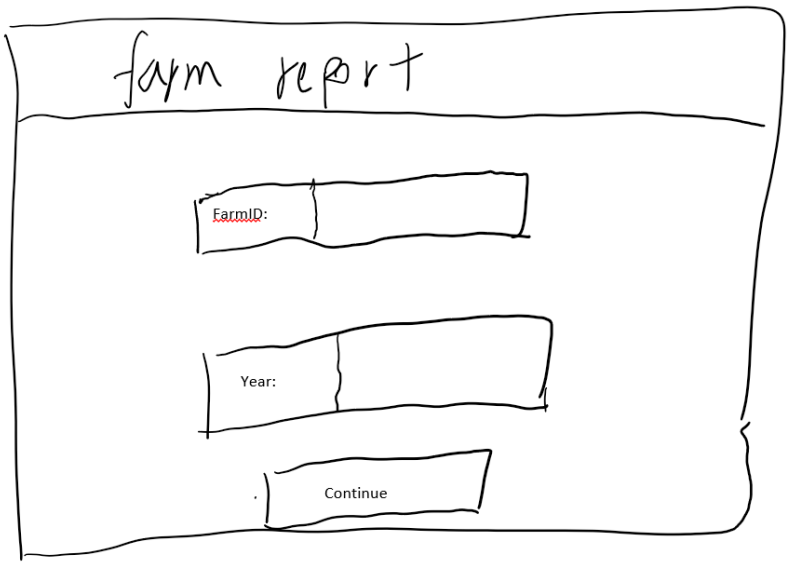
4.Object Diagram：

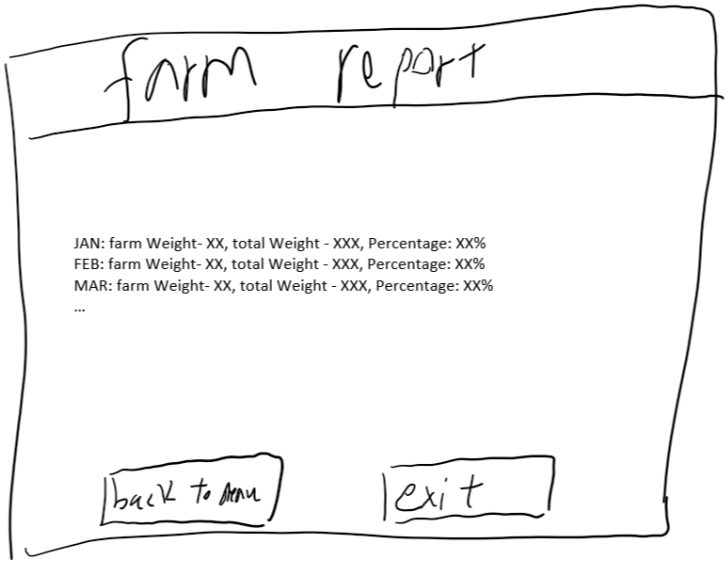


5.GUI Sketch:



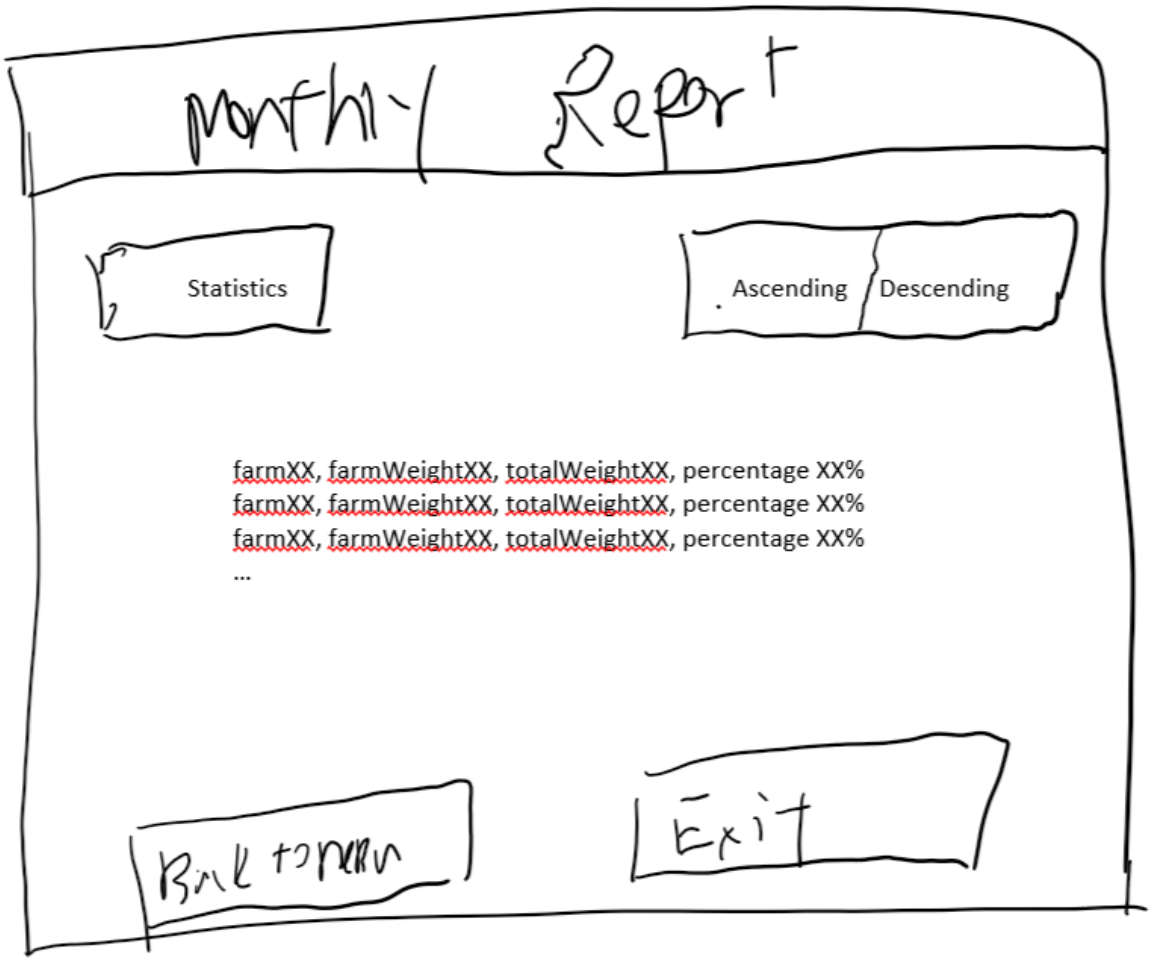
5.1: farm report:



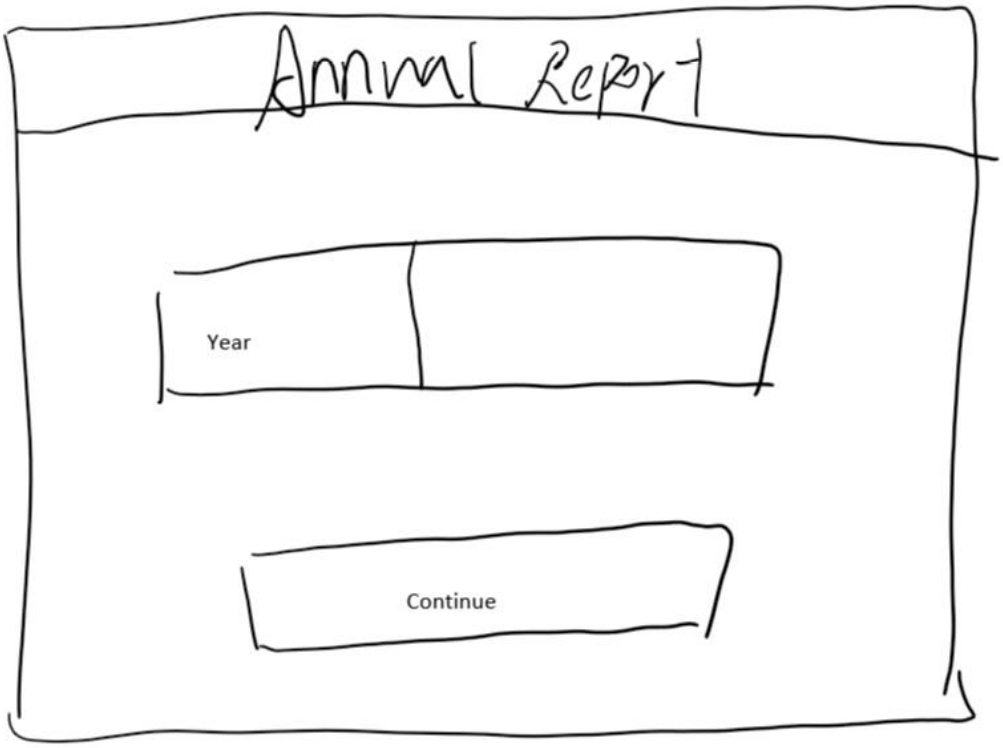


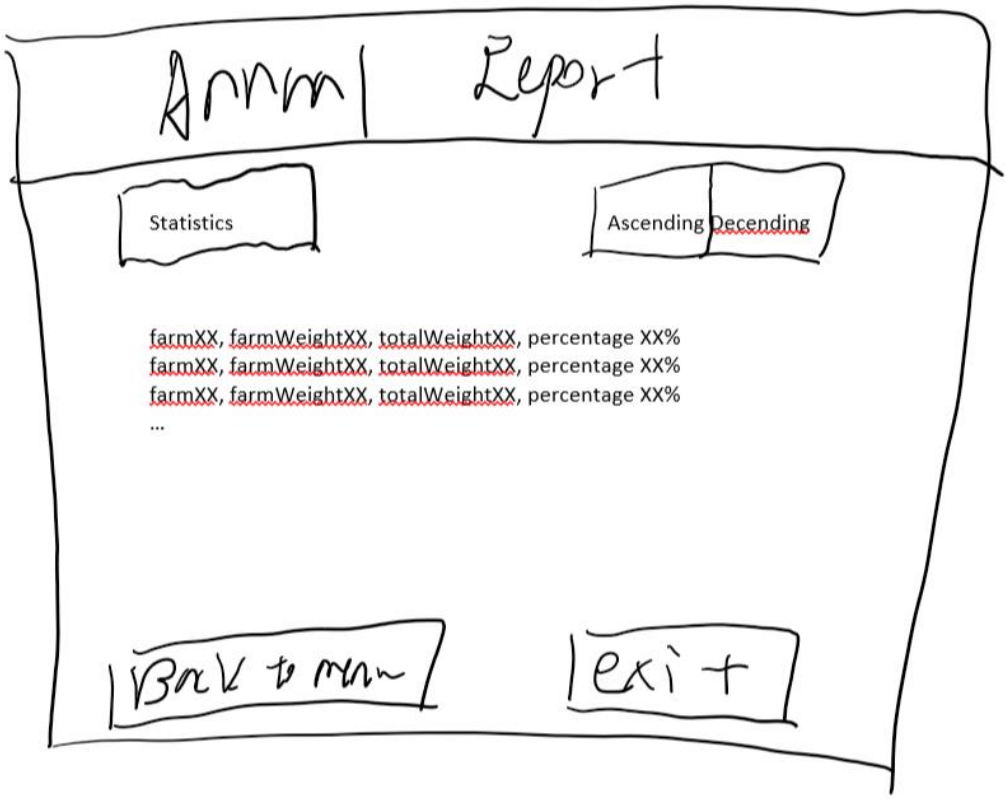
5.2 Monthly Report:


monthly report
year
month
continue

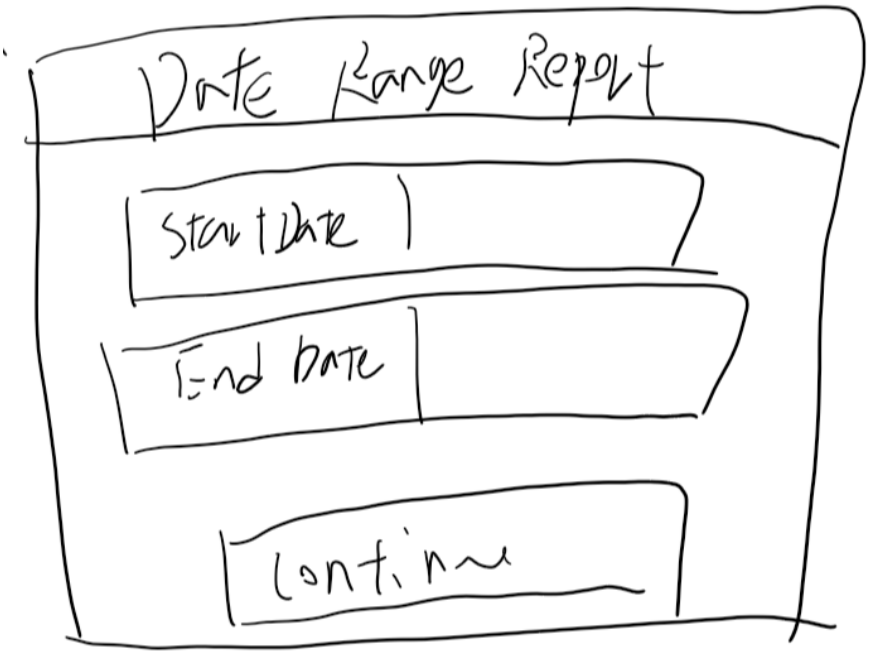

monthly Report
Statistics
Ascending
Descending
farmXX, farmWeightXX, totalWeightXX, percentage XX%
farmXX, farmWeightXX, totalWeightXX, percentage XX%
farmXX, farmWeightXX, totalWeightXX, percentage XX%
...
Exit

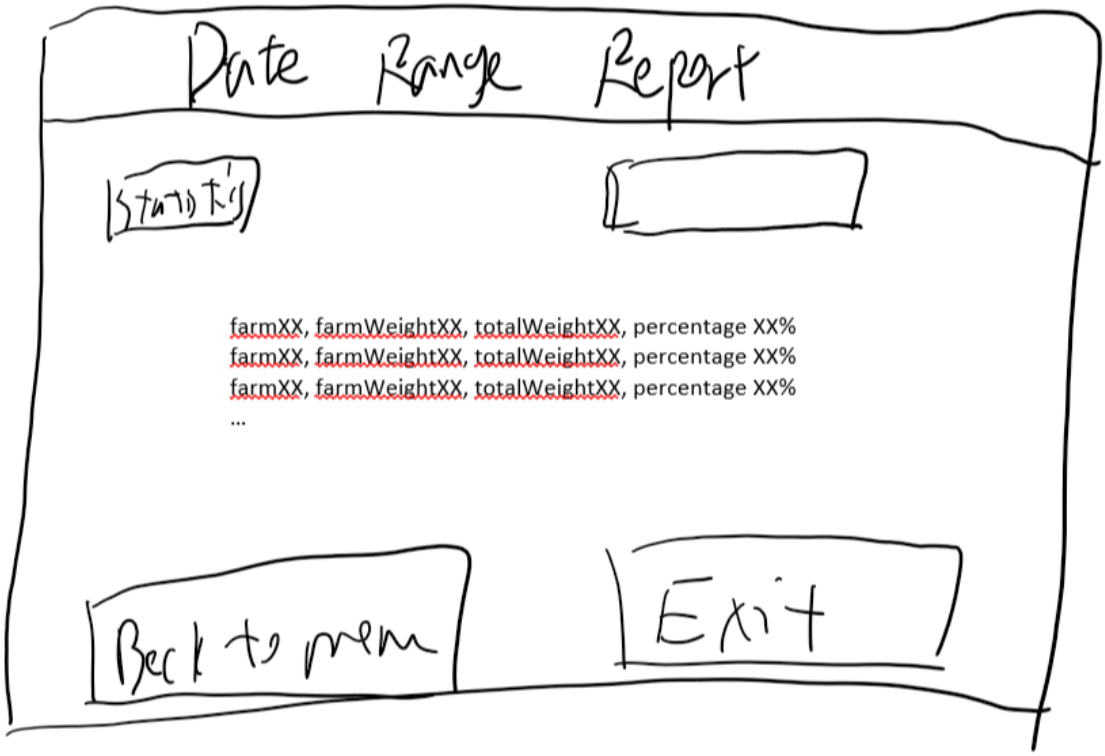
5.3 Annual Report:



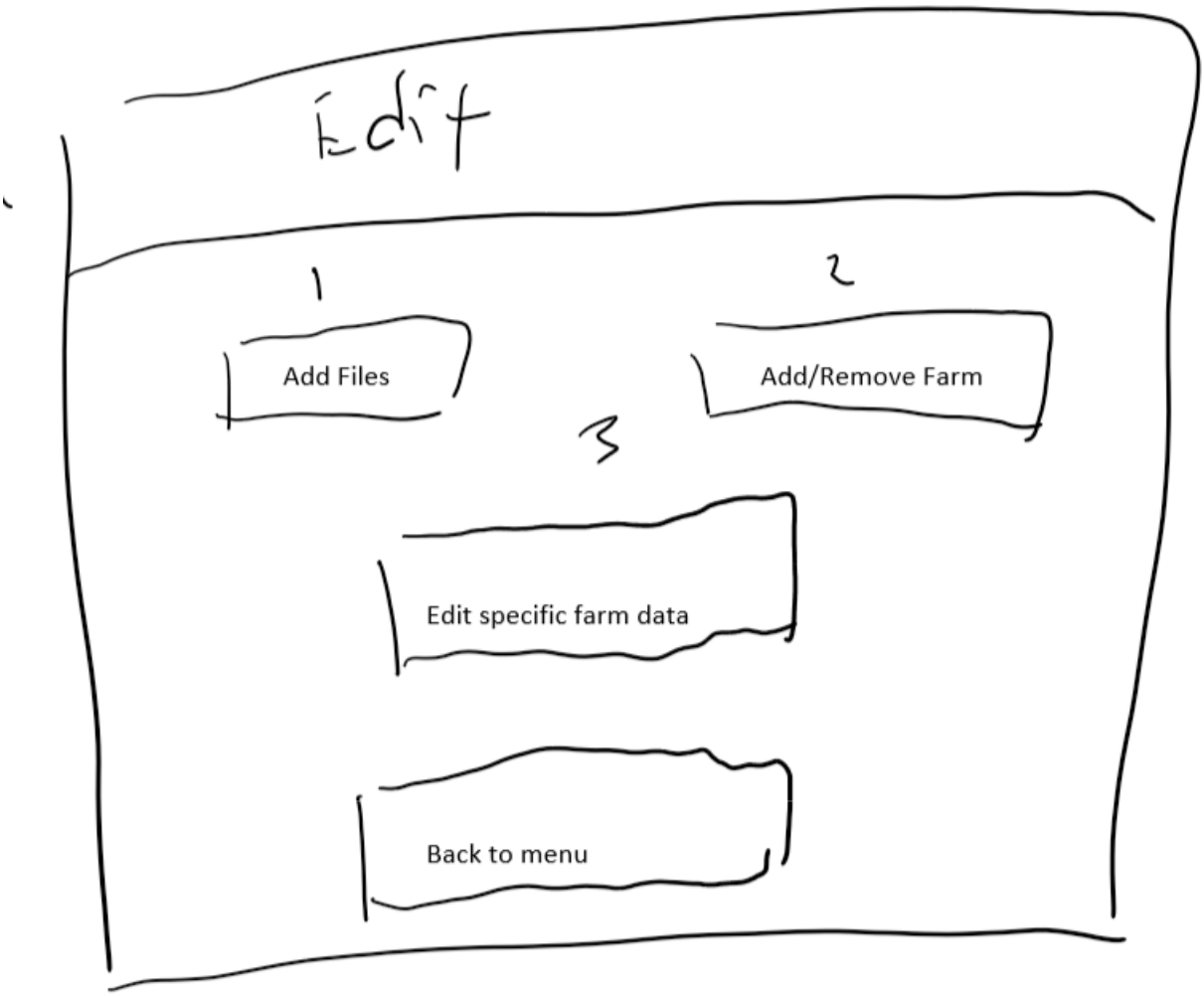


5.4 Select Date Report:

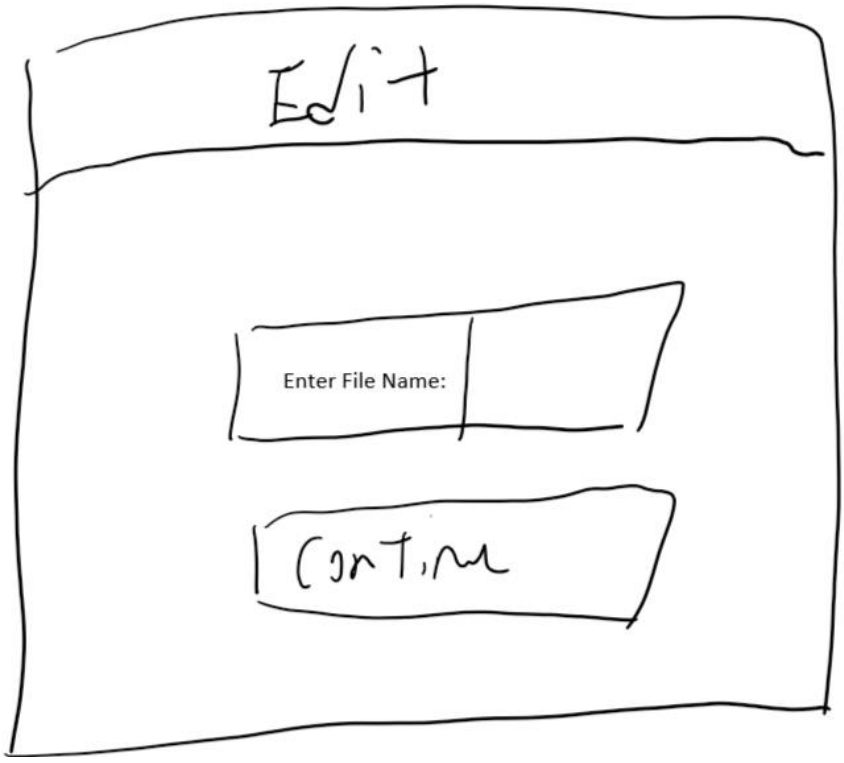


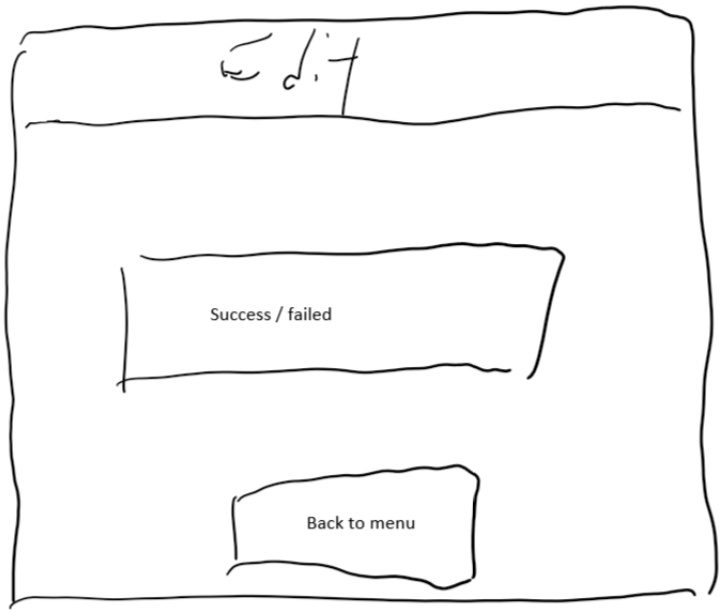


5.5 Edit:

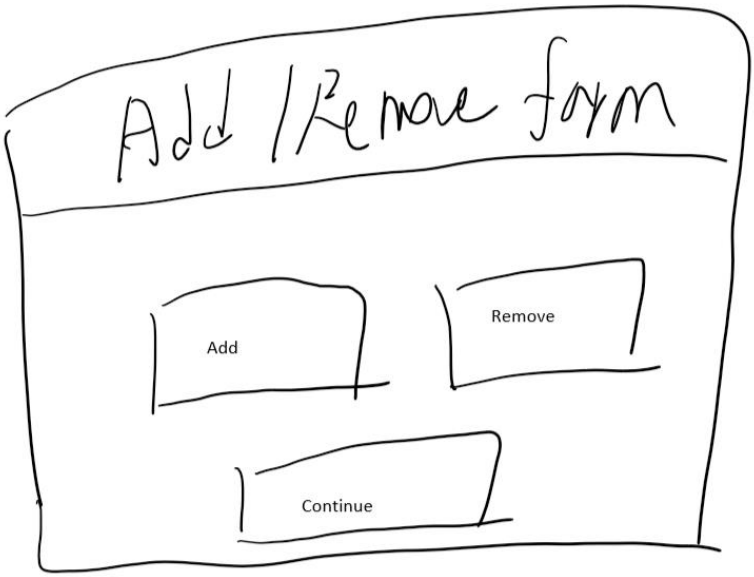

Edit
1
Add Files
2
Add/Remove Farm
3
Edit specific farm data
Back to menu

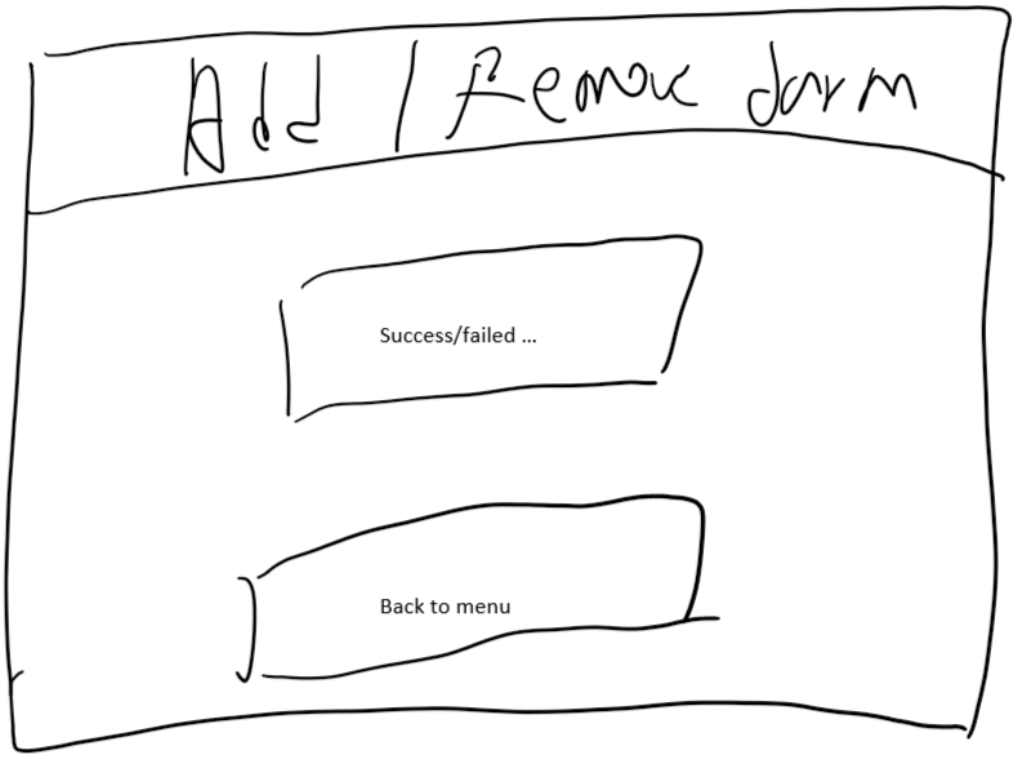
5.5.1 Add Files:



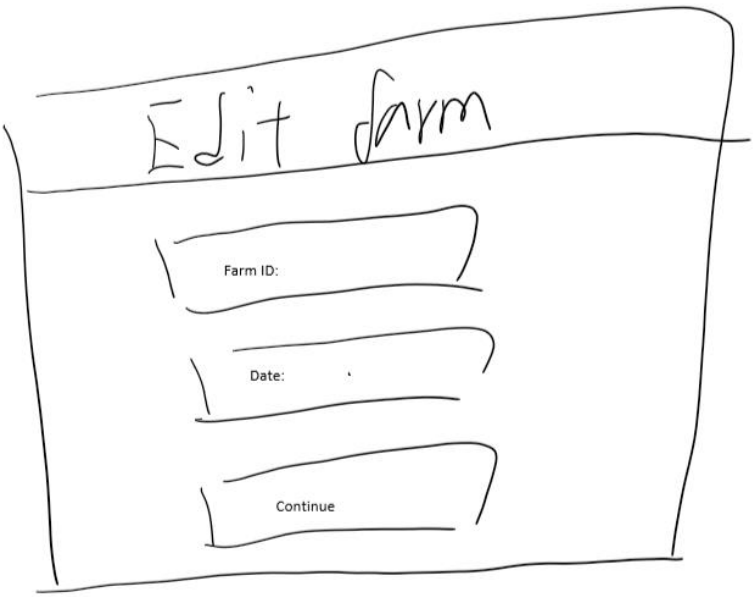


5.5.2 Add/Remove Farm





5.5.3 Edit Specific Farm information:




Edit form
Change the weight to
Change the date to
Remove this data


Edit form
Success/failed
Back to menu