Final Report (PROJECT FARMHOUSE)

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1 Abstract

or a farmer getting crops harvested after many months long process is just half of the task, getting crops sold to market-place can be tiring, hard and extremely disadvantageous to a farmer if he is not completely acquainted with the process. This is where Farm-House steps in; it is a simple all-in-one application for farmers, retailers and corporations alike that enables an easy flow of information and communication between the users. Farm-House allows retailers to raise quotes on purchase of crops from farmers which not only makes it easier for farmers to contact their buyers directly but also allow other customers to see their competitions. This process removes the need of a middleman for the purchasing process which tend to take their own proportions of money from farmers. All a farmer has to do is choose retailers from a list of retailers who is offering the best quote for the crop and contact him directly instead of scrambling in a market searching and asking around for the best buyer. Lastly, it also allows retailers to see which crops are being more produced, which competitor is getting better customers and how the market is changing. With just a click away, all these features can really come to aid for anyone associated with the agriculture business. But mainly, from this project, we hope to create an easier world for farmers who are the driving force of our nations growth.

2 Introduction

armhouse is an user friendly application that allows easy communication between farmers and crop buyers during the purchasing phase. It allows buyers or cooperatives to raise quotes on certain crops they wish to buy and these are made visible to farmers making finding the right buyer a tireless process. The purpose of the project is to ease the purchasing and selling process of farmers and buyers alike for it is the most critical stage of their entire harvesting process as it determines the profits and losses that are thereby generated.

It is completely a C-programming based application that is mainly dependent on File Handling of various files and structures. The application utilizes 4 data (.dat) for storing which stores information regarding user details, details of farmers and buyers and finally, the quotes that are issued. The project allows new users to register as 2 type of users: Farmer or buyer. Upon the selection, each user is transferred to their corresponding portal where they can access a variety of facilities and options. Some of the key features of our application include: Login and Sign-Up facility, buyer search using User-ID, best search based on quote and location for farmers, adding and removing quotes for buyers along with visibility change feature and all quote issued history.

To prevent confusion and to increase appeal, a creative user interface was used on the application. Furthermore, to keep privacy and information safe of each user, a user ID-password system was implemented. Each user has the freedom to choose his or her own User ID with a condition that it is not already in use with another account, on which case the application will notify the same. The users can also Sign-out of their accounts and allow other users to Log-In without the need to close the application.

3 Flowchart or Algorithm

3.1 Program Structure

he program uses 4 different structures for storing information. These act as identification and authenticating points as well when creating or logging into an existing user. They are as follows:

- 1. "basic_details" for storing UserID and Password of an user account along with other essential details like phone number, address etc
- 2. "farmer_details" for storing farmer related information of the account
- 3. "buyer_details" for storing buyer related information of the account
- 4. "buyer_quotes" for storing information on each quote issued by a buyer on the application

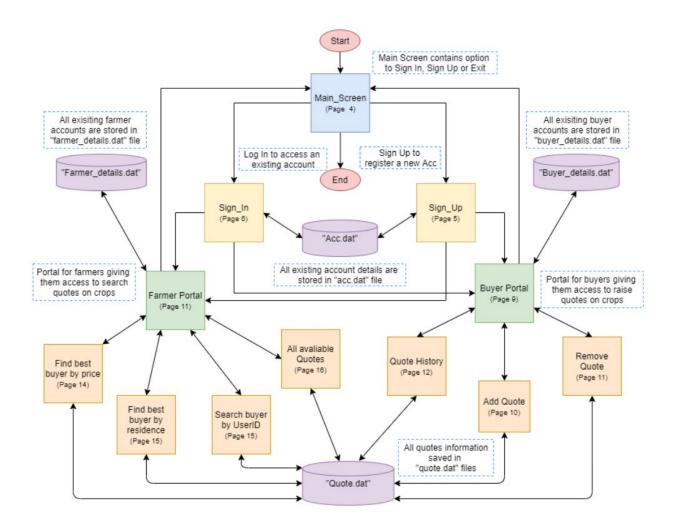
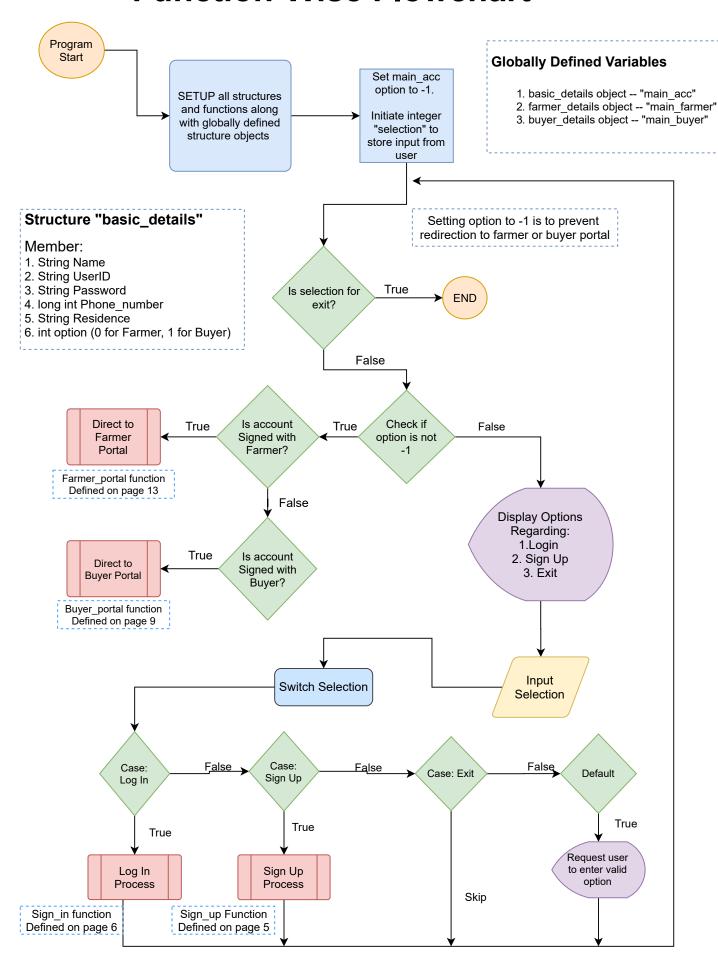
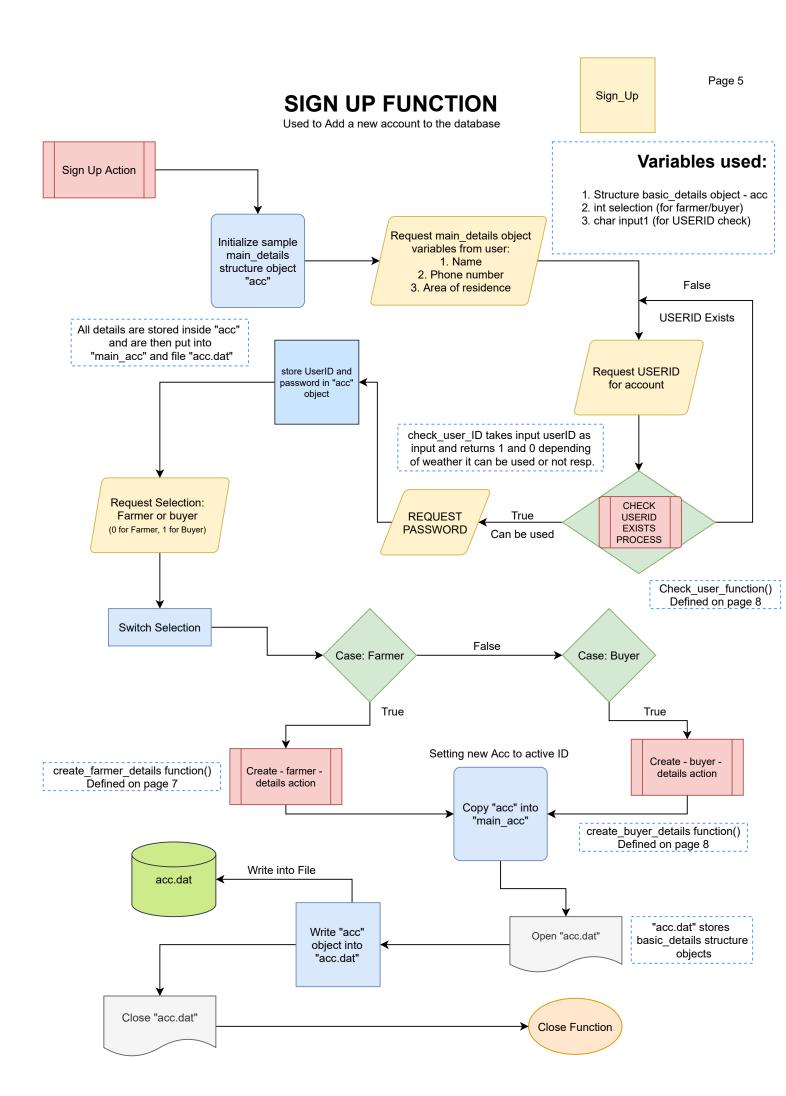
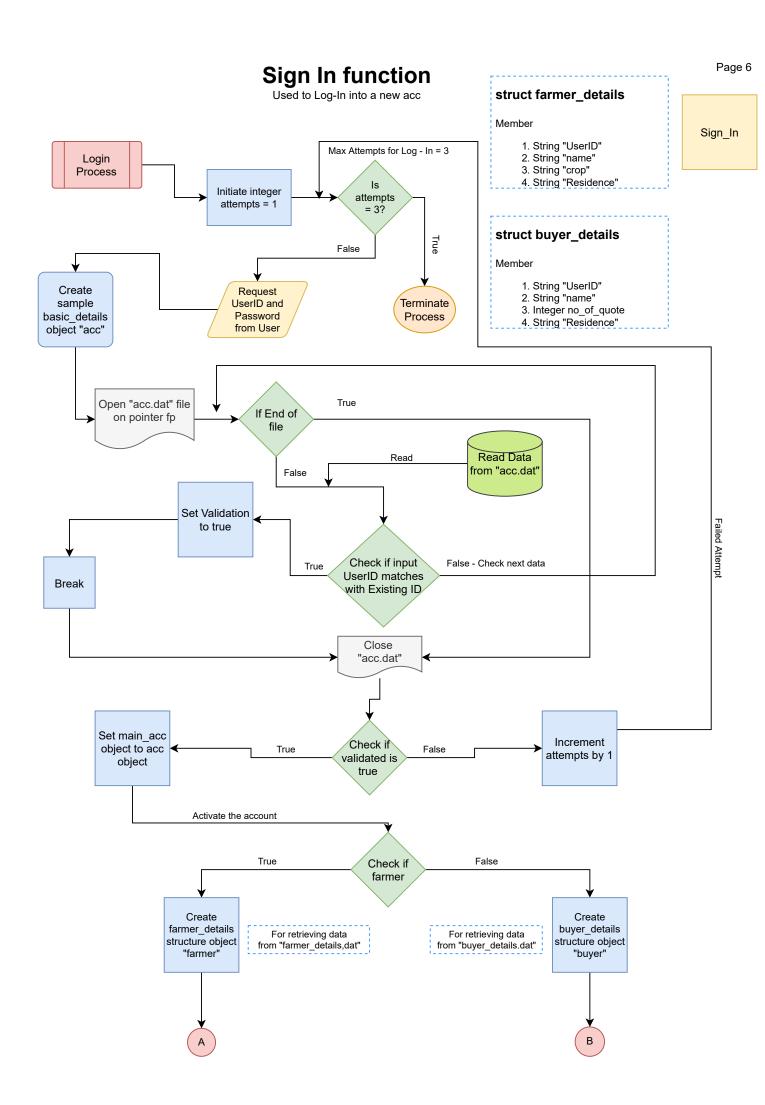


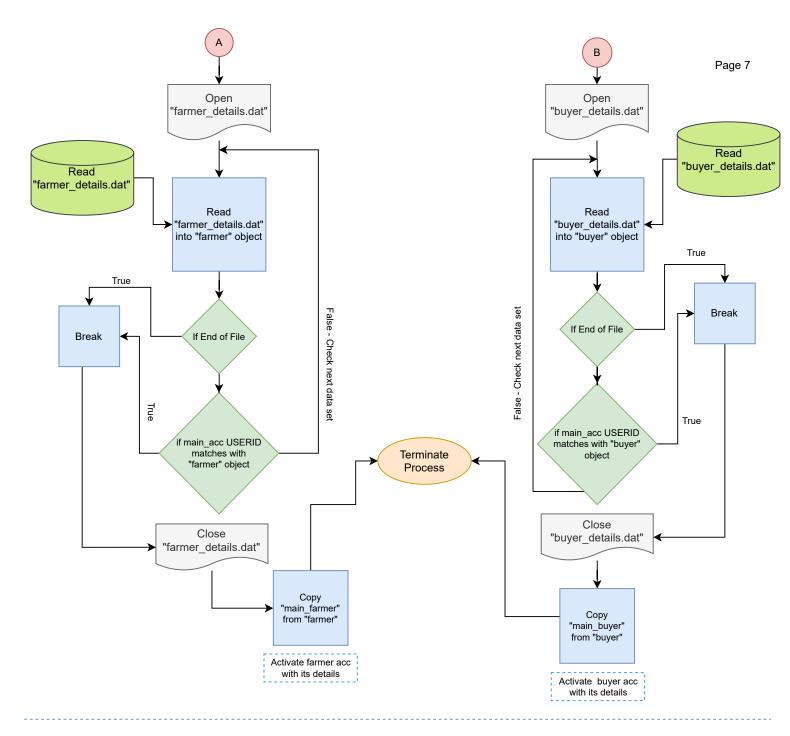
Figure 1: Flow Overview and Index

Function-Wise Flowchart



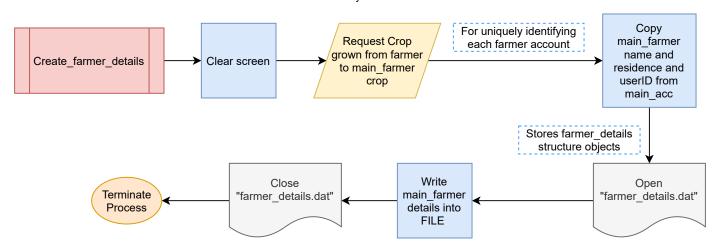






Create_farmer_details

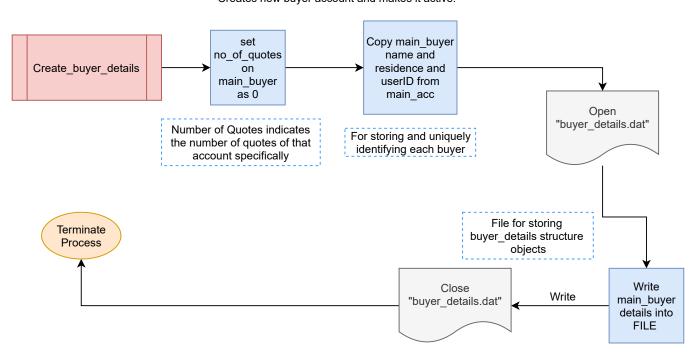
Creates farmer details entry in file and sets to active account



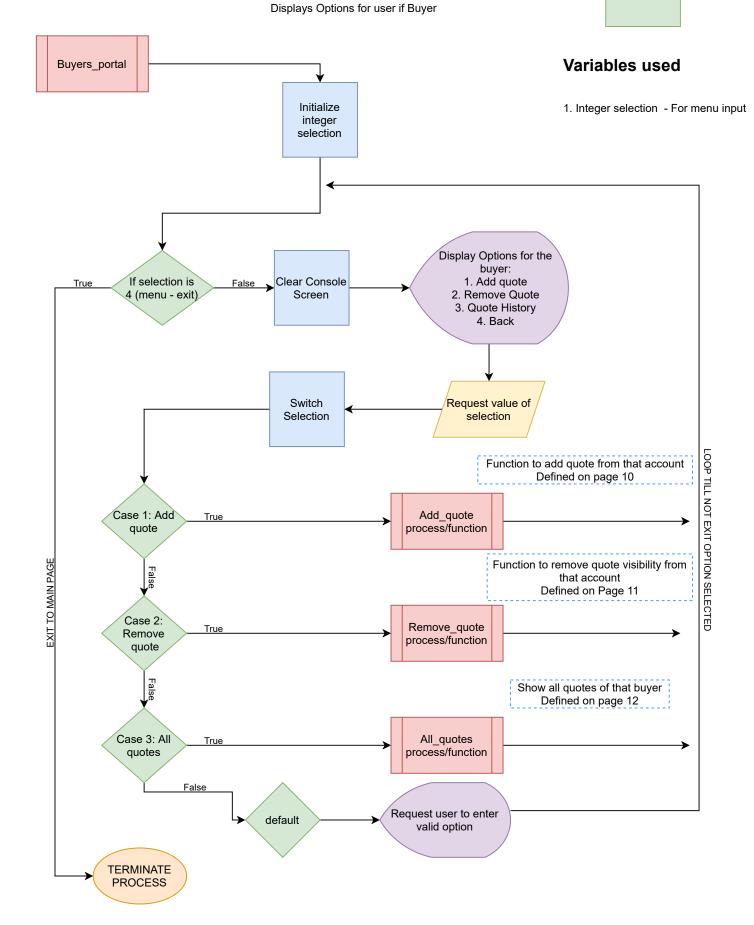
check_valid_userID Used to check if the string the function is called is Variables used unique compared to other IDs 1. Basic details structure object "acc" - for reading data from file "acc.dat" Initialize Check_Valid_USERID object "acc" of Set Valid (Takes char string as 2. Integer "valid" - 1 for "is unique", structure to true input) 0 for "already used" basic_details Return variable: Open "acc.dat" Read acc.dat 1 for "can be used/unique" 0 for "is not unique" Read File False True check if structure into end of file acc object All accounts read Check if input char False matches with userID of Close "acc.dat" True **Break** USERID exists Set Valid to on other acc false Return valid

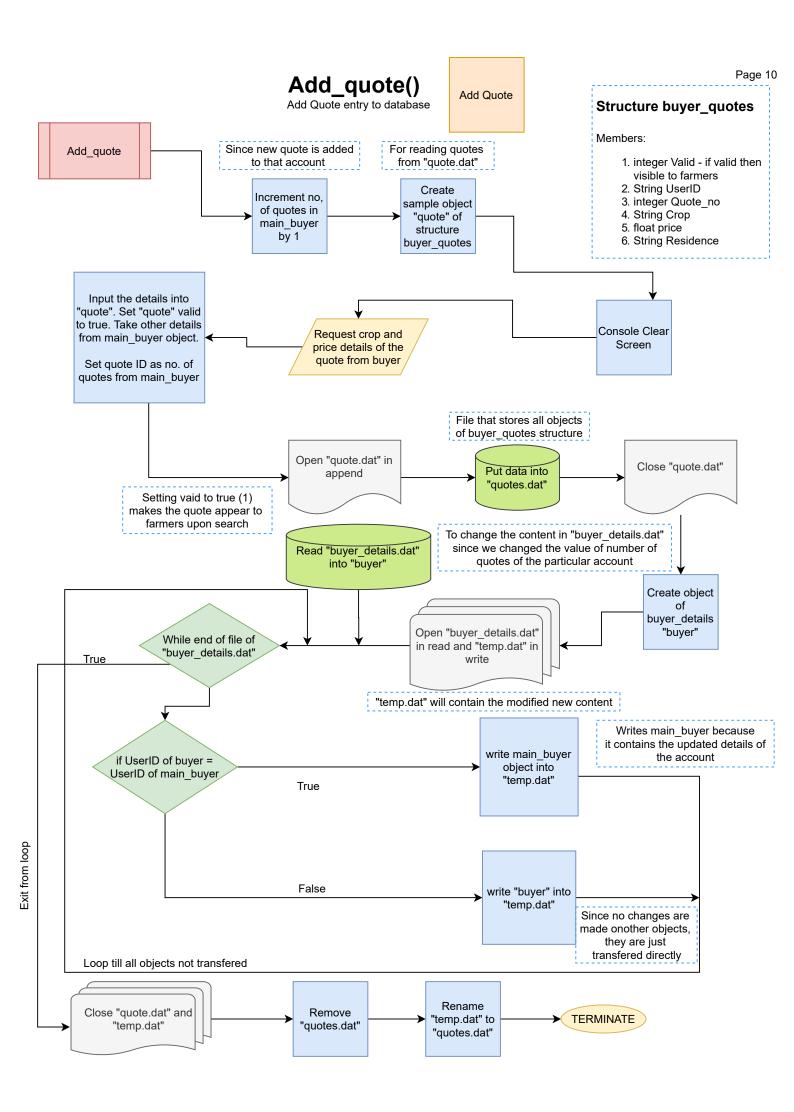
create_buyer_details

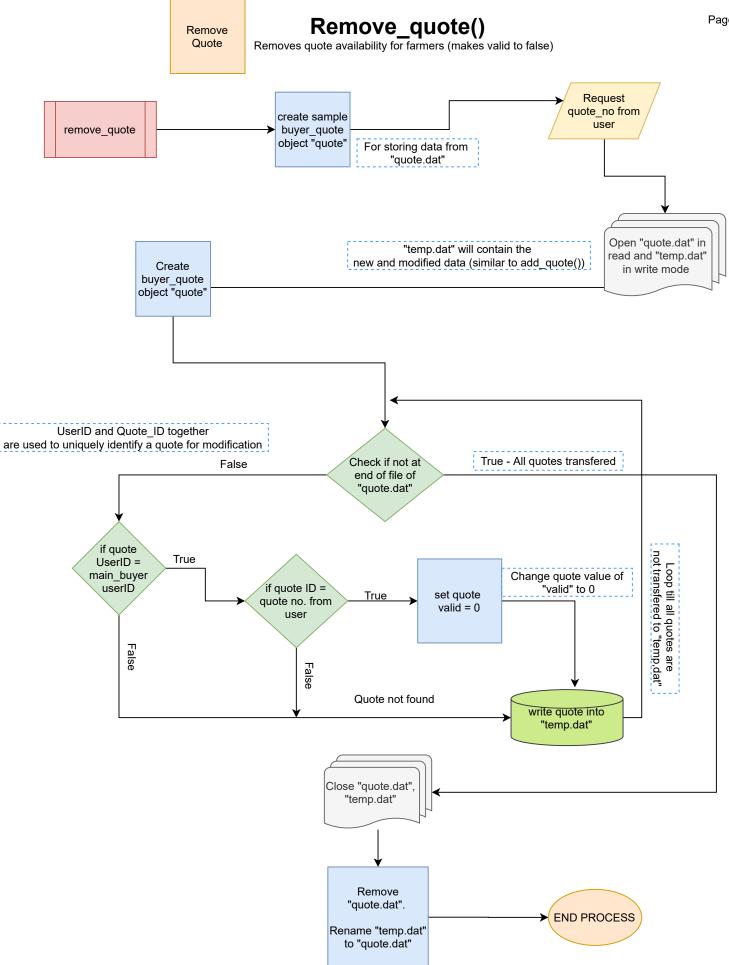
Creates new buyer account and makes it active.

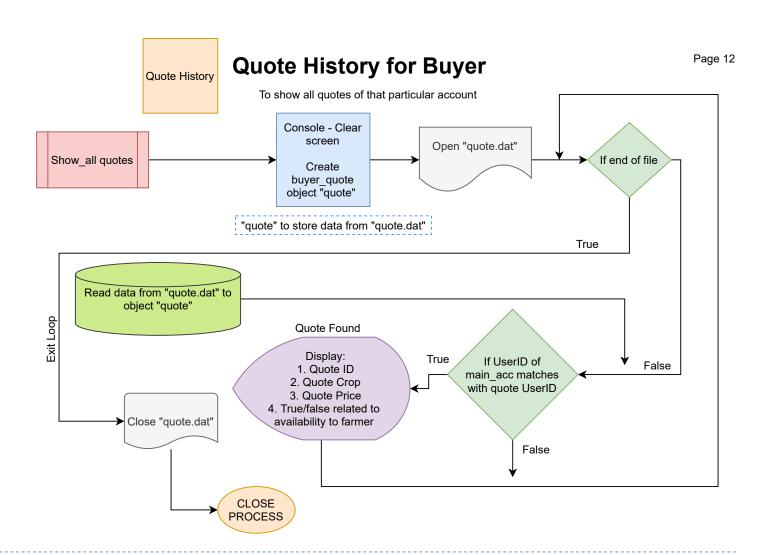


Buyer Portal Buyer Portal



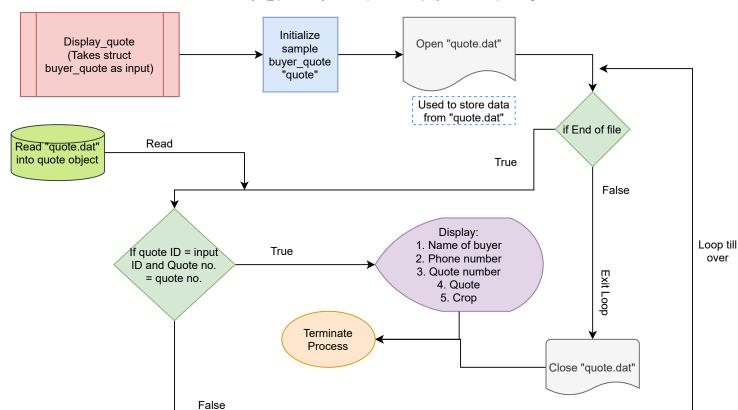


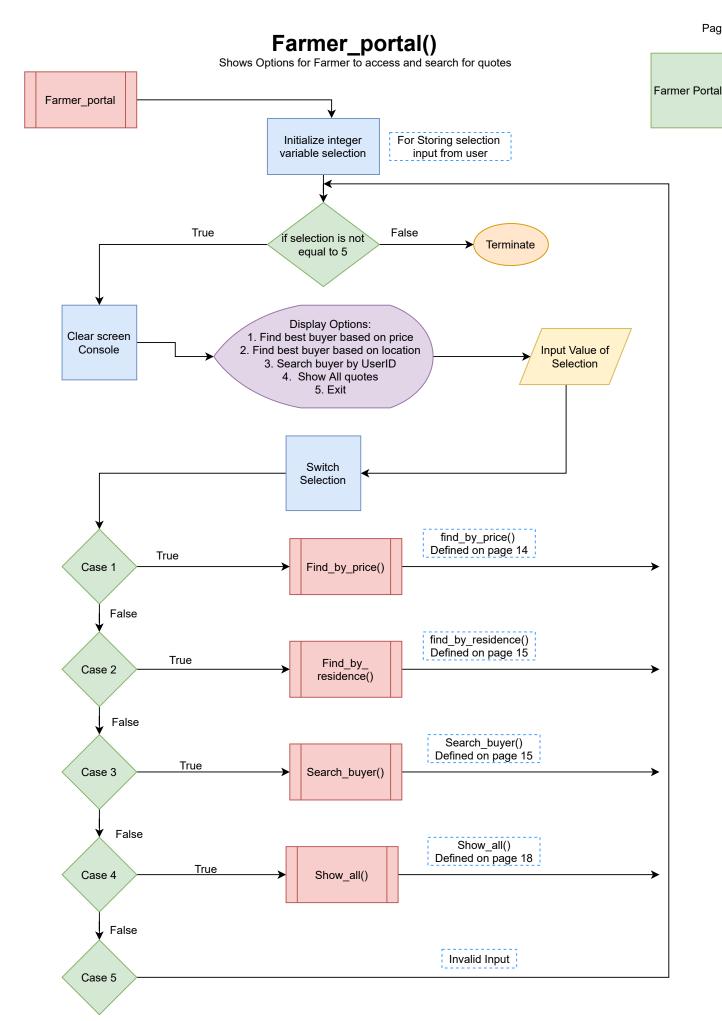




Display_quote()

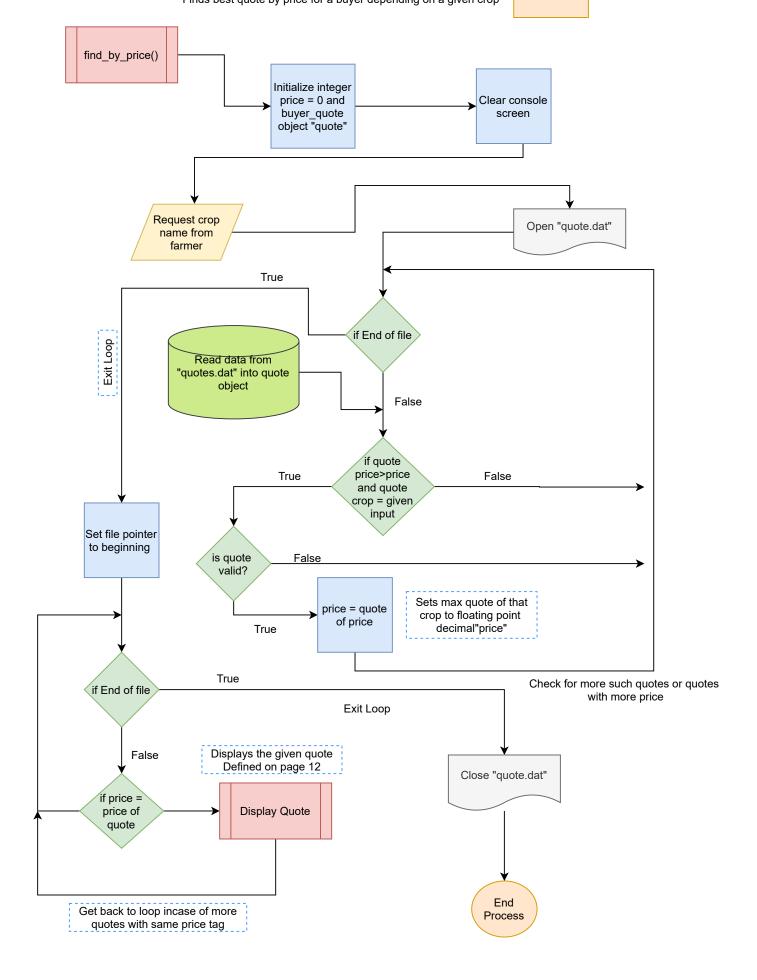
Takes in structure buyer_quotes object as input and displays its corresponding details





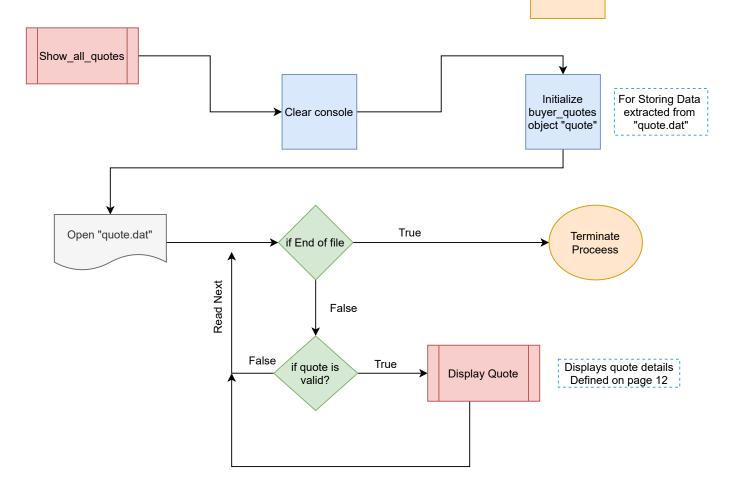
Find_by_priceFinds best quote by price for a buyer depending on a given crop

Find by Price



Show_all_quoteShows all quotes that is accessible to farmers (Quote.valid is 1)

Show All Quotes



4 Source Code

This section of the report presents the source code for project - FARMHOUSE

farmhouse.c

```
Project - FARMHOUSE
CS110 Mini Project
Team: 14
Team Members:
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#include <stdio.h>
#include <stdlib.h>
#include <ctype.h>
#include <string.h>
//---- STRUCTURE DECLARATION-----
struct basic_details //Structure to store Basic Details of any user like UserID, Password etc
    char userID[20]; //Unique UserID of each user, used to uniquely identify each user
   char password[20]; //Password set by each user to safeguard his account
   char name[20]; //Name of user
   long int phno; //Phone number
    char residence[20]; //Residence
    int option; \ensuremath{/\!/} 0 for farmer, 1 for buyer for identification
}:
struct farmer_details //Structure to store details of Farmers if user is a farmer
    char userID[20]; //Links this structure to basic_details structure since UserID is unique
   char crop[20]; //Crop grown by farmer
    char residence[20];
struct buyer_details //Structure to store details of Farmers if user is a farmer
   char userID[20]; //Links this structure to basic_details structure since UserID is unique
   char name[20];
    char residence[20];
   int no_of_quotes; //Number of quotes raised or issued by the farmer throughout the existence of his/her account.
                     //Is used for quote_no in buyer_quote strucute
};
struct buyer_quotes //Structure for storing all quotes that are raised by farmers
    int valid; //if quote is valid (=1), it can be viewed by farmers upon search
   char userID[20]; //Links buyer_quotes to respective User
   int quote_no; //Is the value of the current "no_of_quotes" value from buyer_details. UserID together with quote_no uniquely identifies each quote.
   float price:
    char residence[20];
struct basic_details main_acc; //For storing details of active User
struct farmer_details main_farmer; //For storing details of active user if Farmer
struct buyer_details main_buyer; //For Storing details of active user if Buyer
//-----FUNCTIONS DECLARATION-----
```

```
void create_farmer_details(); //Function to create farmer object for new acc
void create_buyer_details(); //Function to create farmer object for new acc
void farmer_portal(); //Farmer Portal containing all features for farmer account
void search_buyer(); //Search By ID
void buyer_portal(); //Buyers Portal containing all features for buyer account
void find_by_location(); //Find Closest Buyers
void add_quote(); //Adding quote to a buyer
void display_buyer( struct buyer_quotes quotes); //Displaying Quotes
void remove_quote(); //Remove Existing Quote from Visibility
void show_all_buyers(); //Show all visible Quotes
void all_quotes(); //Showing all Quotes of the buyer (Quote History)
int check_valid_userID(char check[20]);//Function to check if given userID is unique or not during registeration process
void find_by_price(); //Finding best quote price for a crop
void SignIn(); //Log In into existing account
void SignUp(); //Function to Create new users
//Main screen - First Screen User Visits when program is run
int main()
   char ch = 'a';
   main_acc.option = -1; //To prevent redirection into Farmer or buyer Portal
       if(main_acc.option==0) //If farmer
         farmer_portal(); //Send to Farmer portal
       if(main_acc.option==1) // If Buyer
          buyer_portal(); //Send to Buyer Portal
       system("cls");
       printf("\t\t\t\t\t Mini Project\n");
       printf("\t\t -----
       printf("\t\t\t\t\t\t
Created By:\n");
       printf("\t\t -----\n"):
      printf("\n\n");
       printf("\t\t\t Select an option: \n");
       \label{localization} printf("\t\t\t\) Press \ L \ to \ Log \ In \ into \ existing \ account \ \n");
       printf("\t\t\t\t > Press S to Sign In and create a new account\n");
       printf("\t\t\t > Press \ E \ to \ Exit \ \n");
       ch = getch();
       ch = tolower(ch); //To convert to lower Case
       switch(ch)
          case 108: SignIn(); //ASCII VALUE OF '1' is 108
          break:
          case 115: SignUp(); //ASCII Value of 's' is 115
          break:
          case 101: break; //ASCI Value of 'e' is 101
          default: printf("\n\n\t\t\t\t *Please Enter valid input*\n");
          printf("\t\t\t\t Press any key to continue...");
          getch();
      }
   }
//----- Function to Create new users ------
void SignUp()
   struct basic_details acc; //temporary structure object for storing details
   char ch = 'a'; //To prevent mis-direction
```

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```
int nxt = 0; //To continue in the registration process
while(ch!='e' && !nxt) //looping and exit condition e-->exit
  system("cls");
  printf("\n\n\n");
  printf("\t\t\t\t\t Mini Project\n");
  printf("\t\t\t\t\New Account Registeration\n");
  printf("\t\t\t Enter the kind of User to be Created: n");
  printf("\t\t\t\t\t > Press F for Farmer \n");
  printf("\t\t\t\t > Press B for Buyer \n");
  printf("\t\t\t\t\t >Press E to return to previous screen \n");
  ch = getch();
  ch = tolower(ch);
  printf("%c",ch);
  switch(ch)
     case 102: acc.option=0; //For Farmer
     nxt = 1;
     break;
     case 98: acc.option=1; //For Buyer
     nxt = 1;
     break;
     case 101: break; //Exit condition
     printf("\t\t\t Press any key to continue...");\\
     getch();
}
if(ch!='e')
{
  system("cls");
  printf("\n\n\n\n");
  printf("\t\t\t\t \ Mini\ Project\n");
  printf("\t\t -----\n");
  printf("\t\t\t\t\New Account Registeration\n");
  printf("\t\t ------
  fp = fopen("acc.dat","ab"); //File storing "Basic_details" structure objects
  printf("\t\t\t\t Enter Name: ");
  fflush(stdin); //to clear buffer which might interfere input of string
  printf("\t\t\t Enter Phone number: ");\\
  scanf("%ld",&acc.phno);
  printf("\t\t\t\t Enter area of residence: ");
  fflush(stdin):
  gets(acc.residence);
  while(1)
  {
     system("cls");
     printf("\n\n\n");
     printf("\t\t\t\t\t Mini Project\n");
     printf("\t\t -----
     printf("\t\t\t\t\t\Account Registeration\n");
     printf("\t\t -----\n");
     char input[20];
     if(check_valid_userID(input)) //check_valid_userID returns 1 if input userID is unique and 0 for not unique
     {
```

```
char input2[20].ch1:
           int i =0; //index of password string
           printf("\n");
           printf("\t\t\t Enter Password: ");
           while(1)
              ch1 = getch();
              if(ch1 == '\r') //return character as loop exit condition
              }
              else
              {
                 input2[i] = ch1;
                 printf("*");
           }
           input2[i] = '\0';
           strcpy(acc.password,input2); //Copy the password to temp object
         }
         else
         {
           printf("\n\n");
            printf("\t\t\ *User\ ID\ already\ Exists.\ Try\ another\ ID.*\n");\ //If\ UserID\ is\ not\ unique\ i.e.\ some\ other\ User\ exists\ with\ given\ ID.
            printf("\t\t\t Press any key to continue...");
            getch();
        }
      fwrite(&acc,sizeof(acc),1,fp); //Writing the structure to file for storing
      fclose(fp);
      main_acc = acc; //Making new account as active account
      if(acc.option == 0) //If farmer
         create_farmer_details(); //Go to Farmer Details function which will create farmer acc object
      else
      {
        create_buyer_details(); //Else if Buyer,go to Buyer Details function which will create Buyer acc object
//----- Log In into existing account -----
void SignIn()
  int tries = 1; //Max Tries to log-In incorrectly = 3
  while(tries!=4)
     FILE *fp:
     fp = fopen("acc.dat","rb");
      struct basic_details acc;
      char input1[20];
      system("cls"):
      printf("\n\n\n");
      printf("\t\t -----\n");
      printf("\t\t\t\t\t Account Log In\n");
      printf("\t\t -----\n");
      printf("\t\t\t\t Enter USER ID: ");
      fflush(stdin);
```

strcpy(acc.userID,input); //If input UserID is unique, it is put into temp object

```
gets(input1);
printf("\t\t\t\t Enter Password: ");
char input2[20], ch1;
int i = 0;
while(1) //Password entry
   ch1 = getch();
   if(ch1 == '\r')
      input2[i] = '\0';
      break;
   else
   {
      input2[i] = ch1;
      printf("*");
}
int validated = 0; //Validated = 1 means account USERID and Password matches with any existing
while(fread(&acc, sizeof(acc),1,fp)==1)
   if(!strcmp(acc.userID,input1) && !strcmp(acc.password,input2))
   -{
       validated = 1;
       break;
   }
}
fclose(fp);
if(validated)
   main_acc = acc; //set to acc to active account, as it matches with the given data
   if(main_acc.option == 0) //if Farmer
       fp = fopen("farmer_details.dat","rb"); //get active Farmer Data
       while(fread(&main_farmer, sizeof(main_farmer),1,fp)==1)
          {
              if(!strcmp(main_farmer.userID,input1))
             {
                 break;
              }
          fclose(fp);
   }
   else
       fp = fopen("buyer_details.dat","rb"); //get active Buyer data
       while(fread(&main_buyer, sizeof(main_buyer),1,fp)==1)
          {
              if(!strcmp(main_buyer.userID,input1))
                 break:
          fclose(fp);
   }
   break;
else
{
   printf("\n\n");
   printf("\t\t\t Press any key to continue...");
   getch();
}
```

```
//------ Function to create farmer object for new acc ---------------------------
void create_farmer_details()
  system("cls");
  printf("\n\n\n");
  printf("\t\t\t\t\t\t Mini Project\n");
  printf("\t\t -----\n");
  printf("\t\t\t\t) \\ New Farmer Registeration\n");
  printf("\t\t -----\n"):
  printf("\t\t\t\t Enter crop grown: ");
  strcpy(main_farmer.name,main_acc.name);
  strcpy(main_farmer.residence,main_acc.residence);
  strcpy(main_farmer.userID,main_acc.userID);
  gets(main_farmer.crop);
  FILE *fp;
  fp = fopen("farmer_details.dat","ab"); //write account details farmer file
  fwrite(&main_farmer,sizeof(main_farmer),1,fp);
//----- Function to create farmer object for new acc ------
void create_buyer_details()
  strcpy(main_buyer.name, main_acc.name);
  strcpy(main_buyer.residence,main_acc.residence);
  strcpv(main buver.userID.main acc.userID):
  main_buyer.no_of_quotes=0;
  fp = fopen("buyer_details.dat","ab"); //write into buyers file
  fwrite(&main_buyer,sizeof(main_buyer),1,fp);
  fclose(fp);
//------ Function to check if given userID is unique or not during registeration process
int\ check\_valid\_userID (char\ check[20])\ // Takes\ char\ as\ input\ while\ it\ loops\ through\ all\ existing\ Users\ and\ returns\ 0\ or\ 1
  struct basic_details acc;
  FILE *fp;
   fp = fopen("acc.dat","rb");
  int valid = 1:
  while(fread(&acc,sizeof(acc),1,fp))
      if(!strcmp(check,acc.userID))
        valid = 0; //valid = 0, not unique
        break;
  return valid; //returns valid
}
//----- Farmer Portal -----
void farmer_portal()
  char ch = 'b'; // to prevent miss direction to wrong menu
  while(ch!='e')
     system("cls");
      printf("\n\n\n\n");
```

}

```
printf("\t\t -----\n"):
      printf("\t\t\t\t Farmer Portal\n");
      printf("\t\t -----\n");
      printf("\n\n");
      printf("\t\t\t Welcome %s, Select An option: \n",main_acc.name);
      printf("\t\t\t) > Press P to find best quote based on price \n");
      printf("\t\t\t) > Press N to find best buyer based on residence \n");
      printf("\t\t\t\t > Press S to search for Buyer based on UserID \n");
      printf("\t\t\t\t >Press A to display all visible quotes \n");
      printf("\t\t\t\t >Press E to log out \n");
      ch = getch();
      ch = tolower(ch):
      switch(ch)
        case 112: find_by_price(); //to find by price
        break:
        case 110: find_by_location(); //find by residence
        break;
         case 115: search_buyer(); //search buyer
        break;
        case 97: show_all_buyers(); //show all buyers
        case 101: main_acc.option = -1; // log out
        break;
        default: printf("\n\n\t\t\t\t *Enter Valid Option.* \n");
        printf("\t\t\t\tPress any key to continue...");
     }
  }
//----- Finding best quote price for a crop ------
void find_by_price()
  system("cls");
  printf("\n\n\n\n");
  printf("\t\t\t\t \ Mini\ Project\n");
  printf("\t\t -----\n"):
  printf("\t\t\t\t Find Best Quote by Price\n");
  printf("\t\t -----\n");
  printf("\n\n");
  int price = 0;
  FILE *fp;
  fp = fopen("quotes.dat", "rb");
  struct buyer_quotes quote;
  printf("\t\t\t Enter Crop to be sold: ");
  char input[20];
   gets(input);
  int found = 0;
   while(fread(&quote,sizeof(quote),1,fp)) //Finding highest quote value for the input crop
      if(quote.price>=price && quote.valid && !strcmpi(quote.crop,input))
        found = 1; //Crop with given details found
        price = quote.price;
   printf("\n\n");
   fseek(fp,0,SEEK_SET);//setting pointer to beginning of file to read contents again
```

printf("\t\t\t\t\t Mini Project\n");

```
if (found)
             printf("\t\t\t Results found for search: \n",found);\\
             printf(" ------\n");
              printf("|\t Name \ \t|\t Nesidence Area \t| \ Quote \t|\t Crop \t| \ \ Quote \t|\t|\t N"); 
             while(fread(&quote,sizeof(quote),1,fp))
                   if(quote.price==price && quote.valid && !strcmp(quote.crop,input))
                         display_buyer(quote);
                        printf("\n");
             }
      }
      else
      {
             }
      fclose(fp);
      printf("\t\t\t Press any key to continue...");\\
      getch();
}
//----- Displaying Quotes -----
void display_buyer(struct buyer_quotes quotes) //Displays structure data of quotes
      FILE *fp_buyer, *fp_main;
      fp_main = fopen("acc.dat","rb");
      fp_buyer = fopen("buyer_details.dat","rb");
      struct basic_details acc;
      while(fread(&acc,sizeof(acc),1,fp_main))
             {\tt if(!strcmp(acc.userID, quotes.userID))} \ // {\tt opens} \ {\tt corresponding} \ {\tt structure} \ {\tt object} \ {\tt of} \ {\tt quote} \\
                  printf("|\t%s \t|\t %ld \t|\t %s \t|\t %\d \t|\t %s \t|\ %0.2f Rs/kg\t|\n",acc.name,acc.phno,acc.residence,quotes.quotes.quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quotes.crop,quote
      }
      fclose(fp_main);
       fclose(fp_buyer);
//----- Find Closest Buyers -----
void find_by_location()
      system("cls");
      printf("\n\n\n");
      printf("\t\t\t\t\t\t
Mini Project\n");
      printf("\t\t\t Find Best Quote by Residence\n"); \\
      printf("\t\t -----\n");
      printf("\n\n");
      FILE *fp;
      fp = fopen("quotes.dat","rb");
      printf("\t\t\t Enter Residence region: ");
      char input[20];
      gets(input);
      struct buyer_quotes quote;
      printf("\t\t\t Results found for search: \n");\\
      printf(" ------ \n");
       printf("|\t Name \ \t|\t Number\t| \  Residence Area \t|\  Quote \t|\t Crop \t| \  Quote \t|\t N");
```

```
int found = 0:
  while(fread(&quote, sizeof(quote), 1, fp))
     if(!strcmpi(quote.residence,input) && quote.valid)
        found++;
        display_buyer(quote);
  if(found)
  {
     printf("\t\t\t %d Results found\n",found);
  else{
     printf("\t\t\t\ No\ results\ found\n");
  fclose(fp);
  printf("\t\t\t Press any \ Key \ to \ continue...\n");
//----- Search By ID ------
void search_buyer()
  system("cls"):
  printf("\n\n\n\n");
  printf("\t\t -----
  printf("\t\t\t\t
Search for a Buyer by USERID\n");
  printf("\t\t -----\n");
  printf("\n\n");
  printf("\t\t\t Enter USERID of Buyer: ");
  char input[20];
  gets(input);
  FILE *fp;
  int found = 0;
  struct basic_details acc;
  fp = fopen("acc.dat","rb");
  FILE *fp2;
  fp2 = fopen("buyer_details.dat","rb");
   struct buyer_details buyer_acc;
  printf("\n\n");
  int is_buyer=0;
   while(fread(&buyer_acc,sizeof(buyer_acc),1,fp2))
     if(!strcmp(buyer_acc.userID,input))
        is_buyer = 1; //to prevent a farmer ID to be shown
        break; //userID found
  while(fread(&acc,sizeof(acc),1,fp))
     if(!strcmp(acc.userID,input) && is_buyer) //userID found, Display
        found = 1:
        printf("\t\t\t\t\t > USERID FOUND \n");
        printf("\t\t\t\t \ \xB2UserID: \n",acc.userID);
        printf("\t\t\t\t \ \ \xB2Name: \n",acc.name);
        break;
     }
```

```
if(!found)
    printf("\t\t\t *UserID Not Found* \n");
  printf("\t\t\t Press any key to continue... \n");\\
  fclose(fp):
  fclose(fp2);
  getch();
}
//----- Show All Buyers -----
void show_all_buyers()
  system("cls");
  printf("\n\n\n");
  printf("\t\t\t\t Mini Project\n");
  printf("\t\t -----\n");
  printf("\t\t -----\n");
  printf("\n\n");
  printf("\t\t\t\All\ accessible\ Quotes: \n");
  printf("\t\t\t Results found for search: \n");\\
  printf(" -----
  printf(" ------\n");
  FILE *fp;
  int found = 0;
  struct buyer_quotes quote;
  fp = fopen("quotes.dat", "rb");
  while(fread(&quote,sizeof(quote),1,fp))
    if(quote.valid)
      found++;
      display_buyer(quote);
    7
  }
  if(found)
    printf("\t\t\t\ \%d\ Results\ found\ \n",found);
  else
  {
    printf("\t\t\ \ \ \ nesults \ found \ \ \ ");
  fclose(fp);
  printf("\t\t\t Press any key to continue...\n");
  getch():
//----- Buyers Portal ------
void buyer_portal()
  char ch = 'b'; // To prevent miss-direction to any option
  while(ch!='e')
    system("cls");
    printf("\n\n\n");
    printf("\t\t\t\t \ Mini\ Project\n");
    printf("\t\t -----\n");
    printf("\t\t\t\t\t\t
Buyer Portal\n");
```

```
printf("\t\t -----\n");
                   printf("\n\n"):
                   printf("\t\t\t Welcome %s, Select An option: \n",main_acc.name);
                   printf("\t\t\t) > Press A to Add quote \n");
                   printf("\t\t\t \gt Press R to Remove Quote \n");
                   printf("\t\t\t\t > Press H for Quote history of all quote raised to date \n");
                   printf("\t\t\t > Press E to log out \n");
                   ch = getch();
                   ch = tolower(ch);
                   switch(ch)
                            case 97: add_quote(); //adding quote
                            break:
                            case 114: remove_quote(); //removing quote
                            break:
                            case 104: all_quotes(); //quote history
                            break;
                            case 101: main_acc.option = -1; //sets main_acc option to -1, to redirect back to main screen and not again get redirected to any portal
                            default: printf("\n\n\t\t\t\t *Enter Valid Option.*\n");
                            printf("\t\t\t\t Press any key to continue...");
                            getch();
                  }
         }
}
//----- Adding quote to a buyer -----
void add_quote()
         main_buyer.no_of_quotes++; //increment no of quotes for a buyer
         struct buyer_quotes quote; //creating sample object variable for storing values from file
         quote.quote_no=main_buyer.no_of_quotes;
         system("cls"):
         printf("\n\n\n\n");
         printf("\t\t\t\t \ Mini\ Project\n");
         printf("\t\t -----\n");
         printf("\t\t\t\t\t Add New Quote\n");
         printf("\t\t -----\n");
         printf("\n\n");
         printf("\t\t\t\t\t Enter Crop: ");
         fflush(stdin);
         gets(quote.crop);
         printf("\t\t\t\t\t Quote (Rs per kg): ");
         scanf("%f",&quote.price);
         quote.valid=1; //Setting Quote to valid allows it to be visible to farmers
         strcpy(quote.userID,main_acc.userID); //for uniquely identifying a quote and linking it to a specific user
         strcpv(quote.residence.main acc.residence):
         FILE *fp;
         fp = fopen("quotes.dat", "ab");
         fwrite(\&quote, size of (quote), 1, fp); \ // writing \ quote \ into \ "quote.dat" \ file \ which \ stores \ all \ quotes \ file \ which \ stores \ all \ quotes \ file \ which \ stores \ all \ quotes \ file \ which \ stores \ all \ quotes \ file \ which \ stores \ all \ quotes \ file \ which \ stores \ all \ quotes \ file \ which \ stores \ all \ quotes \ file \ which \ stores \ all \ quotes \ file \ which \ stores \ all \ quotes \ file \ which \ stores \ all \ quotes \ file \ which \ stores \ all \ quotes \ file \ which \ stores \ all \ quotes \ file \ which \ stores \ all \ quotes \ file \ file \ which \ stores \ all \ quotes \ file \ file \ which \ stores \ all \ quotes \ file \ file \ file \ which \ stores \ file \ 
         printf("\n\t\t\t\t\ \Quote Added Successfully \n");
         printf("\t\t\t\t\tPress any key to continue...");
         struct buyer_details acc;
         fp = fopen("buyer_details.dat","rb");
         FILE *fp2;
         fp2 = fopen("temp.dat","wb");
         \label{lem:condition} while (\texttt{fread(\&acc,sizeof(acc),1,fp))} \ // changing \ no\_of\_quotes \ value \ of \ the \ particular \ user \ of \ account o
                   if(!strcmp(acc.userID,main_buyer.userID))
```

```
fwrite(&main_buyer,sizeof(main_buyer),1,fp2); //add changed values to "temp.dat"
      else
      {
         fwrite(&acc,sizeof(acc),1,fp2); //pass unchanged values to "temp.dat"
   fclose(fp);
   fclose(fp2);
   remove("buyer_details.dat");
   rename("temp.dat","buyer_details.dat");
   getch();
//----- Remove Existing Quote from Visibility ------
void remove_quote()
   system("cls");
   printf("\n\n\n");
   printf("\t\t\t\t\t Mini Project\n");
   printf("\t\t -----
   printf("\t\t\t\t\t Remove Quote\n");
   printf("\t\t -----\n");
   printf("\n\n"):
   printf("\t\t\t List of all visible quotes: \n");
   printf("\t\ |\t Quote ID\t|\t Crop\t\t|\t Quote \t\t|\t Is Valid? \t| \n");
   printf("\t\t -----
   fp = fopen("quotes.dat","rb");
   struct buyer_quotes quote;
   while(fread(&quote,sizeof(quote),1,fp)) //show all quotes which are visibility
         if(!strcmp(quote.userID, main_acc.userID) && quote.valid )
            printf("\t\t |\t %d \t|\t %s\t\t|\t%.2f Rs/kg\t|\t",quote.quote_no,quote.crop,quote.price);
             if(quote.valid)
                printf(" Yes \t\t| \n");
               printf(" No \t\t| \n");
         }
      }
   fclose(fp);
   printf("\t\t\t Enter Quote number of quote to be deleted: ");
   int input:
   scanf("%d",&input);
   FILE *fp2;
   fp2=fopen("temp.dat","wb");
   fp = fopen("quotes.dat", "rb");
   int found = 0; //if quote visibility is removed, found is changed to 1
   while(fread(&quote,sizeof(quote),1,fp))
      if(!strcmp(main_acc.userID,quote.userID) && quote.quote_no==input && quote.valid)
         found = 1;
         quote.valid = 0;
         fwrite(&quote,sizeof(quote),1,fp2);
      else
         fwrite(&quote, sizeof(quote), 1, fp2);
```

```
}
  fclose(fp2);
  fclose(fp);
  remove("quotes.dat");
  rename("temp.dat","quotes.dat");
  printf("\n\n");
  if(found)
    printf("\t\t\t\ Quote\ visibility\ removed\ successfully\n");
  }
  else
  {
    printf("\t\t *Quote not found*\n");
  printf("\t\t\t Press any key to continue...");\\
  getch();
}
//----- Showing all Quotes of the buyer (Quote History)
void all_quotes()
  system("cls");
  printf("\n\n\n\n");
  printf("\t\t\t\t\t Mini Project\n");
  printf("\t\t -----\n"):
  printf("\t\t\t\t\t\t
Quote History\n");
  printf("\t\t -----\n");
  printf("\n\n");
  printf("\t\t -----\n");
  FILE *fp;
  fp = fopen("quotes.dat","rb");
  struct buyer_quotes quote;
  while(fread(&quote,sizeof(quote),1,fp))
  {
    if(!strcmp(quote.userID, main_acc.userID))
      if(quote.valid)
        printf(" Yes \t\t| \n");
      }
      else
      {
        printf(" No \t\t| \n");
    }
  fclose(fp);
  printf("\t\t -----\n");
  getch();
```

5 Results

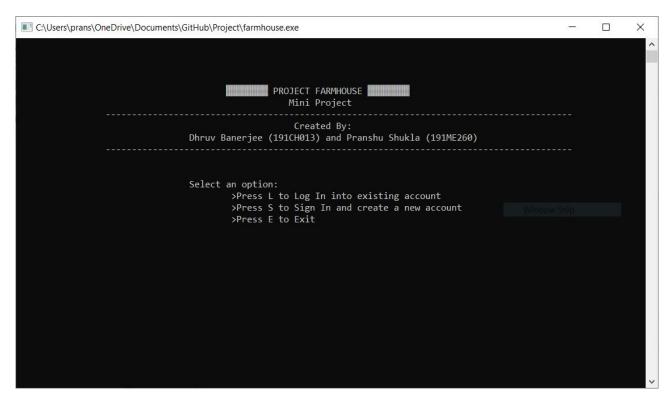


Figure 2: Main Screen

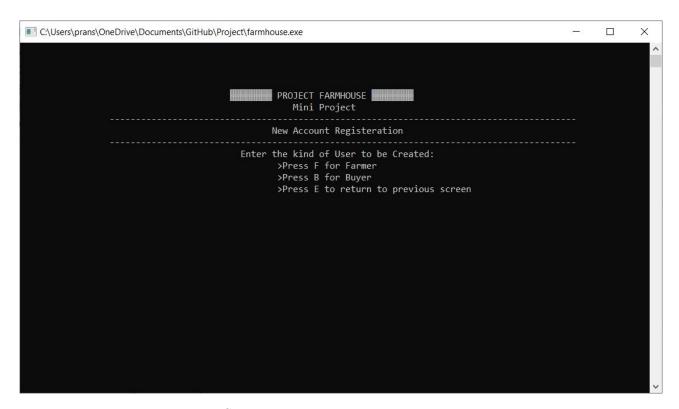


Figure 3: Sign Up page - For new account registration

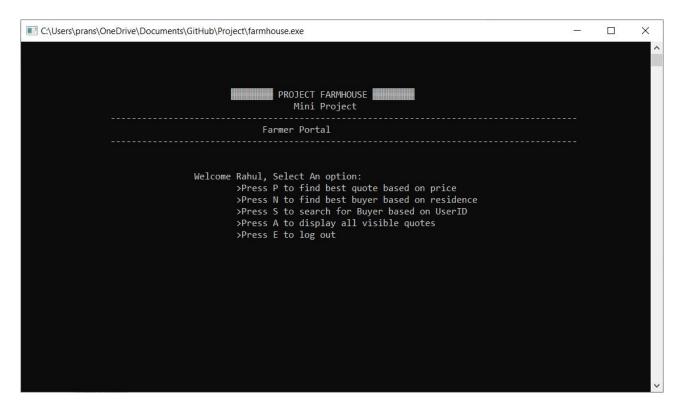


Figure 4: Farmer Portal - Facilities and features of Farmer Portal

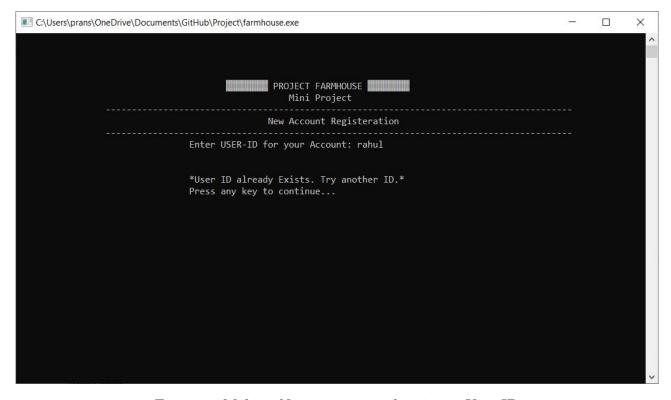


Figure 5: Making New account with existing User ID

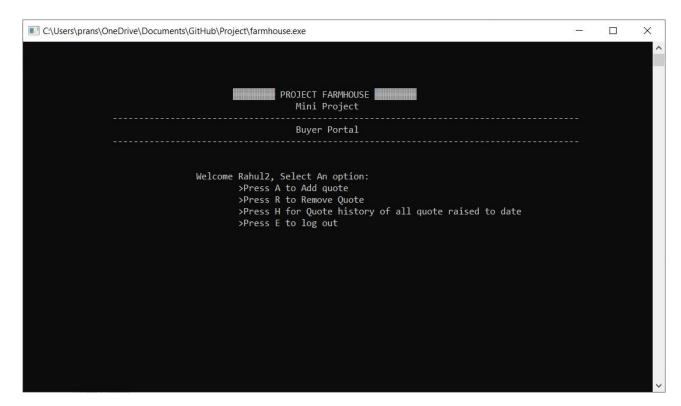


Figure 6: Buyer Portal

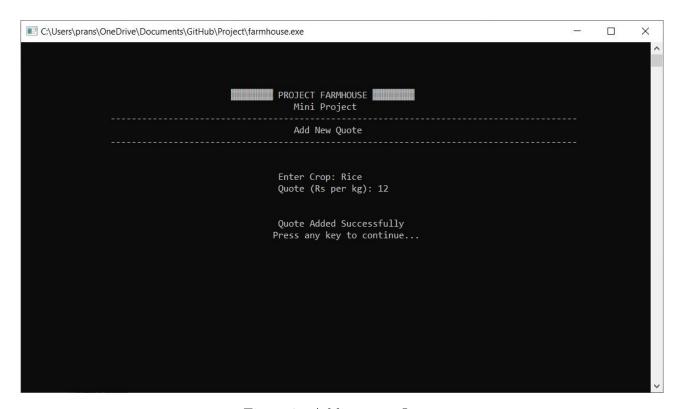


Figure 7: Adding new Quote

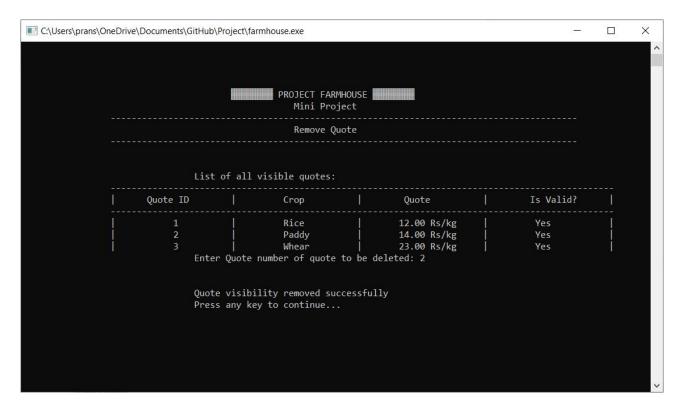


Figure 8: Removing Quote

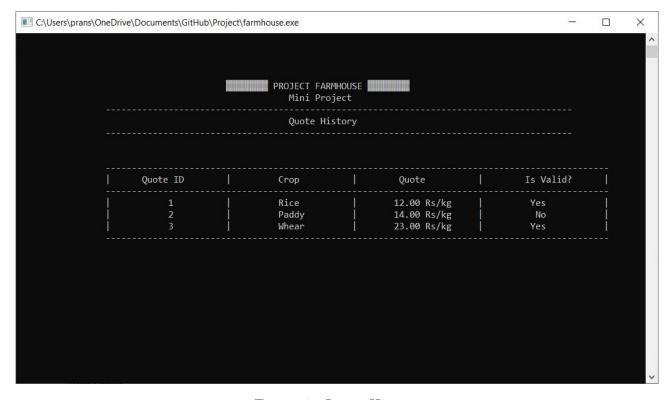


Figure 9: Quote History

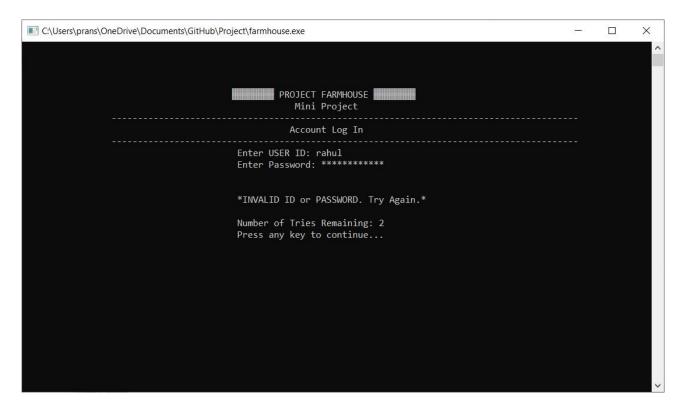


Figure 10: Log-In Page - Invalid User-ID

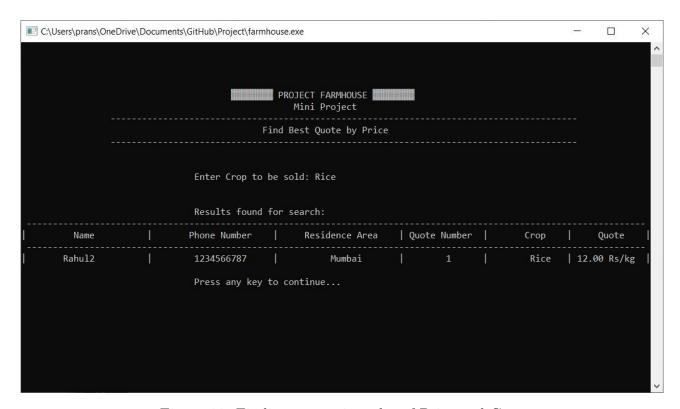


Figure 11: Finding quotes in order of Price and Crop

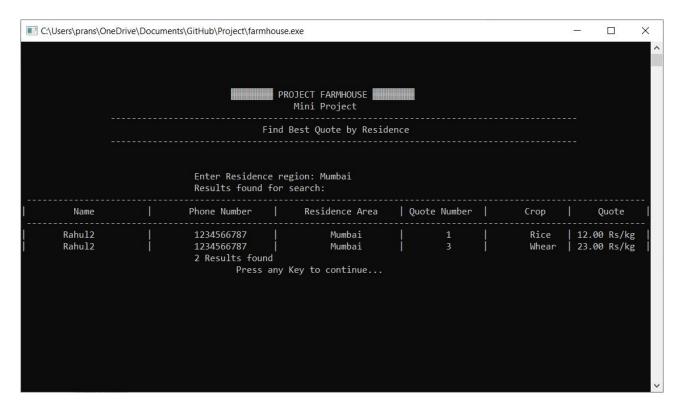


Figure 12: Finding Quotes based on Residence

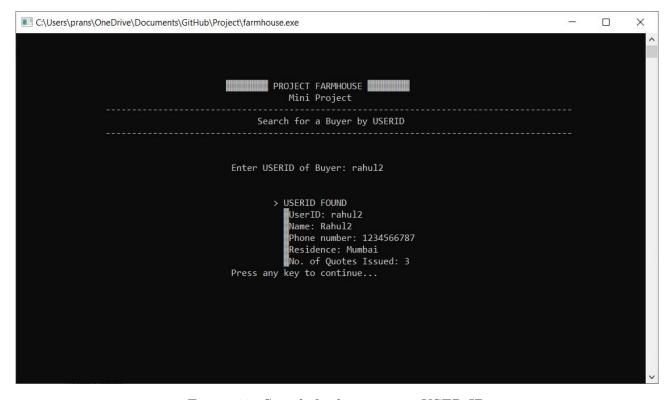


Figure 13: Search for buyer using USER ID

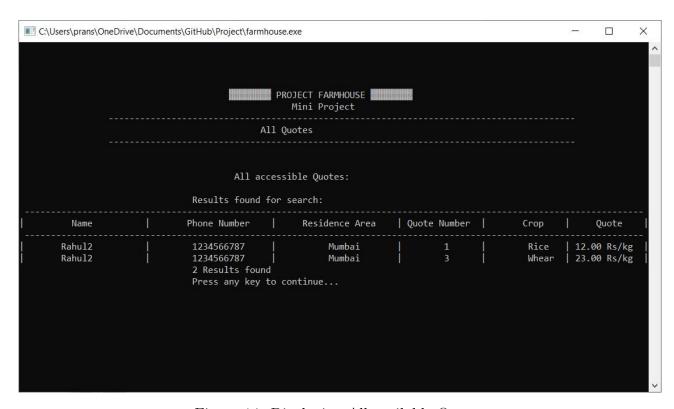


Figure 14: Displaying All available Quotes

6 References:

- 1. https://farmityourself.com/how-do-small-farmers-sell-their-crops/
- $2.\ https://www.farmerslink.org.uk/where-and-how-farmers-can-sell-their-produce/$
- $3.\ https://www.thebetterindia.com/101983/farmer-friend-online-vegetables-direct-from-farmers/201983/farmer-friend-online-vegetables-direct-from-farmers/201983/farmer-friend-online-vegetables-direct-from-farmers/201983/farmer-friend-online-vegetables-direct-from-farmer-friend-online-vegetables-direct-from-farmer-friend-online-vegetables-direct-from-farmer-friend-online-vegetables-direct-from-farmer-friend-online-vegetables-direct-from-farmer-friend-online-vegetables-direct-from-farmer-friend-online-vegetables-direct-from-farmer-friend-online-vegetables-direct-from-farmer-friend-online-vegetables-direct-from-farmer-friend-online-vegetables-direct-from-farmer-friend-online-vegetables-direct-from-farmer-friend-online-vegetables-direct-from-farmer-friend-online-vegetables-direct-from-farmer-friend-online-vegetables-direct-from-farmer-friend-online-vegetables-direct-from-farmer-friend-online-vegetables-direct-friend$

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