C++ Mini Project on

MESS MANAGEMENT SYSTEM

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ABSTRACT

The main objective of this C++ project on Mess Management System is to manage the items available in the mess and their prices per plate.

It manages all the information about items, orders and their prices.

The project is build for the billing purpose at the customer level as it reduces the time for the billing management and the manual work for the managing items and orders.

It tracks all the details about the Mess, food available and their prices as well as the bill generation.

1. INTRODUCTION

1.1 Introduction to Mess Management System:

As the main objective of this C++ project on Mess Management System is to manage the items available in the mess and their prices per plate as well as generate the bill.

CLASS USED IN THE PROGRAM:

1: class Mess:

In this class there are

Mess() is the constructor,
void show()
void allItems()
void addNewItem()
int searchById(int)
void showQuantity(int)
int checkQuantity(int,int)
void addNewSale(int,int) are the functions used.

FUNCTIONS USED IN THE PROGRAM:

a. void show():

      This function prints the main menu which includes
- ❖ Buy an item
- ❖ Menu Card
- ❖ Add new Item
- ❖ Exit.

b. void allItems():

      This function prints the menu card of the Mess.

c. void addNewItem():

      This function is for adding new item in the cart.

d. int searchById(int):

      This is used to search that item is present or not.

e. void showQuantity(int):

      This function is used to show the quantity of the items present.

f. int checkQuantity(int,int):

      This function is used to check the quantity of the items present.

g. void addNewSale(int,int):

      This function calculates the total bill of items bought.

2. SYSTEM DEVELOPMENT

2.1 System Development Tools
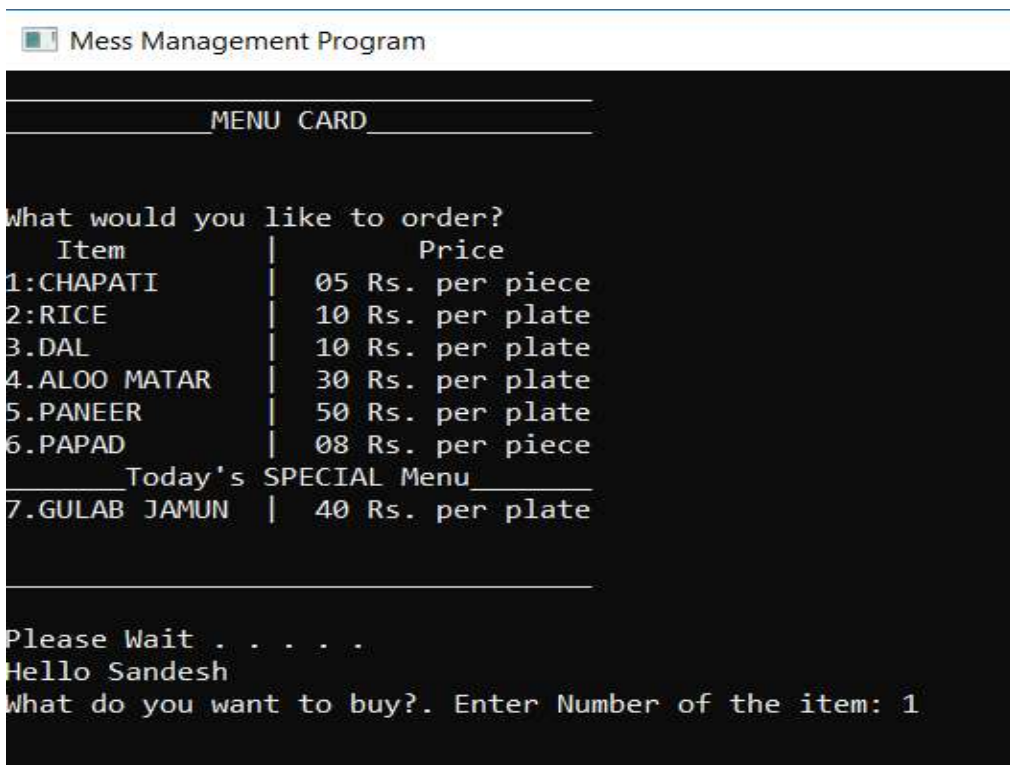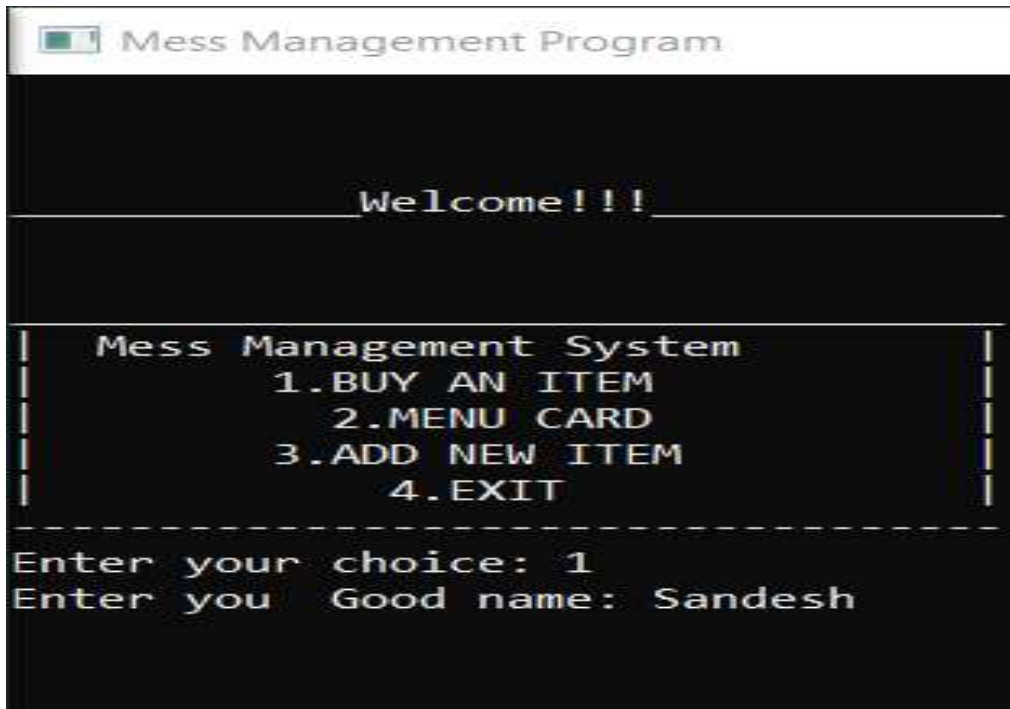
1. Code Blocks:

Code::Blocks is a free, open-source cross-platform IDE that supports multiple compilers including GCC, Clang and Visual C++. It is developed in C++ using wxWidgets as the GUI toolkit. ... Currently, Code::Blocks is oriented towards C, C++, and Fortran. It has a custom build system and optional Make support.

2. C++:

C++ is a general-purpose programming language created by Bjarne Stroustrup as an extension of the C programming language, or "C with Classes". The language has expanded significantly over time, and modern C++ has object-oriented, generic, and functional features in addition to facilities for low-level memory manipulation. It is almost always implemented as a compiled language, and many vendors provide C++ compilers, including the Free Software Foundation, LLVM, Microsoft, Intel, Oracle, and IBM, so it is available on many platforms.

2.2 System Design-(Screen Shots)

```
Mess Management Program


                    Welcome!!!

|      Mess Management System        |
|             1.BUY AN ITEM          |
|             2.MENU CARD            |
|          3.ADD NEW ITEM            |
|               4.EXIT               |
-------------------------------------
Enter your choice: 1
Enter you   Good name: Sandesh
```

```
Mess Management Program


_____MENU CARD_____

What would you like to order?
   Item          |          Price
1:CHAPATI        |   05 Rs. per piece
2:RICE           |   10 Rs. per plate
3.DAL            |   10 Rs. per plate
4.ALOO MATAR     |   30 Rs. per plate
5.PANEER         |   50 Rs. per plate
6.PAPAD          |   08 Rs. per piece
_____Today's SPECIAL Menu_____
7.GULAB JAMUN    |   40 Rs. per plate



Please Wait . . . . .
Hello Sandesh
What do you want to buy?. Enter Number of the item: 1
```

```
Available Quantity . . . . .
_____
     Item          |    Quantity
1:CHAPATI          |    10 plates
_____

Enter quantity of the item: 5_
```

```
Preparing Bill . . . . .
You Bought item CHAPATI  and quantity of 5 itemsPrice is 25
                                        Total BILL: 25


 _____
|  Mess Management System        |
|         1.BUY AN ITEM          |
|          2.MENU CARD           |
|         3.ADD NEW ITEM         |
|            4.EXIT              |
----------------------------------
Enter your choice: 3
```

```
■□ Mess Management Program
_____
_____MENU CARD_____


What would you like to order?
   Item          |        Price
1:CHAPATI        |   05 Rs. per piece
2:RICE           |   10 Rs. per plate
3.DAL            |   10 Rs. per plate
4.ALOO MATAR     |   30 Rs. per plate
5.PANEER         |   50 Rs. per plate
6.PAPAD          |   08 Rs. per piece
_____Today's SPECIAL Menu_____
7.GULAB JAMUN  |   40 Rs. per plate

_____
Hello Sandesh
What do you want to add?. Enter Number of the item: 5
```

Mess Management Program

```
Available Quantity . . . . .

        Item         |   Quantity
5.PANEER             |   10 plates


Enter quantity of the item: 5_
```

Mess Management Program

```
Preparing Bill . . . . .
You Bought item PANEER and quantity of 5 itemsPrice is 250
                                        Total BILL: 275
Do you want to add more?. Enter (Y/N) N




_____Total BILL: 275_____
_____Thank you Sandesh for shopping!_____
_____Do visit again!!_____
_
```

2.3 Coding

```cpp
#include<iostream>
#include<conio.h>
#include<string>
#include<cstdlib>
#include<conio.h>
#include<windows.h>

#include <typeinfo>
using namespace std;
class Mess
{
public:
    Mess();
    void show();
    void allItems();
    void addNewItem();
    int searchById(int);
    void showQuantity(int);
    int checkQuantity(int,int);
    void addNewSale(int,int);
};
string name;
int choice;
int item, quantity,price=0;
int main()
{
    system("cls");
    system("title Mess Management Program");
```

```cpp
    system("mode con: cols=140 lines=30");
    system("color 0f");
    Mess Mess;

    again:
    Mess.show();

    cin>>choice;
    if(choice == 1)
    {
        cout<<"Enter you  Good name: ";
        cin>>name;
        cout<<endl;
        system("cls");
        bb:
        Mess.allItems();
        cout<<endl;
        mm:
            cout<<"Please Wait";
cout<<" . ";
Sleep(1000);
cout<<". ";
Sleep(1000);
cout<<". ";
Sleep(1000);
cout<<". ";
Sleep(1000);
cout<<". ";
Sleep(1000);
    cout<<"\n";
```

```cpp
        cout<<"Hello "<<name;

        cout<<"\nWhat do you want to buy?. Enter Number of the item: ";


        cin>>item;

        if(item<=7)

        {

        if(Mess.searchById(item)==0)

        {

            cout<<"This item is not present\n";

            goto mm;

        }

        customer:

        Mess.showQuantity(item);

        cout<<"\nEnter quantity of the item: ";

        cin>>quantity;

        if(Mess.checkQuantity(item, quantity)==2)

        {

            system("cls");

    cout<<"\n\n\n\n\n";

cout<<"Checking Quantity";

cout<<" . ";

Sleep(1000);

cout<<". ";

Sleep(1000);

cout<<". ";

Sleep(1000);

cout<<". ";

Sleep(1000);

cout<<". ";

Sleep(1000);
```

```cpp
cout<<"\n";
cout<<"_____\n";
cout<<"Quantity is not present in our Mess. Try again\n";
cout<<"\t\t\t\tSorry!!!\n";
cout<<"\t\tPlease enter the proper Quantity\n";
cout<<"_____\n";
    Sleep(5000);

    goto customer;

  }
  else if(Mess.checkQuantity(item, quantity)==1)
  {
    Mess.addNewSale(item, quantity);
    goto again;
  }
}

  else
  {
    system("cls");
    cout<<"\t\t\tPlease Enter Proper Number!!!";
      Sleep(3000);
    goto bb;
  }
}
else if(choice == 2)
{
  Mess.allItems();
  goto again;
```

```cpp
        }
        else if(choice == 3)
        {
            Mess.addNewItem();
            goto again;
        }
        else if(choice == 4)
        {
            item, quantity,price=0;
            exit(0);
        }
        return 0;
}
Mess::Mess()
{
    cout<<"\n\n\n_____Welcome!!!_____\n";
}



void Mess::show()
{
    cout<<"\n\n";
    cout<<"_____\n";
    cout <<"|  Mess Management System       |\n";
    cout <<"|       1.BUY AN ITEM          |\n";
    cout <<"|        2.MENU CARD           |\n";
    cout <<"|       3.ADD NEW ITEM          |\n";
    cout <<"|          4.EXIT              |\n";
    cout<<"--------------------------------\n";
    cout<<"Enter your choice: ";
```

```cpp
}
void Mess::allItems()
{
    system("cls");
    cout<<"_____\n";
    cout<<"_____MENU CARD_____\n\n";
    cout<<"\nWhat would you like to order?\n";
    cout<<"  Item      |     Price \n";
    cout<<"1:CHAPATI    | 05 Rs. per piece\n";
    cout<<"2:RICE       | 10 Rs. per plate\n";
    cout<<"3.DAL        | 10 Rs. per plate\n";
    cout<<"4.ALOO MATAR  | 30 Rs. per plate\n";
    cout<<"5.PANEER     | 50 Rs. per plate\n";
    cout<<"6.PAPAD      | 08 Rs. per piece\n";
    cout<<"_____Today's SPECIAL Menu_____\n";
    cout<<"7.GULAB JAMUN  | 40 Rs. per plate\n\n";
    cout<<"_____\n";
    Sleep(3000);
}
void Mess::addNewItem()
{
Mess Mess;
    system("cls");
    t:
    Mess.show();
    system("cls");
    mnn:
    cout<<"_____\n";
    cout<<"_____Total BILL: "<<price<<"_____"<<endl;
    Mess.allItems();
```

```cpp
    int id;
    int quantity;


mm:
    cout<<"Hello "<<name;
    cout<<"\nWhat do you want to add?. Enter Number of the item: ";

        cin>>id;
        if (id<=7)
        {
        if(Mess.searchById(id)==0)
        {
            cout<<"This item is not present\n";
            goto x;
        }
        customer:
        cout<<"\t\t\t\t\t\t\t\t\t\t\t\tTotal BILL: "<<price;
        Mess.showQuantity(id);
        cout<<"\nEnter quantity of the item: ";
        cin>>quantity;
        if(Mess.checkQuantity(id, quantity)==2)
        {
            system("cls");
    cout<<"\n\n\n\n\n";
cout<<"Checking Quantity";
cout<<" . ";
Sleep(1000);
cout<<". ";
Sleep(1000);
cout<<". ";
```

```cpp
Sleep(1000);
cout<<". ";
Sleep(1000);
cout<<". ";
Sleep(1000);
    cout<<"\n";
    cout<<"_____\n";
    cout<<"Quantity is not present in our Mess. Try again\n";
    cout<<"\t\t\t\t\t\t\tSorry!!!\n";
    cout<<"\t\tPlease enter the proper Quantity";
    cout<<"_____\n";
        Sleep(5000);
        goto customer;
    }
    else if(Mess.checkQuantity(id, quantity)==1)
    {
        Mess.addNewSale(id, quantity);
        goto x;
    }

    x:
        cout<<"\nDo you want to add more?. Enter (Y/N) ";
        char ch;
        cin>>ch;
        if (ch=='y' || ch=='Y')
            goto t;
        else
        {
         cout<<"\n\n\n\n\n\n\n";
         cout<<"_____Total BILL: "<<price<<"_____"<<endl;
```

```cpp
        cout<<"_____Thank you "<<name<<" for shopping!_____\n";
        cout<<"_____Do visit again!!_____\n";
        Sleep(5000);
        system("cls");
        return;


    }
  }
  else{
        cout<<"\t\t\tPlease enter proper number!!!";
        Sleep(3000);
     goto mnn;
  }
}
void Mess::addNewSale(int item, int quantity)
{
   cout<<"_____\n";
int price1;
string item_name;
 system("cls");
   if(quantity<=10)
   { system("cls");
   cout<<"\n\n\n\n\n";
cout<<"Preparing Bill";
cout<<" . ";
Sleep(1000);
cout<<". ";
Sleep(1000);
cout<<". ";
Sleep(1000);
```

```cpp
cout<<". ";
Sleep(1000);
cout<<". ";
Sleep(1000);
    cout<<"\n";
    if(item==1)
    {
item_name="CHAPATI ";
    }
    else if(item==2)
    {   item_name="RICE";
    }
    else if(item==3)
    {   item_name="DAL ";
    }
    else if(item==4)
    {   item_name="ALOO MATAR ";
    }
    else if(item==5)
    {   item_name="PANEER";
    }
    else if(item==6)
    {   item_name="PAPAD ";
    }
    else if(item==7)
    {   item_name="GULAB JAMUN ";
    }
    if(item==1)
    {
cout<<"You Bought item "<<item_name<<" and quantity of "<<quantity<<" items";
```

```cpp
price=price+5*quantity;
price1=5*quantity;
    cout<<"Price is "<<price1;
    cout<<"\t\t\t\t\t\t\t\t\t\t\t\t\tTotal BILL: "<<price;
  }
  else if(item==2)
  {  cout<<"You Bought item "<<item_name<<" and quantity of "<<quantity<<" items";
price=price+10*quantity;
price1=10*quantity;
    cout<<"Price is "<<price1;
    cout<<"\t\t\t\t\t\t\t\t\t\t\t\t\tTotal BILL: "<<price;
  }
  else if(item==3)
  {  cout<<"You Bought item "<<item_name<<" and quantity of "<<quantity<<" items";
price=price+10*quantity;
price1=10*quantity;
    cout<<"Price is "<<price1;
    cout<<"\t\t\t\t\t\t\t\t\t\t\t\t\tTotal BILL: "<<price;
  }
  else if(item==4)
  {  cout<<"You Bought item "<<item_name<<" and quantity of "<<quantity<<" items";
price=price+30*quantity;
price1=30*quantity;
    cout<<"Price is "<<price1;
    cout<<"\t\t\t\t\t\t\t\t\t\t\t\t\tTotal BILL: "<<price;
  }
  else if(item==5)
  {  cout<<"You Bought item "<<item_name<<" and quantity of "<<quantity<<" items";
price=price+50*quantity;
price1=50*quantity;
```

```cpp
        cout<<"Price is "<<price1;
        cout<<"\t\t\t\t\t\t\t\t\t\t\t\tTotal BILL: "<<price;
    }
    else if(item==6)
    {   cout<<"You Bought item "<<item_name<<" and quantity of "<<quantity<<" items";
price=price+8*quantity;
price1=8*quantity;
        cout<<"Price is "<<price1;
        cout<<"\t\t\t\t\t\t\t\t\t\t\t\tTotal BILL: "<<price;
    }
    else if(item==7)
    {   cout<<"You Bought item "<<item_name<<" and quantity of "<<quantity<<" items";
price=price+40*quantity;
price1=40*quantity;
        cout<<"Price is "<<price1;
        cout<<"\t\t\t\t\t\t\t\t\t\t\t\tTotal BILL: "<<price;
    }
    }
    else{
        cout<<"\t\t\tPlease enter proper quantity!!!";
            Sleep(3000);
            system("cls");


    }
}



void Mess::showQuantity(int i)
{
```

```cpp
system("cls");
cout<<"\n\n\n\n\n";
cout<<"Available Quantity";
cout<<" . ";
Sleep(1000);
cout<<". ";
Sleep(1000);
cout<<". ";
Sleep(1000);
cout<<". ";
Sleep(1000);
cout<<". ";
Sleep(1000);
    cout<<"\n";
    cout<<"_____\n";
    cout<<"   Item     | Quantity \n";

    if(i==1)
    cout<<"1:CHAPATI    | 10 plates\n";
    else if(i==2)
    cout<<"2:RICE       | 10 plates\n";
    else if(i==3)
    cout<<"3.DAL        | 10 plates\n";
    else if(i==4)
    cout<<"4.ALOO MATAR  | 10 plates\n";
    else if(i==5)
    cout<<"5.PANEER      | 10 plates\n";
    else if(i==6)
    cout<<"6.PAPAD       | 10 plates\n";
    else if(i==7)
```

```cpp
    cout<<"7.GULAB JAMUN  |  10 plates\n\n";
    cout<<"_____\n";



}



int Mess::searchById(int id)
{
    if(id<1 && id>6)
    return 0;
    else
    return 1;
}
int Mess::checkQuantity(int item, int quantity)
{
    if (quantity>10)
    return 2;
    else
    return 1;
}
```

3.CONCLUSION

This software is efficient in maintaining customer's details and can easily perform operations on customer's records and also works to handles the information of the products available in a canteen.

This software also reduces the work load of the Mess and makes bill management easier. In future, this system can launch web site for easy online Mess facilities.

There can be certain modifications such as edit the quantity and delete the item as well as we can add the database to it.

Thank You!

REFERENCES

1) www.stackoverflow.com

2) Wikipedia.org

3) GeeksforGeeks.org