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COURSE CODE: CSE 1290
COURSE TITLE: Software Development I (C Programming)

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SOURCE CODE AND OUTPUT

(POS System)

File Name: main.cpp

Code:

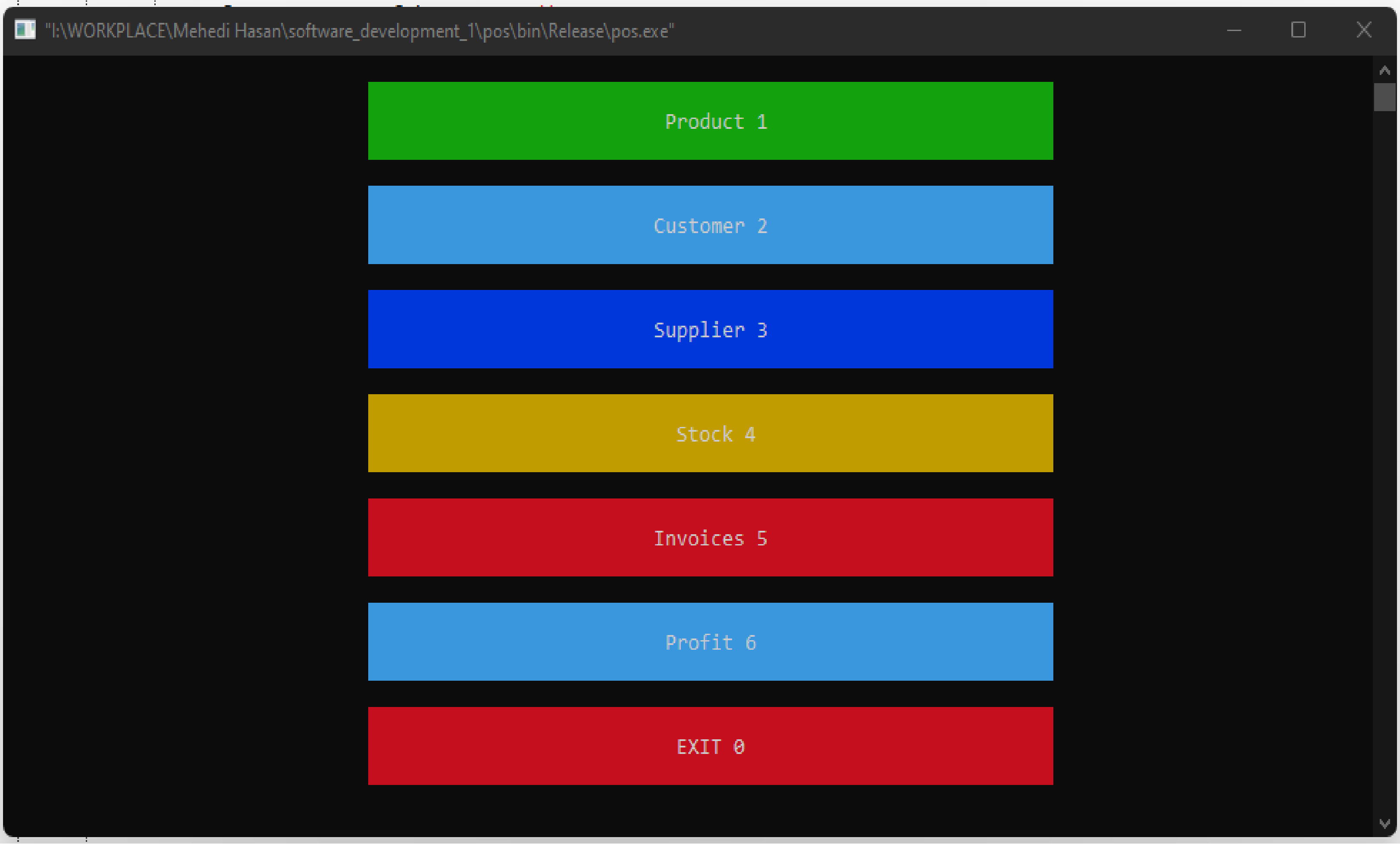
```
#include<iostream>
#include <string>
#include "tabulate/table.hpp"
#include "header/menu/mainMenu.h"
using namespace tabulate;
using namespace std;

void successMessage();
void errorMessage();


int main() {


    int value;

    while(1){
        value = mainMenu();
        if(value == 10000000){
            break;
        }
    }

  return 0;

}
```

File Name: mainMenu.h
Code:-

```
#include<iostream>
#include<stdlib.h>
#include "../../tabulate/table.hpp"
#include "productMenu.h"
#include "customerMenu.h"
#include "supplierMenu.h"
#include "../modules/product/viewSale.h"

using namespace tabulate;
using namespace std;



    int mainMenu(){

        int option;

        Table universal_constants;

        universal_constants.add_row({"","Please select an option:"});
        universal_constants.add_row({"","Product 1"});
        universal_constants.add_row({"","Customer 2"});
        universal_constants.add_row({"","Supplier 3"});
        universal_constants.add_row({"","Stock 4"});
        universal_constants.add_row({"","Invoices 5"});
        universal_constants.add_row({"","Profit 6"});
        universal_constants.add_row({"","EXIT 0"});

        universal_constants.format()
            .font_style({FontStyle::bold})
            .border_top(" ")
            .border_bottom(" ")
            .border_left(" ")
            .border_right(" ")
            .corner(" ");

        universal_constants[0][0].format()
            .padding_top(1)
            .padding_bottom(1)
            .font_align(FontAlign::center)
            .font_style({FontStyle::bold})
            .width(30);
        universal_constants[0][1].format()
            .padding_top(1)
            .padding_bottom(1)
            .font_align(FontAlign::center)
            .font_style({FontStyle::bold})
            .width(60)
            .font_background_color(Color::magenta);

        universal_constants[1][0].format()
            .padding_top(1)
            .padding_bottom(1)
            .font_align(FontAlign::center)
            .font_style({FontStyle::bold})
            .width(30);
        universal_constants[1][1].format()
            .padding_top(1)
            .padding_bottom(1)
            .font_align(FontAlign::center)
            .font_style({FontStyle::bold})
            .font_background_color(Color::green);

        universal_constants[2][0].format()
            .padding_top(1)
            .padding_bottom(1)
            .font_align(FontAlign::center)
            .font_style({FontStyle::bold})
            .width(30);
        universal_constants[2][1].format()
            .padding_top(1)
            .padding_bottom(1)
            .font_align(FontAlign::center)
            .font_style({FontStyle::underline})
            .font_style({FontStyle::bold})
            .font_background_color(Color::cyan);

        universal_constants[3][0].format()
            .padding_top(1)
            .padding_bottom(1)
            .font_align(FontAlign::center)
            .font_style({FontStyle::bold})
            .width(30);
```

```
universal_constants[3][1].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(60)
    .font_background_color(Color::blue);

universal_constants[4][0].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(30);
universal_constants[4][1].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(60)
    .font_background_color(Color::yellow);

universal_constants[5][0].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(30);
universal_constants[5][1].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(60)
    .font_background_color(Color::red);

universal_constants[6][0].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(30);
universal_constants[6][1].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(60)
    .font_background_color(Color::cyan);

universal_constants[7][0].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(30);
universal_constants[7][1].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(60)
    .font_background_color(Color::red);



std::cout << universal_constants << std::endl;

cout<<"\t\t\t\t\t\t\t";

cin>>option;

system ("CLS");

switch(option){
    int value;
    case 1:
        while(1){
          value = porductMenu();
          if(value == 10000000){
            break;
          }
        }
        break;
    case 2:
        while(1){
          value = customerMenu();
          if(value == 10000000){
                break;
              }
            }
             break;
        case 3:
            while(1){
              value = supplierMenu();
              if(value == 10000000){
                break;
              }
            }
             break;
        case 4:
            cout<<"4 selected";
             break;
        case 5:
            viewSale();
            break;
        case 6:
            cout<<"6 selected";
             break;
        case 0:
            return 10000000;
             break;

        default:

            errorMessage("Invalid Option!");

    }


    return option;
}
```

OUTPUT:



"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

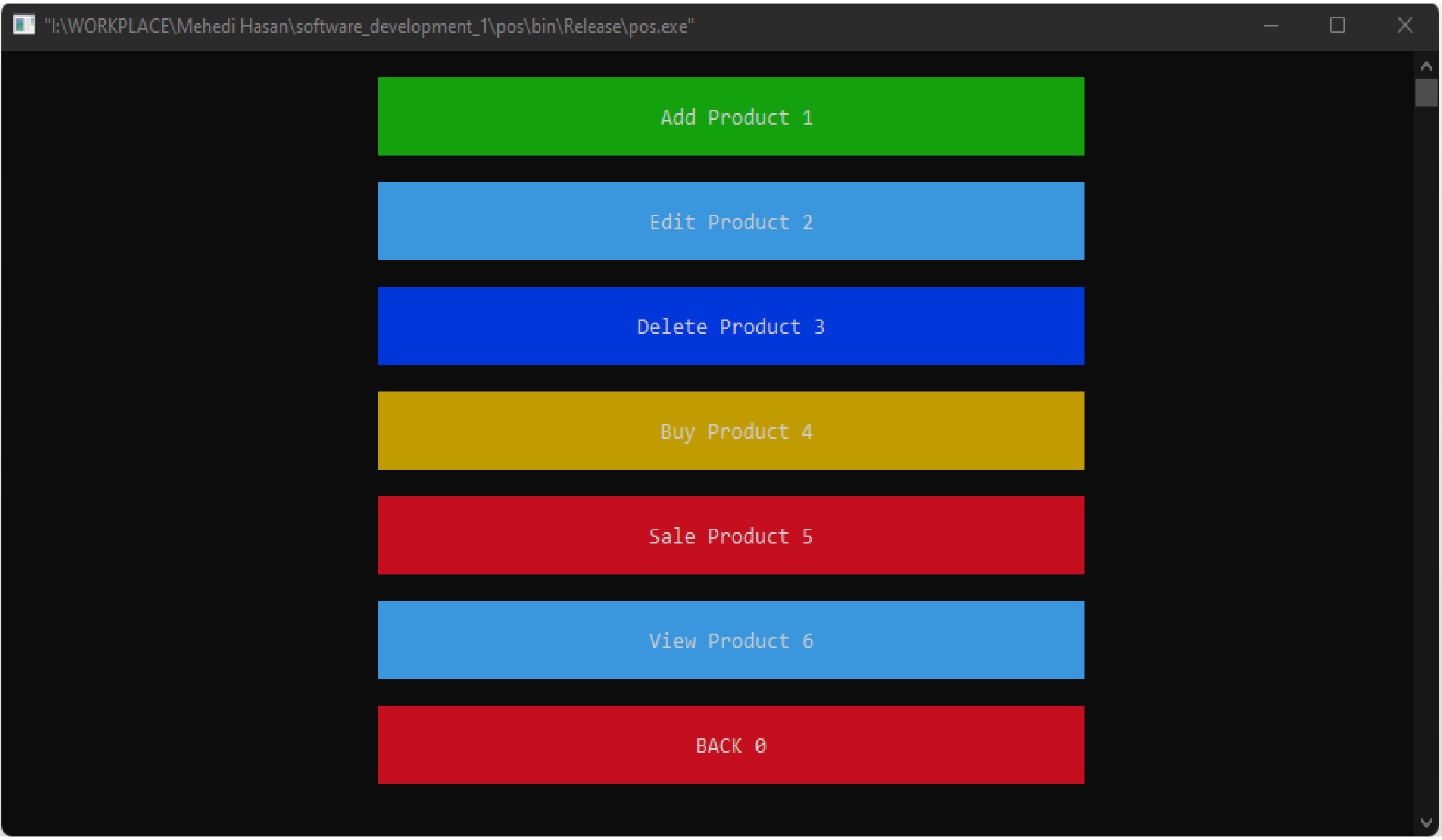
```
Product 1

Customer 2

Supplier 3

Stock 4

Invoices 5

Profit 6

EXIT 0
```

File Name: productMenu.h
Code:-

```
#include<iostream>
#include <stdlib.h>
#include "../../tabulate/table.hpp"
#include "../modules/product/addProduct.h"
#include "../message/errorMessage.h"
#include "../modules/product/viewProduct.h"
#include "../modules/product/buyProduct.h"
#include "../modules/product/saleProduct.h"
#include "../modules/product/editProduct.h"
#include "../modules/product/deleteProduct.h"

using namespace tabulate;
using namespace std;



  int porductMenu(){

    int option;

    Table universal_constants;

    universal_constants.add_row({"","Please select an option:"});
    universal_constants.add_row({"","Add Product 1"});
    universal_constants.add_row({"","Edit Product 2"});
    universal_constants.add_row({"","Delete Product 3"});
    universal_constants.add_row({"","Buy Product 4"});
    universal_constants.add_row({"","Sale Product 5"});
    universal_constants.add_row({"","View Product 6"});
    universal_constants.add_row({"","BACK 0"});

    universal_constants.format()
      .font_style({FontStyle::bold})
      .border_top(" ")
      .border_bottom(" ")
      .border_left(" ")
      .border_right(" ")
      .corner(" ");
```

```
universal_constants[0][0].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(30);
universal_constants[0][1].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(60)
    .font_background_color(Color::magenta);

universal_constants[1][0].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(30);
universal_constants[1][1].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .font_background_color(Color::green);

universal_constants[2][0].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(30);
universal_constants[2][1].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::underline})
    .font_style({FontStyle::bold})
    .font_background_color(Color::cyan);

universal_constants[3][0].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(30);
universal_constants[3][1].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(60)
    .font_background_color(Color::blue);

universal_constants[4][0].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(30);
universal_constants[4][1].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(60)
    .font_background_color(Color::yellow);

universal_constants[5][0].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(30);
universal_constants[5][1].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(60)
    .font_background_color(Color::red);

universal_constants[6][0].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(30);
universal_constants[6][1].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(60)
    .font_background_color(Color::cyan);

universal_constants[7][0].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(30);
universal_constants[7][1].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(60)
    .font_background_color(Color::red);



std::cout << universal_constants << std::endl;

cout<<"\t\t\t\t\t\t\t";

cin>>option;

system ("CLS");

switch(option){
    case 1:
        addProduct();
        break;
    case 2:
        editProduct();
        break;
    case 3:
        deleteProduct();
        break;
    case 4:
            buyProduct();
            break;
        case 5:
            saleProduct();
            break;
        case 6:
            viewProduct();
            break;
        case 0:
            return 10000000;
            break;

        default:
            errorMessage("Invalid Option!");
    }


    return option;
}
```

OUTPUT:


"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
Add Product 1

Edit Product 2

Delete Product 3

Buy Product 4

Sale Product 5

View Product 6

BACK 0
```

File Name: productClass.h

Code:-

```
#include<iostream>
#include <string>
#include<stdlib.h>

using namespace std;

    string name;

    struct Product{
        int id;
        int purchasePrice;
        int salePrice;
        int inStock;
        string date;
        string name;
        struct Product *next;
    };

    typedef struct Product products;

    products *start = NULL;
```

File Name: addProduct.h

Code:-

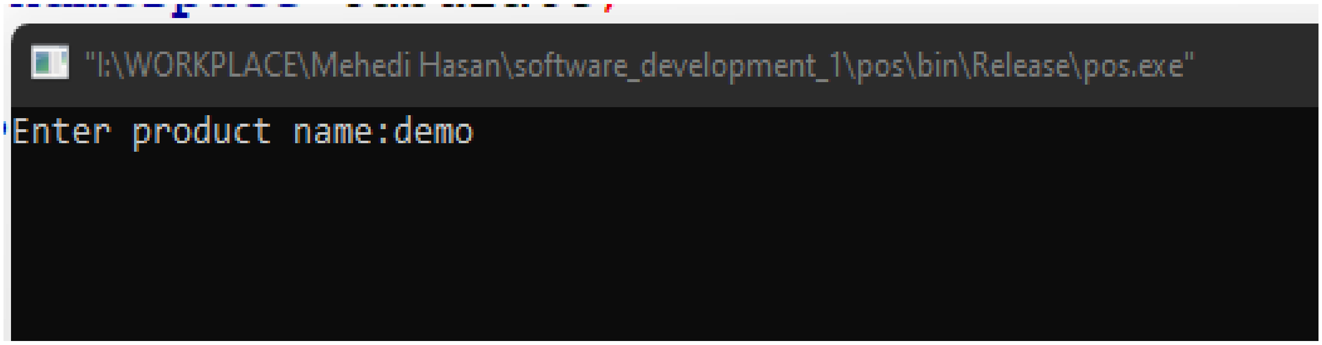
```
#include<iostream>
#include <stdlib.h>
#include <string>
#include <ctime>
#include "../../store.h"
#include "productClass.h"
#include "../../message/successMessage.h"
#include "../../../tabulate/table.hpp"

    int currentProductId = 1;

    using namespace std;
    using namespace tabulate;


        products *getNode(){
            products* newNode;

            newNode = (products*) malloc(sizeof(products));

            string name;
            cout<<"Enter product name:";
            getline(cin, name);
            getline(cin, name);
            newNode->name = name;
            system ("CLS");

            cout<<"Enter product purchase price:";
            int purchasePrice;
            cin>>purchasePrice;
            newNode->purchasePrice = purchasePrice;
            system ("CLS");

            cout<<"Enter product sale price:";
            int salePrice;
            cin>>salePrice;
            newNode->salePrice  = salePrice;
            system ("CLS");

            time_t now = time(0);
            char* dt = ctime(&now);
            newNode->date = dt;
            newNode->id = currentProductId;
            newNode->inStock = 0;


            newNode->next = NULL;

            return newNode;

        }

    void addProduct(){


        products *newNode;
        products *temp;
        newNode = getNode();
        currentProductId++;

        Table movies;
        movies.add_row({"Id", "Name", "Purchase Price", "Sale Price","In Stock", "Date"});
        movies.add_row({to_string(newNode->id), newNode->name, to_string(newNode->purchasePrice), to_string(newNode->salePrice),to_string(newNode->inStock), newNode->date});

        for (size_t i = 0; i < 6; ++i) {
            movies[0][i].format()
                .font_color(Color::yellow)
                .font_align(FontAlign::center)
                .font_style({FontStyle::bold});

                movies[1][i].format()
                .font_color(Color::cyan)
                .font_align(FontAlign::center)
                .font_style({FontStyle::bold});
        }


        if(start == NULL){
            start = newNode;
            std::cout << movies << std::endl;
            successMessage("Product added successfully.");

        }else{

            temp = start;
            while(temp->next != NULL){
                temp = temp->next;
            }

            temp->next = newNode;
            std::cout << movies << std::endl;
            successMessage("Product added successfully.");
        }


    }
```

File Name: successMessage.h
Code:-

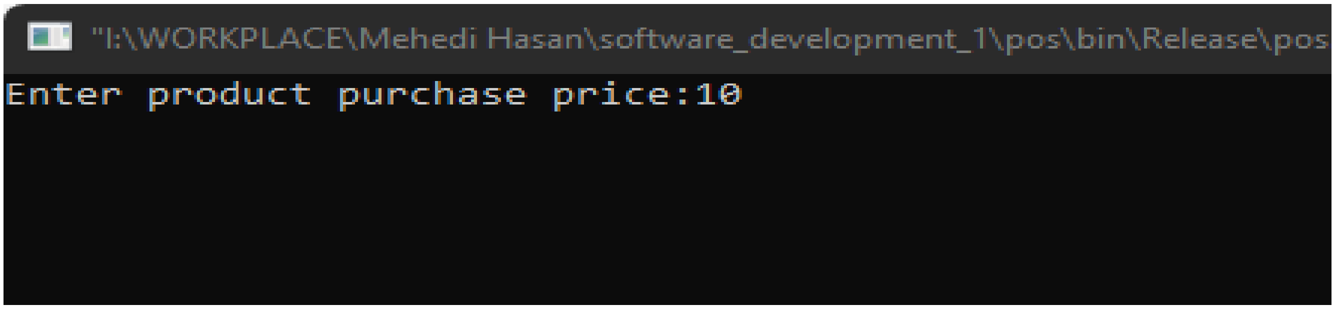
```
#include<iostream>
#include <string>
#include "../../tabulate/table.hpp"
using namespace std;
using namespace tabulate;

    void successMessage(string message){

        int option;

        Table universal_constants;

        universal_constants.add_row({"",message,""});
        universal_constants.add_row({"","Back 0"});

        universal_constants.format()
            .font_style({FontStyle::bold})
            .border_top(" ")
            .border_bottom(" ")
            .border_left("")
            .border_right("")
            .corner(" ");

        universal_constants[0][0].format()
            .padding_top(1)
            .padding_bottom(1)
            .font_align(FontAlign::center)
            .font_style({FontStyle::bold})
            .font_background_color(Color::green)
            .width(20);
        universal_constants[0][1].format()
            .padding_top(1)
            .padding_bottom(1)
            .font_align(FontAlign::center)
            .font_style({FontStyle::bold})
            .width(60)
            .font_background_color(Color::green);

        universal_constants[0][2].format()
            .padding_top(1)
            .padding_bottom(1)
            .font_align(FontAlign::center)
            .font_style({FontStyle::bold})
            .font_background_color(Color::green)
            .width(30);



        universal_constants[1][0].format()
            .padding_top(1)
            .padding_bottom(1)
            .font_align(FontAlign::center)
            .font_style({FontStyle::bold})
            .width(30);
        universal_constants[1][1].format()
            .padding_top(1)
            .padding_bottom(1)
            .font_align(FontAlign::center)
            .font_style({FontStyle::bold})
            .width(60)
            .font_background_color(Color::red);
```

```
        std::cout << universal_constants << std::endl;

        cout<<"\t\t\t\t\t\t\t";

        cin>>option;

        system ("CLS");

    }
```

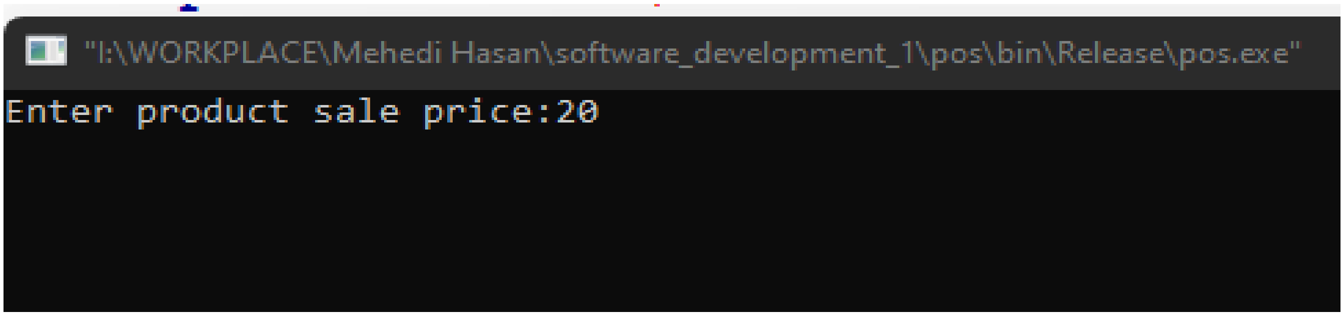
OUTPUT:


"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

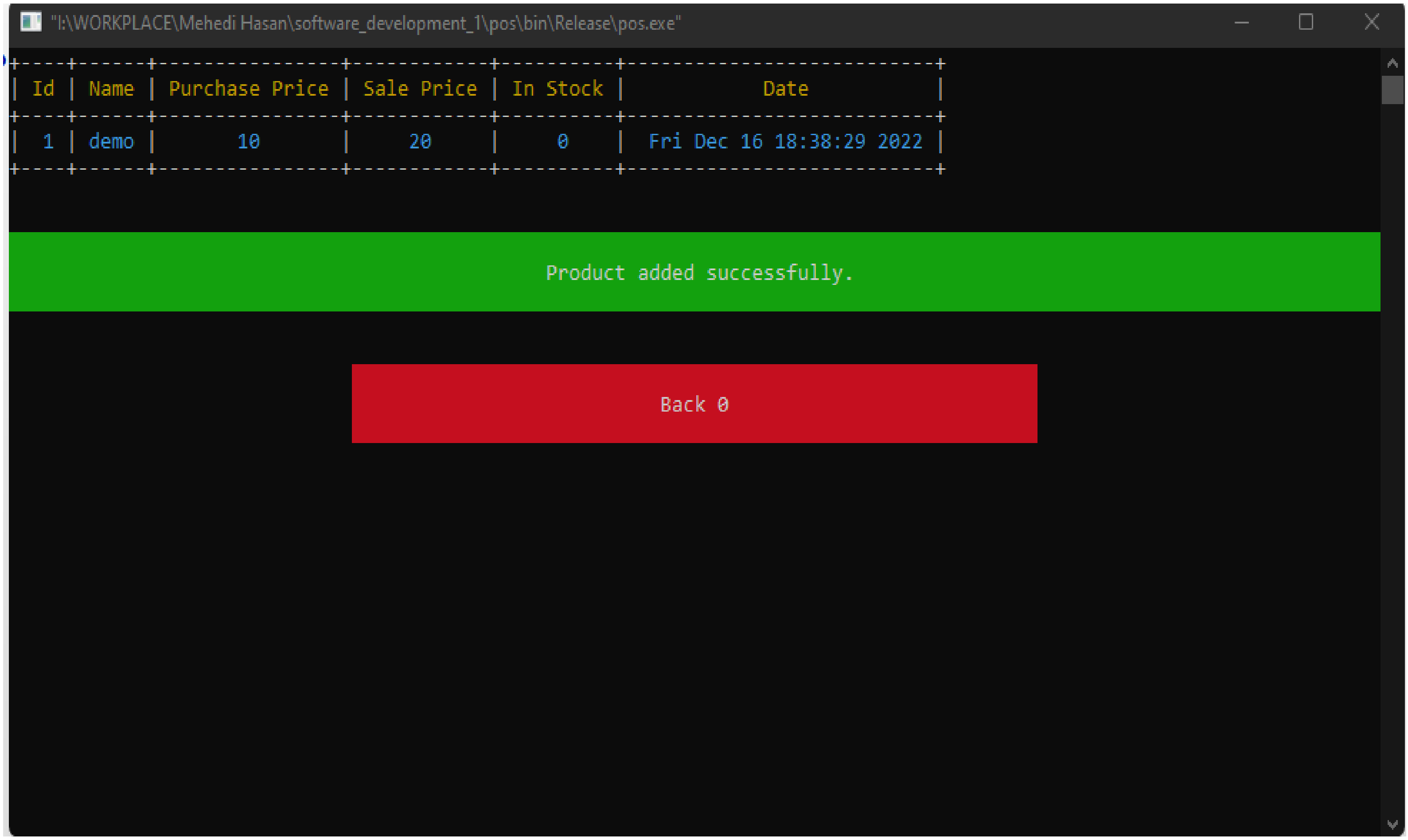
```
Enter product name:demo
```


"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos

```
Enter product purchase price:10
```


"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
Enter product sale price:20
```



"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
+----+------+-----------------+------------+----------+--------------------------+
| Id | Name | Purchase Price | Sale Price | In Stock |           Date           |
+----+------+-----------------+------------+----------+--------------------------+
|  1 | demo |       10        |     20     |    0     | Fri Dec 16 18:38:29 2022 |
+----+------+-----------------+------------+----------+--------------------------+

                          Product added successfully.

                                   Back 0
```

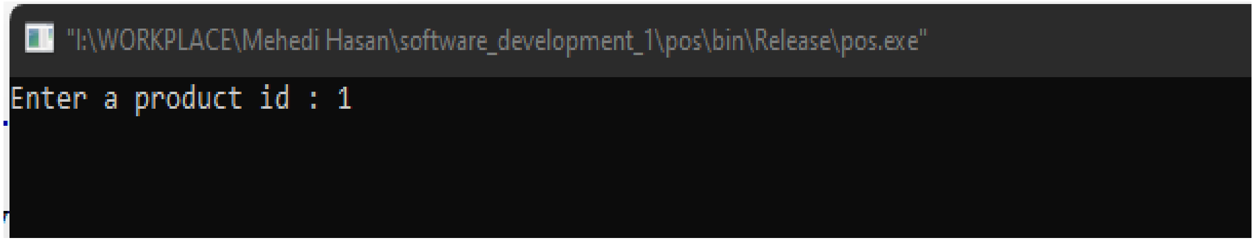
File Name: editProduct.h

Code:-

```
#include<iostream>
#include "../../../tabulate/table.hpp"

   using namespace std;
   using namespace tabulate;

   void editProduct(){
      int productId;

      viewProduct();

      cout<<"Enter a product id : ";
      cin>>productId;
      system ("CLS");

      products* EP = findProduct(productId);

      string name;
      cout<<"Current product name : ->[ " <<EP->name <<" ]" <<endl;
      cout<<"Enter product name:";
      getline(cin, name);
      getline(cin, name);
      EP->name = name;
      system ("CLS");

      cout<<"Current purchase price : ->[ " <<EP->purchasePrice <<" ]" <<endl;
      cout<<"Enter product purchase price:";
      int purchasePrice;
      cin>>purchasePrice;
      EP->purchasePrice = purchasePrice;
      system ("CLS");

      cout<<"Current sale price : ->[ " <<EP->salePrice <<" ]" <<endl;
      cout<<"Enter product sale price:";
      int salePrice;
```

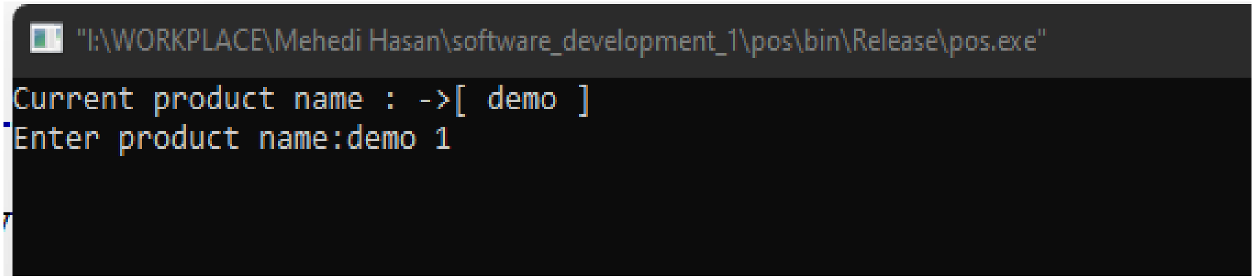
```
        cin>>salePrice;
        EP->salePrice  = salePrice;
        system ("CLS");

        Table movies;
        movies.add_row({"Id", "Name", "Purchase Price", "Sale Price","In Stock", "Date"});
        movies.add_row({to_string(EP->id), EP->name, to_string(EP->purchasePrice),
to_string(EP->salePrice),to_string(EP->inStock), EP->date});

        for (size_t i = 0; i < 6; ++i) {
            movies[0][i].format()
                .font_color(Color::yellow)
                .font_align(FontAlign::center)
                .font_style({FontStyle::bold});

                movies[1][i].format()
                .font_color(Color::cyan)
                .font_align(FontAlign::center)
                .font_style({FontStyle::bold});
        }

        std::cout << movies << std::endl;
        successMessage("Product update successfully.");

    }
```

OUTPUT:



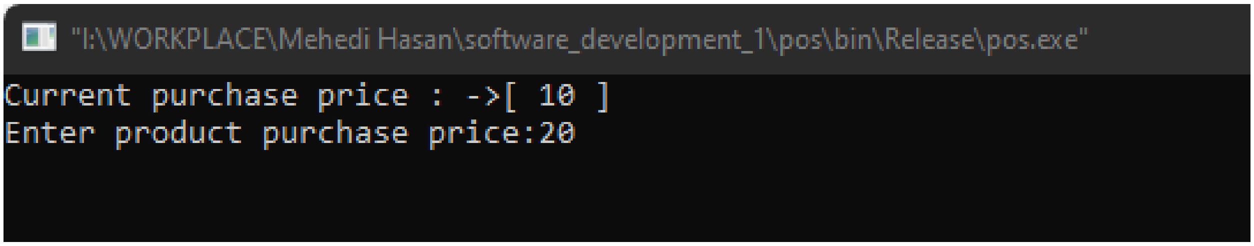
"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
Enter a product id : 1
```

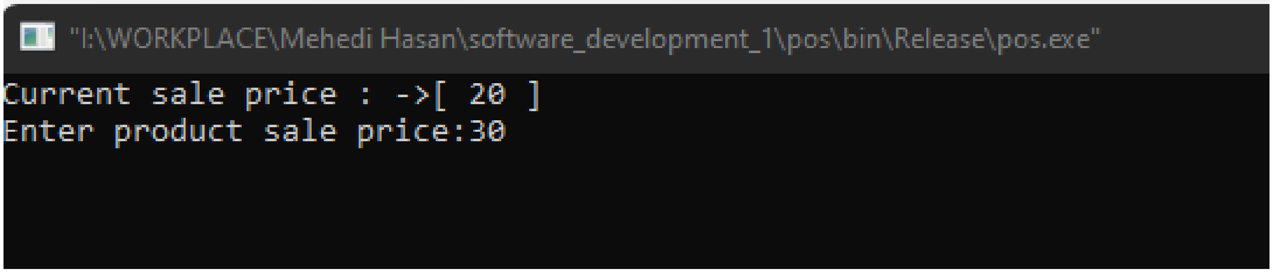


"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

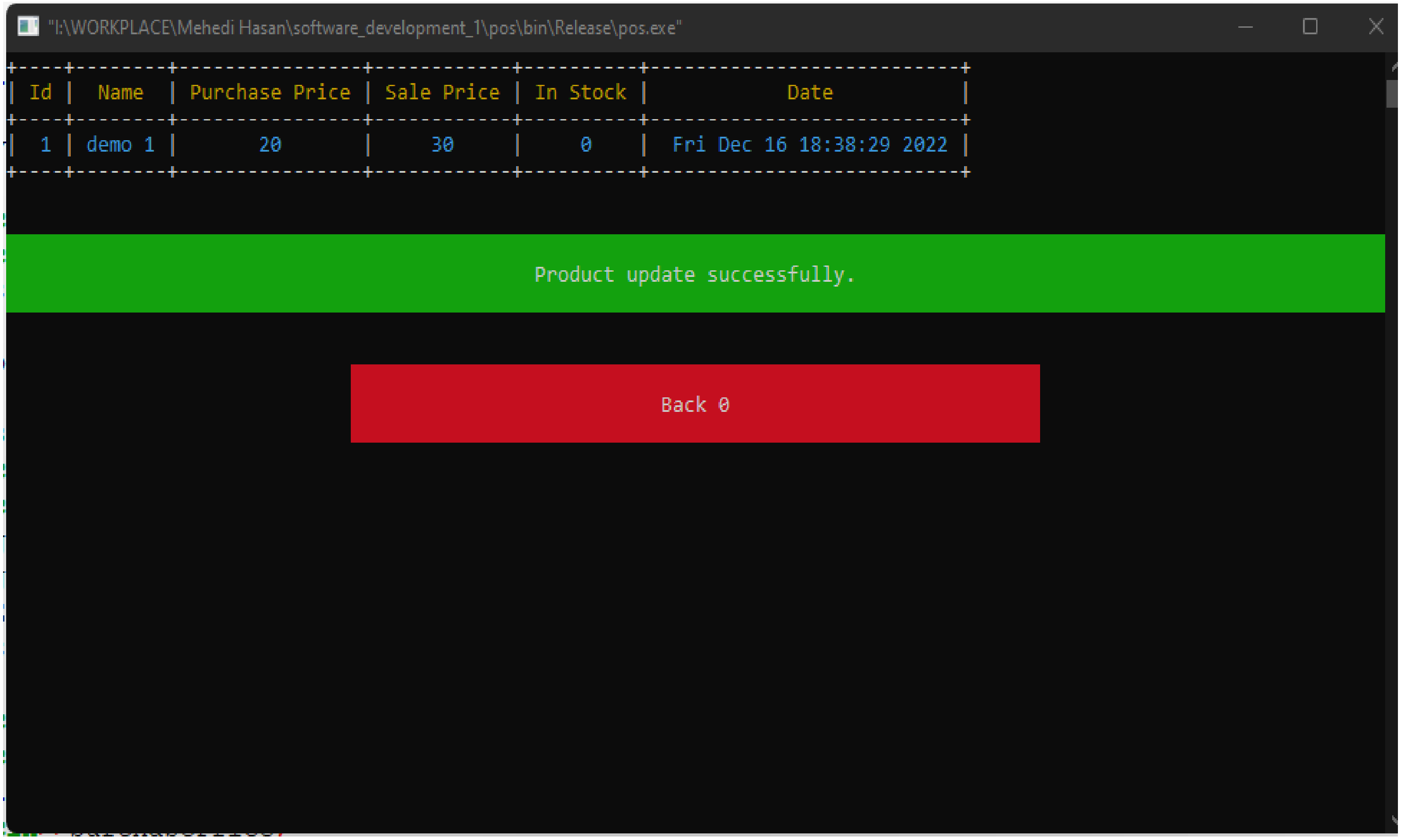
```
Current product name : ->[ demo ]
Enter product name:demo 1
```


"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
Current purchase price : ->[ 10 ]
Enter product purchase price:20
```


"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
Current sale price : ->[ 20 ]
Enter product sale price:30
```


"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

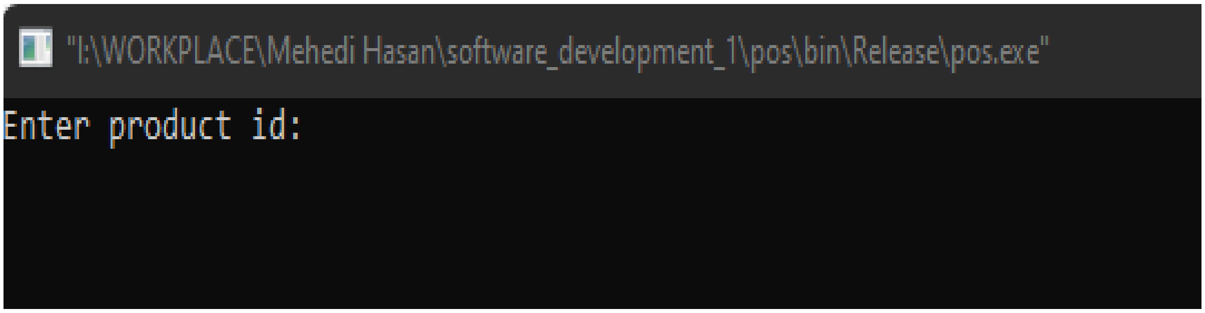
```
+----+--------+----------------+------------+----------+--------------------------+
| Id |  Name  | Purchase Price | Sale Price | In Stock |           Date           |
+----+--------+----------------+------------+----------+--------------------------+
|  1 | demo 1 |       20       |     30     |    0     | Fri Dec 16 18:38:29 2022 |
+----+--------+----------------+------------+----------+--------------------------+

                          Product update successfully.

                                    Back 0
```

File Name: deleteProduct.h

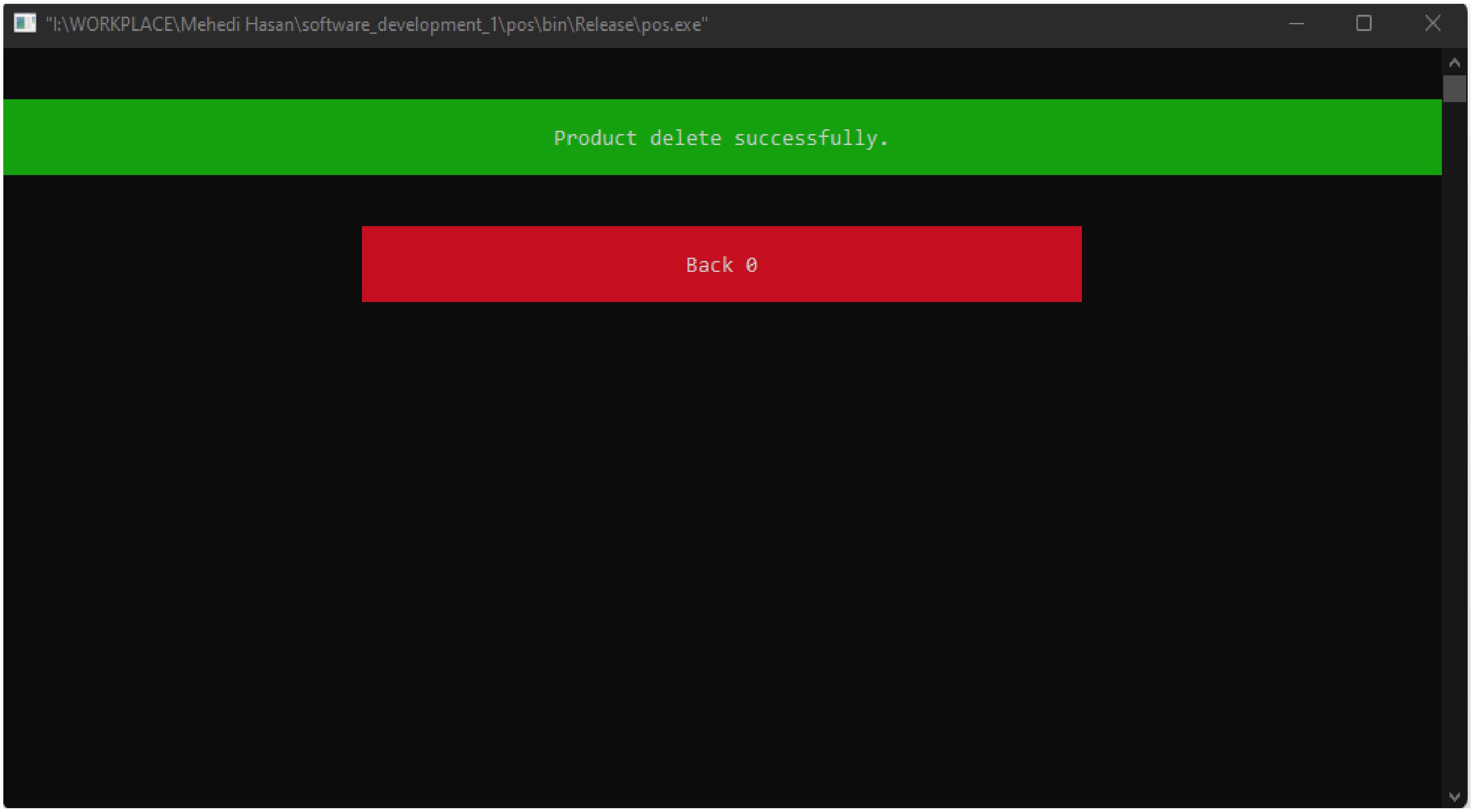
Code:-

```
#include<iostream>
#include "../../../tabulate/table.hpp"

    using namespace std;
    using namespace tabulate;

        void deleteProduct(){

        viewProduct();
        int id;
        cout<< "Enter product id:";
        cin>>id;
        system ("CLS");

        products *dataFPDL = start;
        products *dataFPDL2;
        products *dataFPDL3;

        if(start->id == id && start->next == NULL){
            free(start);
            start = NULL;
            successMessage("Product delete successfully.");
        }else{
            if(start->id == id ){
                free(start);
                start = dataFPDL->next;
                successMessage("Product delete successfully.");
            }else{

                while(dataFPDL != NULL){
                    if(dataFPDL->next->id == id){
                        if(dataFPDL->next->next == NULL){
                            dataFPDL2 = dataFPDL->next->next;
                        free(dataFPDL2);
                        dataFPDL->next = NULL;
                        successMessage("Product delete successfully.");
                        break;
                    }else{
                        dataFPDL2 = dataFPDL->next->next;
                        dataFPDL3 = dataFPDL->next;
                        free(dataFPDL3);
                        dataFPDL->next = dataFPDL2;
                        successMessage("Product0 delete successfully.");
                        break;
                    }
                }
                dataFPDL = dataFPDL->next;

            }


        }

    }

}
```

OUTPUT:



```
"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"
Enter product id:
```



"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
Product delete successfully.

Back 0
```

File Name: supplierMenu.h

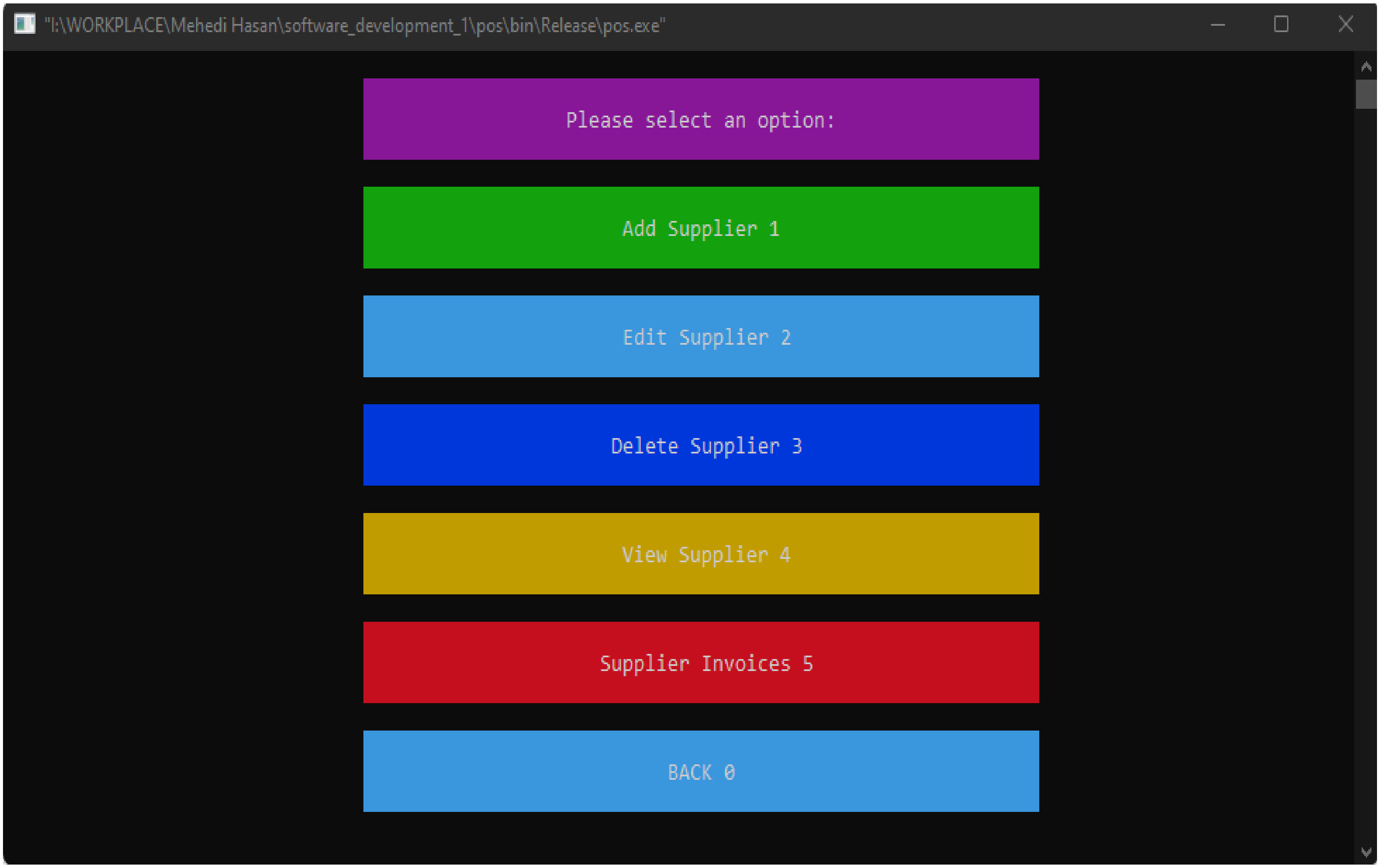
Code:-

```
#include<iostream>
#include <stdlib.h>
#include "../../tabulate/table.hpp"
#include "../modules/supplier/addSupplier.h"
#include "../modules/supplier/EditSupplier.h"
#include "../modules/supplier/deleteSupplier.h"

using namespace tabulate;
using namespace std;



  int supplierMenu(){

    int option;

    Table universal_constants;

    universal_constants.add_row({"","Please select an option:"});
    universal_constants.add_row({"","Add Supplier 1"});
    universal_constants.add_row({"","Edit Supplier 2"});
    universal_constants.add_row({"","Delete Supplier 3"});
    universal_constants.add_row({"","View Supplier 4"});
    universal_constants.add_row({"","Supplier Invoices 5"});
    universal_constants.add_row({"","BACK 0"});

    universal_constants.format()
      .font_style({FontStyle::bold})
      .border_top(" ")
      .border_bottom(" ")
      .border_left(" ")
      .border_right(" ")
      .corner(" ");
```

```
universal_constants[0][0].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(30);
universal_constants[0][1].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(60)
    .font_background_color(Color::magenta);

universal_constants[1][0].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(30);
universal_constants[1][1].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .font_background_color(Color::green);

universal_constants[2][0].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(30);
universal_constants[2][1].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::underline})
    .font_style({FontStyle::bold})
    .font_background_color(Color::cyan);

universal_constants[3][0].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(30);
universal_constants[3][1].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(60)
    .font_background_color(Color::blue);

universal_constants[4][0].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(30);
universal_constants[4][1].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(60)
    .font_background_color(Color::yellow);

universal_constants[5][0].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(30);
universal_constants[5][1].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(60)
    .font_background_color(Color::red);

universal_constants[6][0].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(30);
universal_constants[6][1].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(60)
    .font_background_color(Color::cyan);




std::cout << universal_constants << std::endl;

cout<<"\t\t\t\t\t\t\t";

cin>>option;

system ("CLS");

switch(option){
    case 1:
        addSupplier();
        break;
    case 2:
        editSupplier();
        break;
    case 3:
        deleteSupplier();
        break;
    case 4:
        viewSupplier();
        break;
    case 5:
        cout<<"5 selected";
         break;
    case 0:
        return 10000000;
        break;

    default:
        cout<<"selected";
}
```

```
    return option;
}
```

OUTPUT:



"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
Please select an option:

Add Supplier 1

Edit Supplier 2

Delete Supplier 3

View Supplier 4

Supplier Invoices 5

BACK 0
```

File Name: supplierClass.h

Code:-

```
#include<iostream>
#include <string>
#include<stdlib.h>

using namespace std;


    struct Supplier{
        int id;
        string name;
        string email;
        string phone;
        string address;
        string date;
        struct Supplier *next;
    };

    typedef struct Supplier suppliers;

    suppliers *startS = NULL;
```

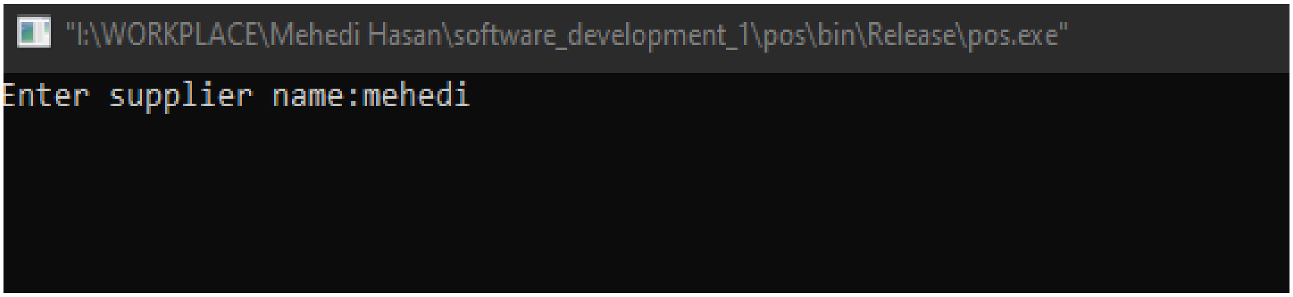
File Name: AddSupplier.h

Code:-

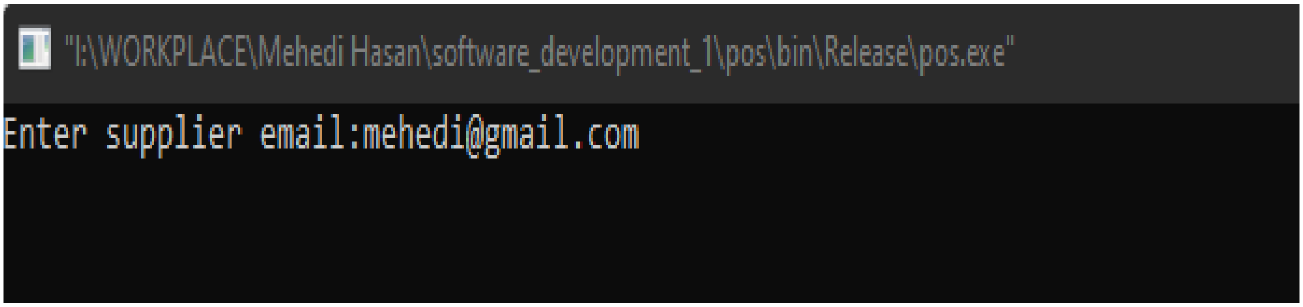
```
#include<iostream>
#include <stdlib.h>
#include <string>
```

```
#include <ctime>
#include "../../store.h"
#include "../../../tabulate/table.hpp"

    int currentSupplierId = 1;

    using namespace std;
    using namespace tabulate;


        suppliers *getSNode(){
            suppliers* newNode;

            newNode = (suppliers*) malloc(sizeof(suppliers));

            string nam;
            cout<<"Enter supplier name:";
            getline(cin, nam);
            getline(cin, nam);
            newNode->name = nam;
            system ("CLS");


            cout<<"Enter supplier email:";
            string email;
            getline(cin, email);
            newNode->email = email;
            system ("CLS");

            cout<<"Enter supplier phone:";
            string phone;
            getline(cin, phone);
            newNode->phone = phone;
            system ("CLS");

            cout<<"Enter supplier address:";
            string address;
            getline(cin, address);
            newNode->address = address;
            system ("CLS");

            time_t now = time(0);
            char* dt = ctime(&now);
            newNode->date = dt;
            newNode->id = currentSupplierId;


            newNode->next = NULL;

            return newNode;

        }

    void addSupplier(){


        suppliers *newNode;
        suppliers *temp;
        newNode = getSNode();
        currentSupplierId++;

        Table movies;
        movies.add_row({"Id", "Name", "Email", "phone","Address", "Date"});
        movies.add_row({to_string(newNode->id), newNode->name, newNode->email, newNode->phone, newNode->address, newNode->date});

        for (size_t i = 0; i < 6; ++i) {
            movies[0][i].format()
                .font_color(Color::yellow)
                .font_align(FontAlign::center)
                .font_style({FontStyle::bold});

                movies[1][i].format()
                .font_color(Color::cyan)
                .font_align(FontAlign::center)
                .font_style({FontStyle::bold});
        }


        if(startS == NULL){

            startS = newNode;
            std::cout << movies << std::endl;
            successMessage("Supplier added successfully.");

        }else{

            temp = startS;
            while(temp->next != NULL){
                temp = temp->next;
            }

            temp->next = newNode;
            std::cout << movies << std::endl;
            successMessage("Supplier added successfully.");
        }


    }
```

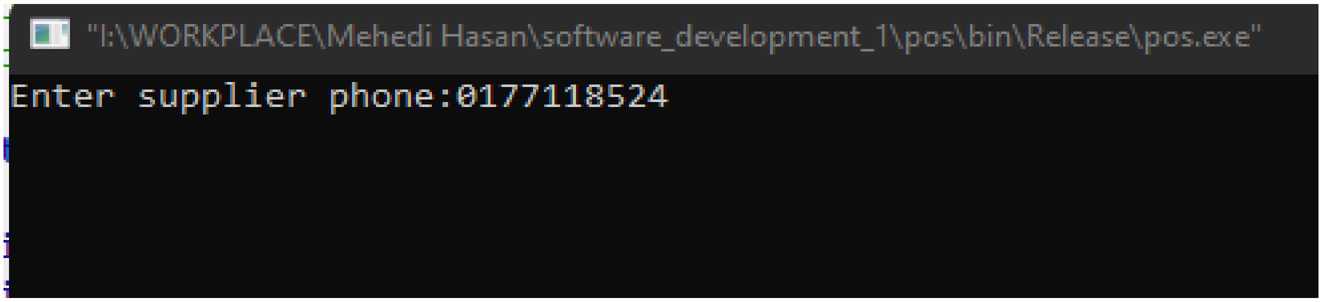
OUTPUT:


"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

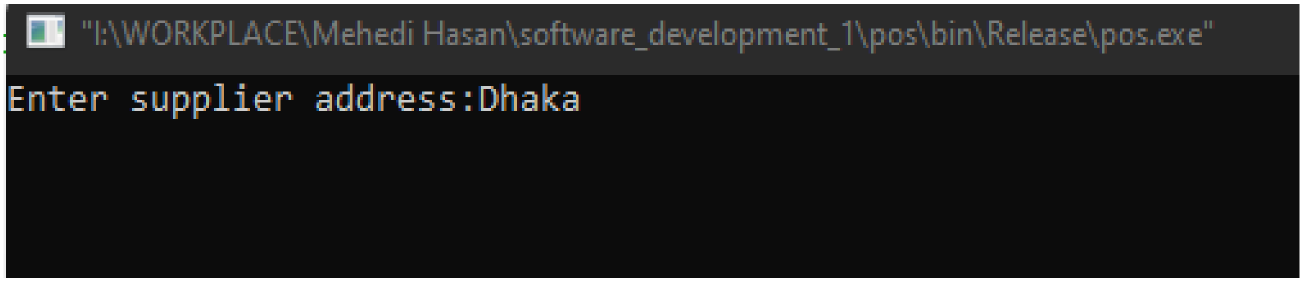
```
Enter supplier name:mehedi
```


"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

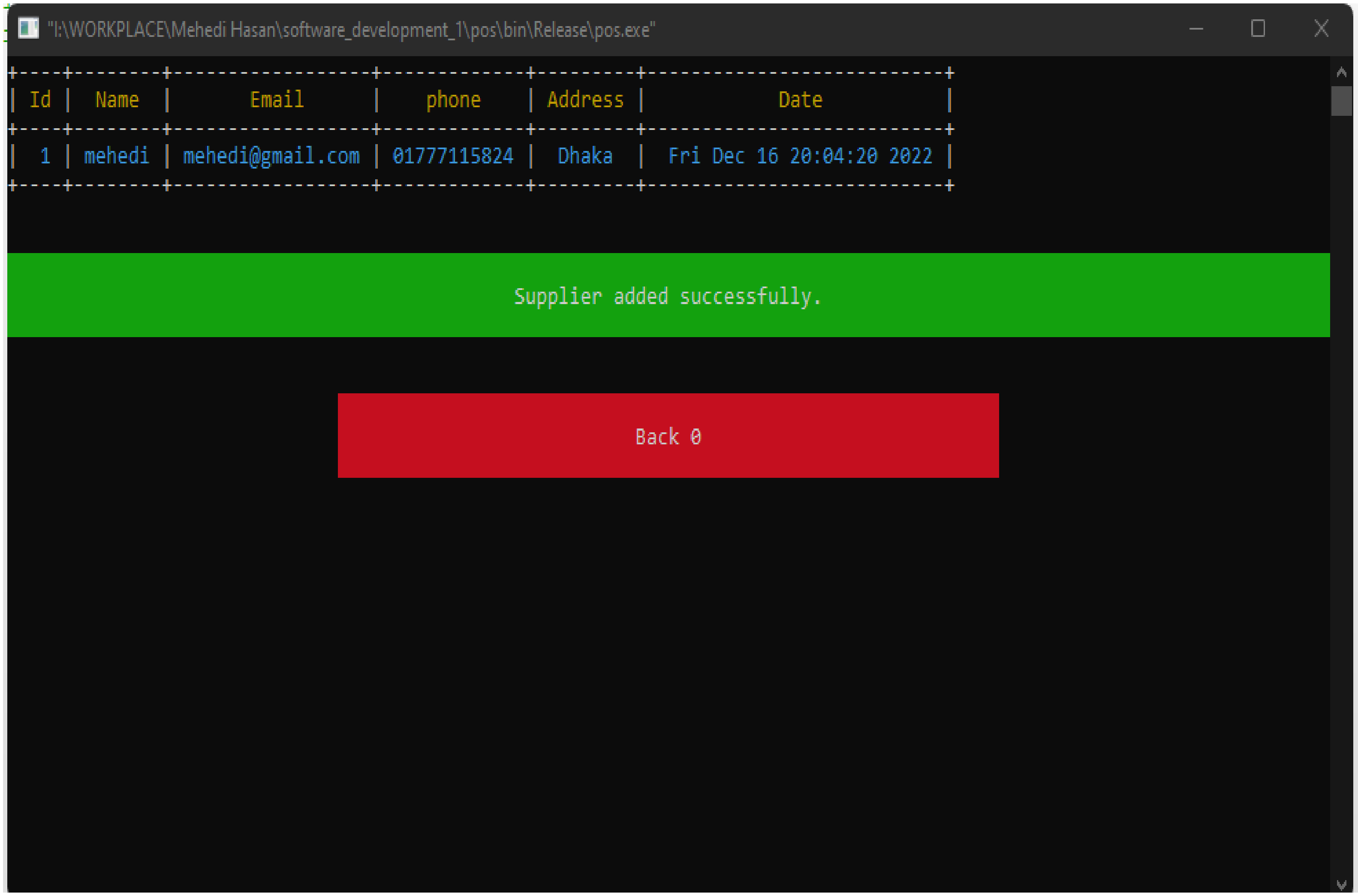
```
Enter supplier email:mehedi@gmail.com
```


"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
Enter supplier phone:0177118524
```


"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
Enter supplier address:Dhaka
```

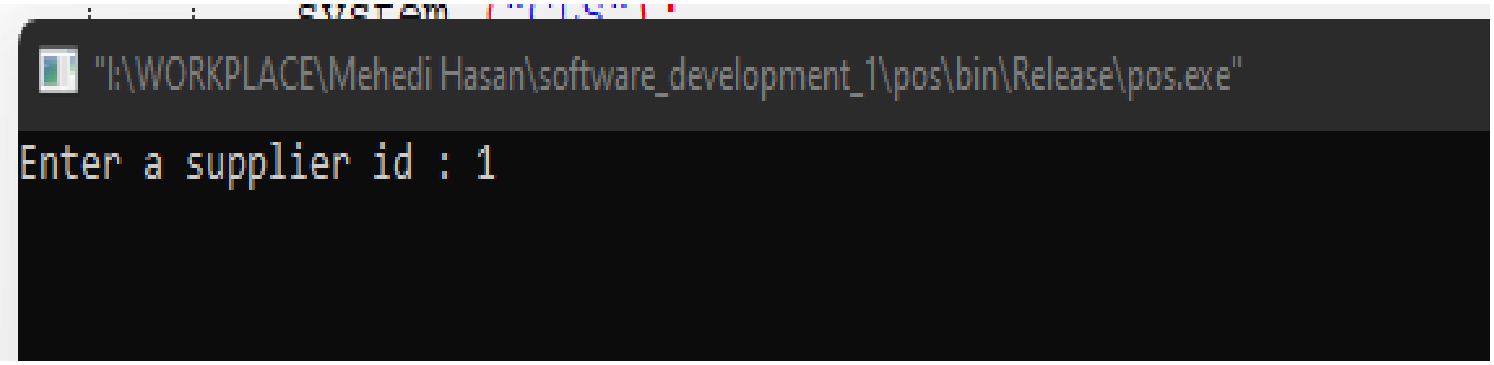

"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
+----+--------+------------------+-------------+---------+--------------------------+
| Id |  Name  |      Email       |    phone    | Address |           Date           |
+----+--------+------------------+-------------+---------+--------------------------+
|  1 | mehedi | mehedi@gmail.com | 01777115824 |  Dhaka  | Fri Dec 16 20:04:20 2022 |
+----+--------+------------------+-------------+---------+--------------------------+

Supplier added successfully.
```

File Name: editSupplier.h
Code:-

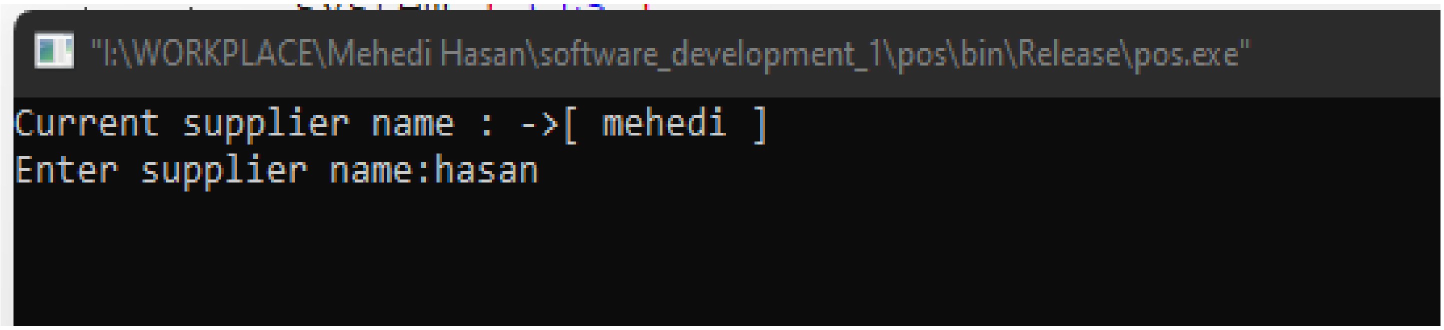
```
#include<iostream>
#include "../../../tabulate/table.hpp"

    using namespace std;
    using namespace tabulate;

    void editSupplier(){
        int supplierId;

        viewSupplier();

        cout<<"Enter a supplier id : ";
        cin>>supplierId;
        system ("CLS");

        suppliers* ES = findSupplier(supplierId);

            cout<<"Current supplier name : ->[ " <<ES->name <<" ]" <<endl;
            string nam;
            cout<<"Enter supplier name:";
            getline(cin, nam);
            getline(cin, nam);
            ES->name = nam;
            system ("CLS");

            cout<<"Current supplier email : ->[ " <<ES->email <<" ]" <<endl;
            cout<<"Enter supplier email:";
            string email;
            getline(cin, email);
            ES->email = email;
            system ("CLS");

            cout<<"Current supplier phone : ->[ " <<ES->phone <<" ]" <<endl;
            cout<<"Enter supplier phone:";
            string phone;
            getline(cin, phone);
            ES->phone = phone;
            system ("CLS");
            cout<<"Current supplier address : ->[ " <<ES->address <<" ]" <<endl;
            cout<<"Enter supplier address:";
            string address;
            getline(cin, address);
            ES->address = address;
            system ("CLS");

        Table movies;
        movies.add_row({"Id", "Name", "Email", "phone", "Address", "Date"});
        movies.add_row({to_string(ES->id), ES->name, ES->email, ES->phone, ES->address, ES-
>date});

        for (size_t i = 0; i < 6; ++i) {
            movies[0][i].format()
                .font_color(Color::yellow)
                .font_align(FontAlign::center)
                .font_style({FontStyle::bold});

                movies[1][i].format()
                .font_color(Color::cyan)
                .font_align(FontAlign::center)
                .font_style({FontStyle::bold});
        }

        std::cout << movies << std::endl;
        successMessage("Supplier update successfully.");

    }
```

OUTPUT:



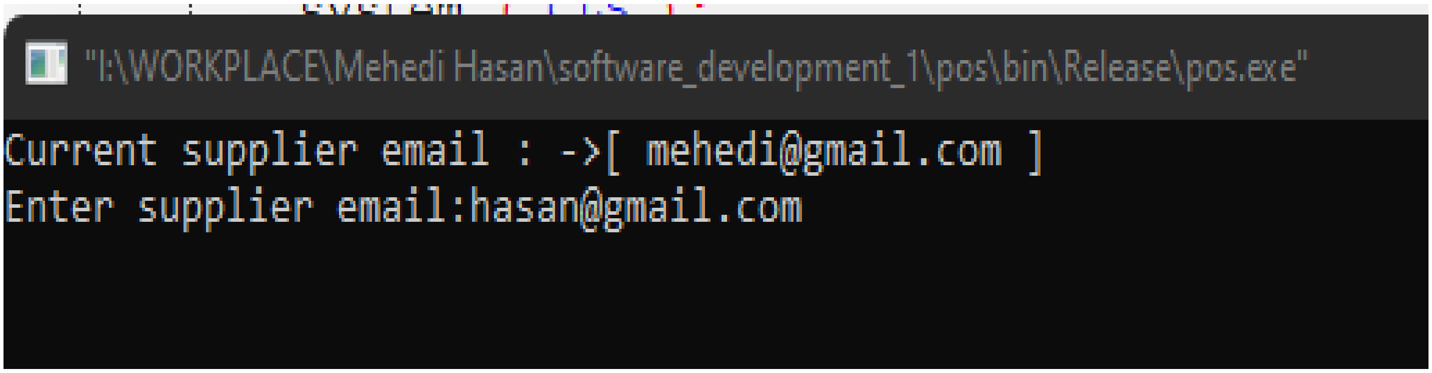
"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
Enter a supplier id : 1
```



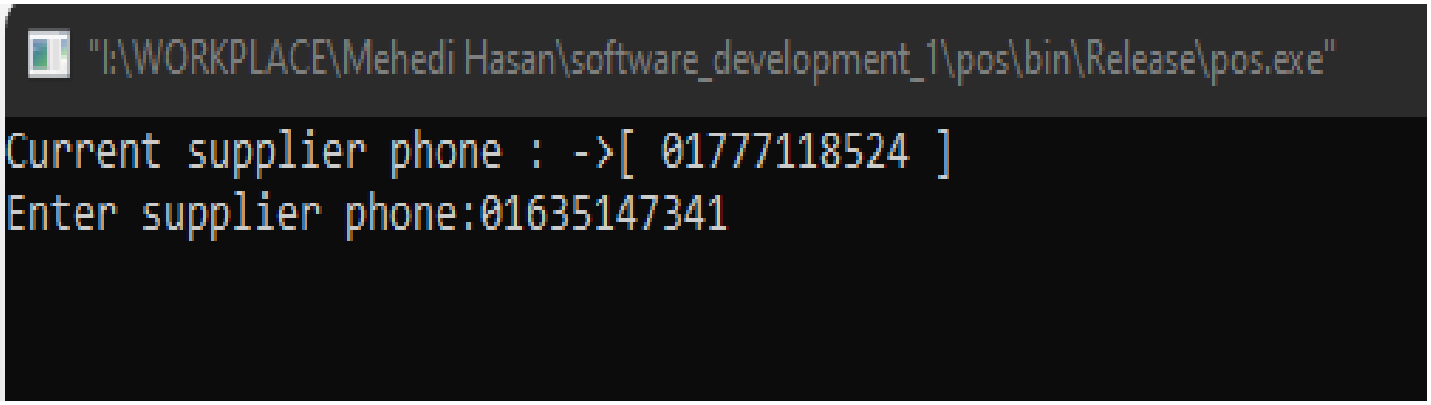
"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
Current supplier name : ->[ mehedi ]
Enter supplier name:hasan
```



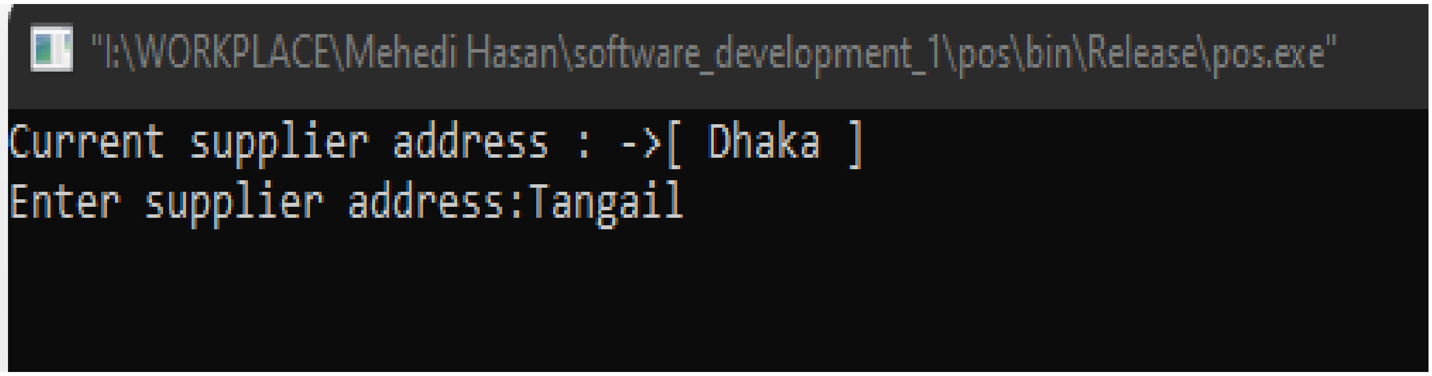
"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
Current supplier email : ->[ mehedi@gmail.com ]
Enter supplier email:hasan@gmail.com
```

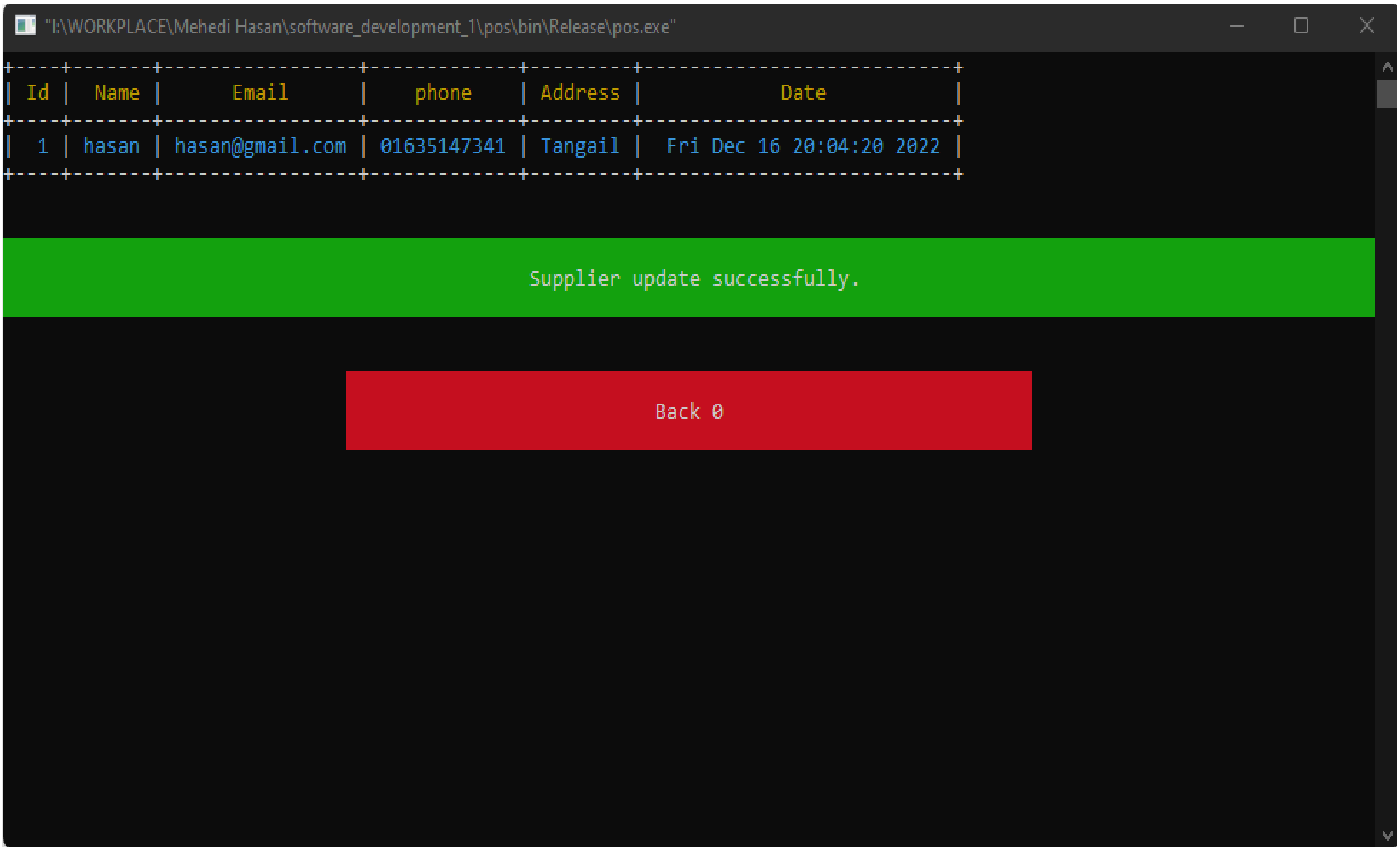


"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
Current supplier phone : ->[ 01777118524 ]
Enter supplier phone:01635147341
```



```
"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"
Current supplier address : ->[ Dhaka ]
Enter supplier address:Tangail
```



```
"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"
+----+-------+-----------------+------------+---------+--------------------------+
| Id |  Name |      Email      |    phone   | Address |           Date           |
+----+-------+-----------------+------------+---------+--------------------------+
|  1 | hasan | hasan@gmail.com | 01635147341 | Tangail |  Fri Dec 16 20:04:20 2022 |
+----+-------+-----------------+------------+---------+--------------------------+

                       Supplier update successfully.

                                 Back 0
```

File Name: viewSupplier.h

Code:-

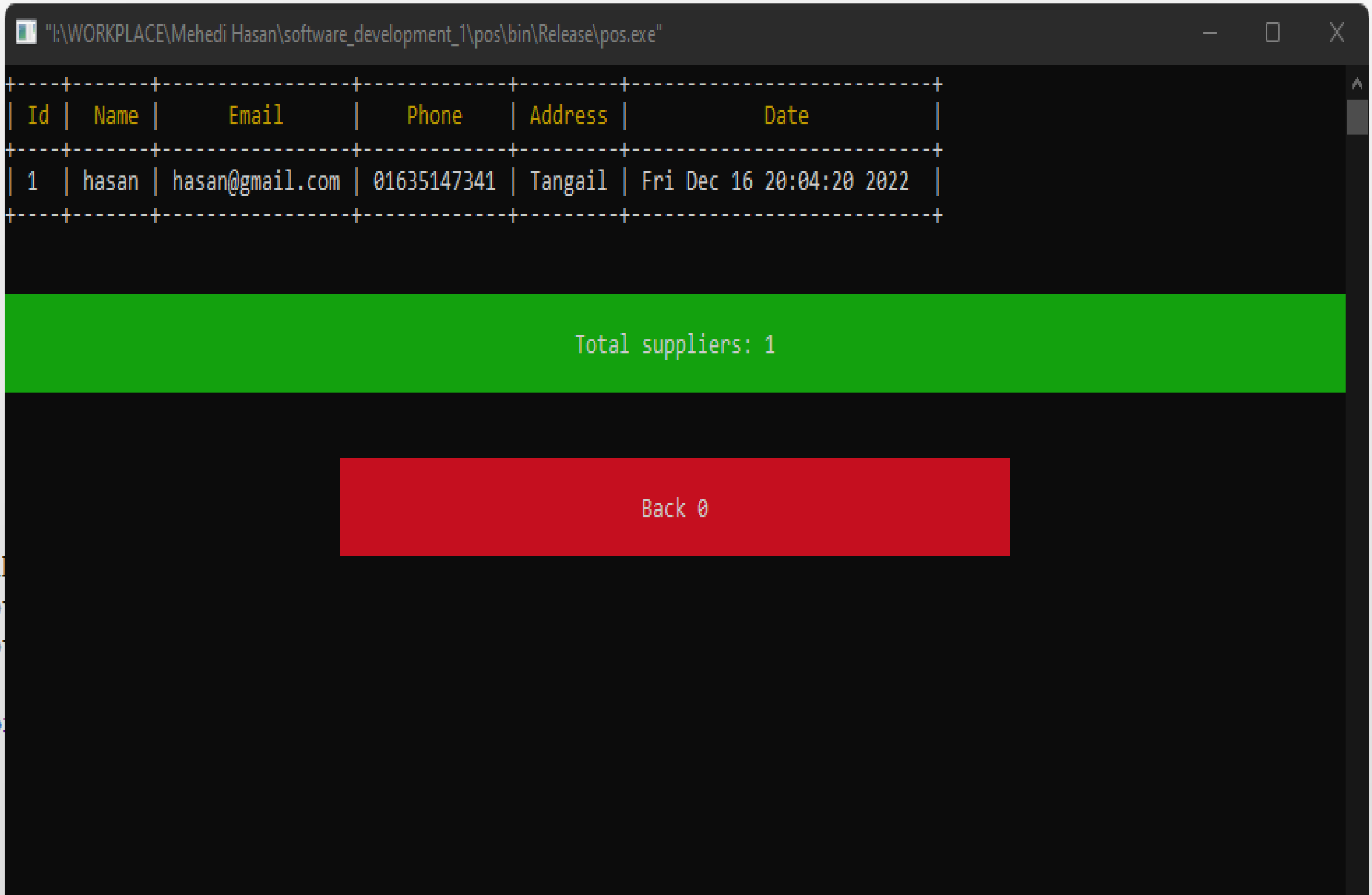
```
#include <iostream>
#include "../../../tabulate/table.hpp"
using namespace std;
using namespace tabulate;

  void viewSupplier(){

    suppliers *dataS = startS;

    Table movies;
    movies.add_row({"Id", "Name", "Email", "Phone","Address", "Date"});

    for (size_t i = 0; i < 6; ++i) {
      movies[0][i].format()
        .font_color(Color::yellow)
        .font_align(FontAlign::center)
        .font_style({FontStyle::bold});

    }

    int n = 0;
    string total ;
    while(dataS != NULL){
      n++;
      movies.add_row({to_string(dataS->id), dataS->name, dataS->email, dataS->phone,
dataS->address, dataS->date});

      dataS = dataS->next;
    }

    std::cout << movies << std::endl;
    total = "Total suppliers: " + to_string(n);
    successMessage(total);

  }
```

File Name: findSupplier.h

Code:-

```
#include<iostream>
#include "supplierClass.h"
using namespace std;

    suppliers *findSupplier(int id){
        suppliers *dataFS = startS;

        while(dataFS != NULL){
            if(dataFS->id == id){
                return(dataFS);
            }
            dataFS = dataFS->next;
        }
        return(NULL);
    }
```

OUTPUT:


"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

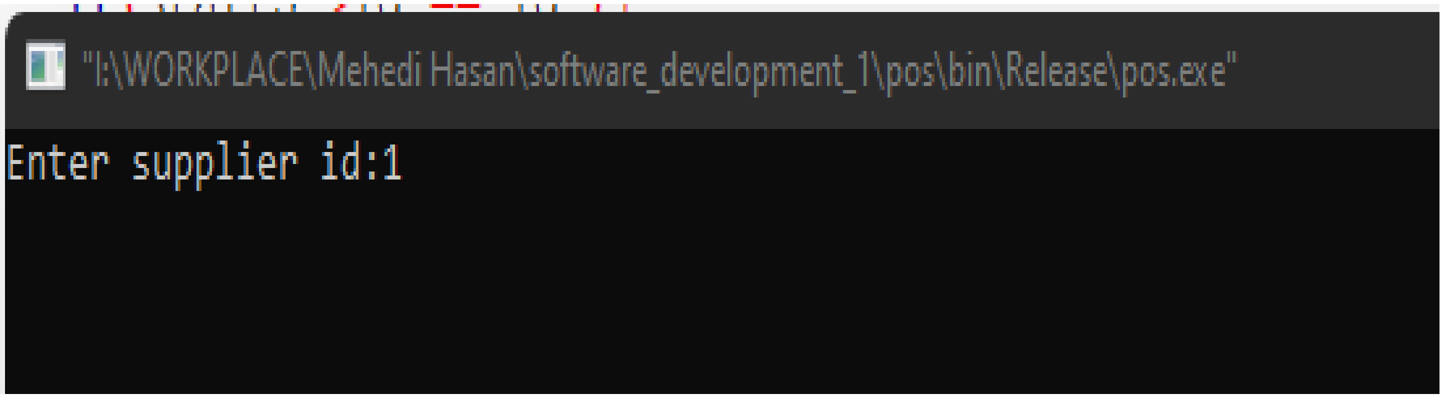
```
+----+-------+----------------+------------+---------+-------------------------+
| Id |  Name |     Email      |    Phone   | Address |          Date           |
+----+-------+----------------+------------+---------+-------------------------+
| 1  | hasan | hasan@gmail.com | 01635147341 | Tangail | Fri Dec 16 20:04:20 2022  |
+----+-------+----------------+------------+---------+-------------------------+


                              Total suppliers: 1


                                    Back 0
```

File Name: deleteSupplier.h

Code:-

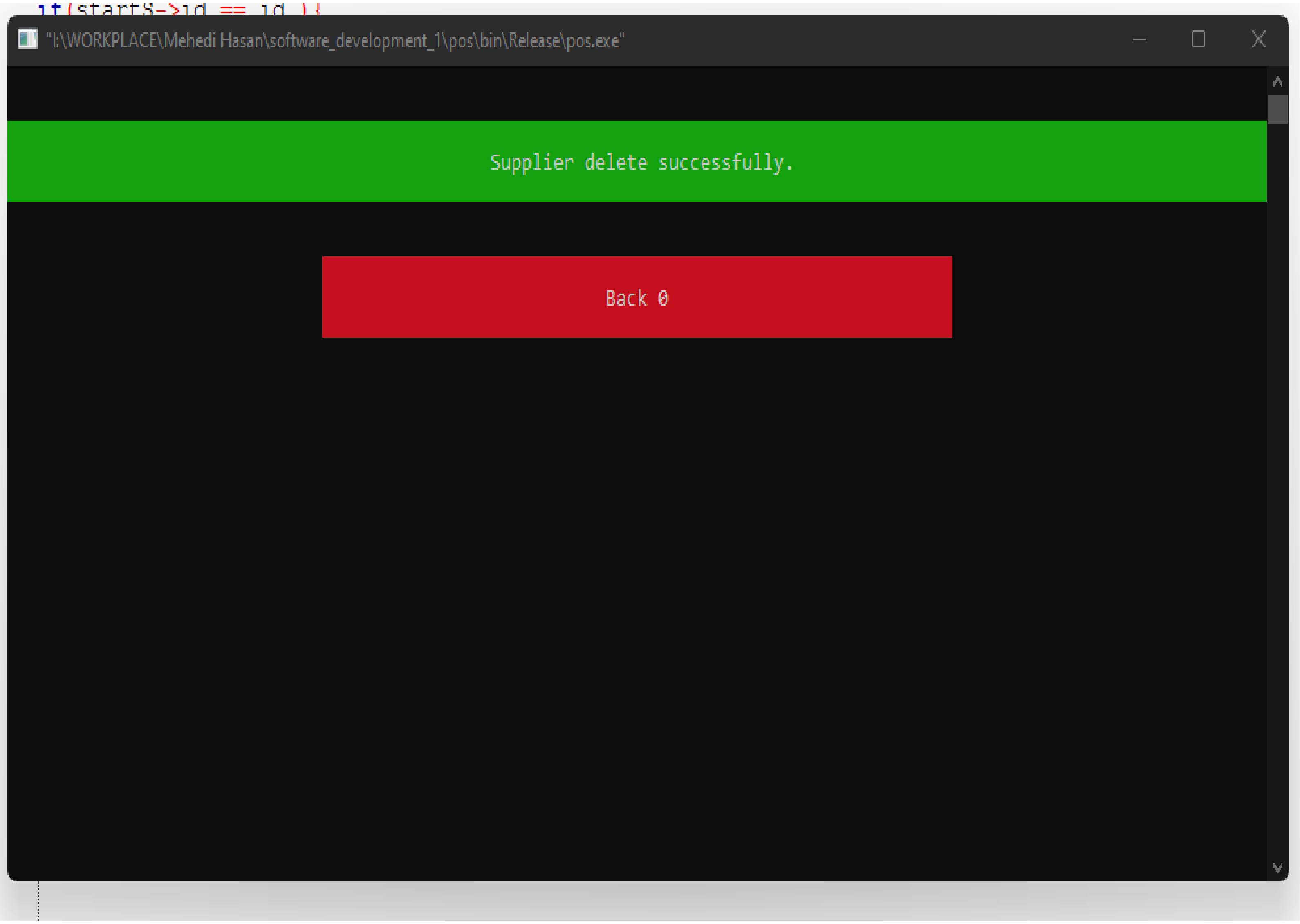
```
#include<iostream>
#include "../../../tabulate/table.hpp"

    using namespace std;
    using namespace tabulate;

        void deleteSupplier(){

        viewSupplier();
        int id;
        cout<< "Enter supplier id:";
        cin>>id;
        system ("CLS");

        suppliers *dataFSDL = startS;
        suppliers *dataFSDL2;
        suppliers *dataFSDL3;

        if(startS->id == id && startS->next == NULL){
            free(startS);
            startS = NULL;
            successMessage("Supplier delete successfully.");
        }else{
            if(startS->id == id ){
                free(startS);
                startS = dataFSDL->next;
                successMessage("Supplier delete successfully.");
        }else{

            while(dataFSDL != NULL){
                if(dataFSDL->next->id == id){
                    if(dataFSDL->next->next == NULL){
                        dataFSDL2 = dataFSDL->next->next;
                        free(dataFSDL2);
                        dataFSDL->next = NULL;
                        successMessage("Supplier delete successfully.");
                        break;
                    }else{
                        dataFSDL2 = dataFSDL->next->next;
                        dataFSDL3 = dataFSDL->next;
                        free(dataFSDL3);
                        dataFSDL->next = dataFSDL2;
                        successMessage("Supplier delete successfully.");
                        break;
                    }
                }
                dataFSDL = dataFSDL->next;

            }


        }

    }

}
```

OUTPUT:



"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
Enter supplier id:1
```



```
if(startS->id == id ){
```

"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

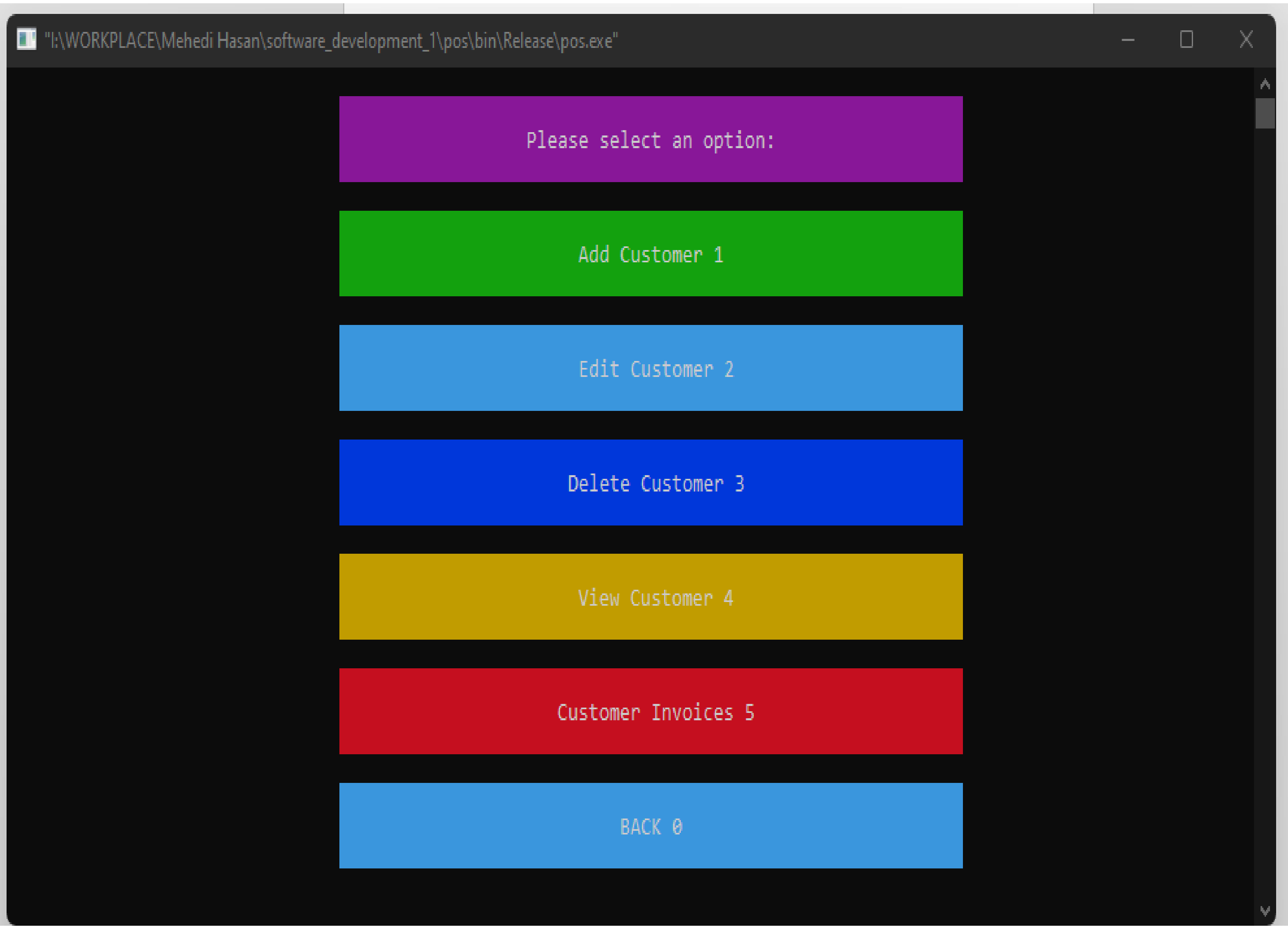
```
Supplier delete successfully.
```

File Name: customerMenu.h
Code:-

```
#include<iostream>
#include <stdlib.h>
#include "../../tabulate/table.hpp"
#include "../modules/customer/addCustomer.h"
#include "../modules/customer/editCustomer.h"
#include "../modules/customer/deleteCustomer.h"

using namespace tabulate;
using namespace std;



    int customerMenu(){

        int option;

        Table universal_constants;

        universal_constants.add_row({"","Please select an option:"});
        universal_constants.add_row({"","Add Customer 1"});
        universal_constants.add_row({"","Edit Customer 2"});
        universal_constants.add_row({"","Delete Customer 3"});
        universal_constants.add_row({"","View Customer 4"});
        universal_constants.add_row({"","Customer Invoices 5"});
        universal_constants.add_row({"","BACK 0"});

        universal_constants.format()
    .font_style({FontStyle::bold})
    .border_top(" ")
    .border_bottom(" ")
    .border_left(" ")
    .border_right(" ")
    .corner(" ");

universal_constants[0][0].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(30);
universal_constants[0][1].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(60)
    .font_background_color(Color::magenta);

universal_constants[1][0].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(30);
universal_constants[1][1].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .font_background_color(Color::green);

universal_constants[2][0].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(30);
universal_constants[2][1].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::underline})
    .font_style({FontStyle::bold})
    .font_background_color(Color::cyan);

universal_constants[3][0].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(30);
universal_constants[3][1].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(60)
    .font_background_color(Color::blue);

universal_constants[4][0].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(30);
universal_constants[4][1].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(60)
    .font_background_color(Color::yellow);

universal_constants[5][0].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(30);
universal_constants[5][1].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(60)
    .font_background_color(Color::red);

universal_constants[6][0].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(30);
universal_constants[6][1].format()
    .padding_top(1)
    .padding_bottom(1)
    .font_align(FontAlign::center)
    .font_style({FontStyle::bold})
    .width(60)
    .font_background_color(Color::cyan);




std::cout << universal_constants << std::endl;

cout<<"\t\t\t\t\t\t\t";

cin>>option;

system ("CLS");

switch(option){
    case 1:
        addCustomer();
        break;
    case 2:
        editCustomer();
        break;
    case 3:
        deleteCustomer();
        break;
    case 4:
        viewCustomer();
        break;
    case 5:
        cout<<"5 selected";
         break;
    case 0:
```

```
                return 10000000;
               break;

            default:
               cout<<"selected";
         }


         return option;
      }
```

OUTPUT:



```
"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

                    Please select an option:

                         Add Customer 1

                         Edit Customer 2

                        Delete Customer 3

                         View Customer 4

                       Customer Invoices 5

                             BACK 0
```

File Name: customerClash.h
Code:-

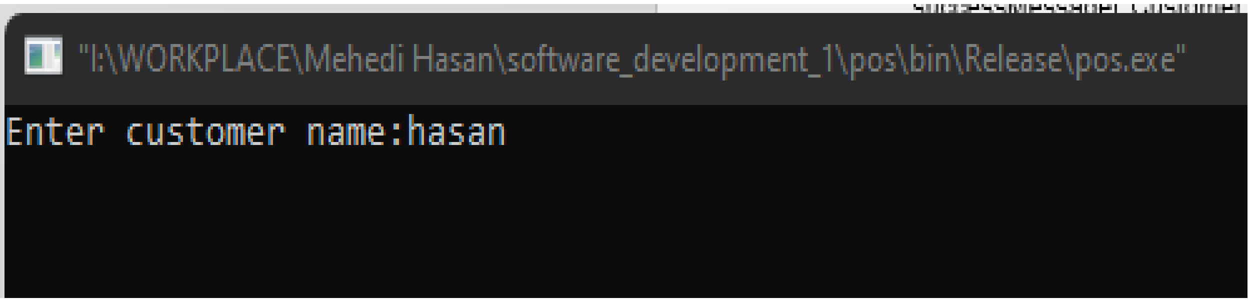
```
#include<iostream>
#include <string>
#include<stdlib.h>

using namespace std;


    struct Customer{
        int id;
        string email;
        string phone;
        string address;
        string date;
        string name;
        struct Customer *next;
    };

    typedef struct Customer customers;

    customers *startC = NULL;
```

File Name: addCustomer.h
Code:-

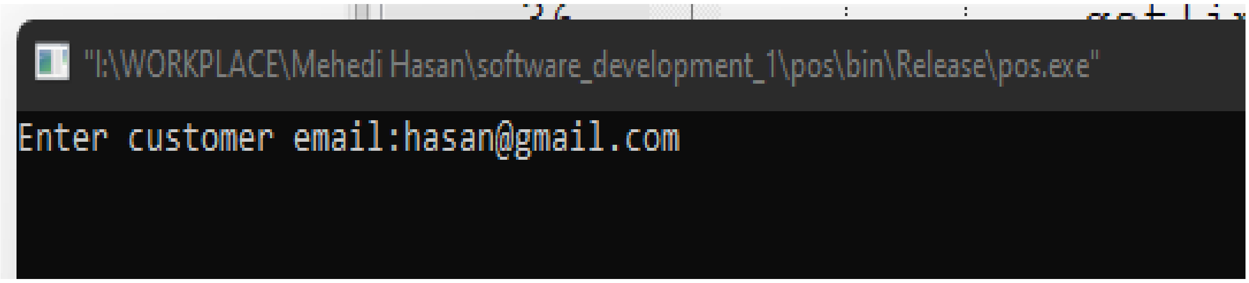
```
#include<iostream>
#include <stdlib.h>
#include <string>
#include <ctime>
#include "../../store.h"
//#include "customerClass.h"
#include "../../../tabulate/table.hpp"

  int currentCustomerId = 1;

  using namespace std;
  using namespace tabulate;


    customers *getCNode(){
      customers* newNode;

      newNode = (customers*) malloc(sizeof(customers));

      string nam;
      cout<<"Enter customer name:";
      getline(cin, nam);
      getline(cin, nam);
      newNode->name = nam;
      system ("CLS");


      cout<<"Enter customer email:";
      string email;
      getline(cin, email);
      newNode->email = email;
      system ("CLS");

      cout<<"Enter customer phone:";
      string phone;
      getline(cin, phone);
      newNode->phone = phone;
      system ("CLS");

      cout<<"Enter customer address:";
      string address;
      getline(cin, address);
      newNode->address = address;
      system ("CLS");
```

```
            time_t now = time(0);
            char* dt = ctime(&now);
            newNode->date = dt;
            newNode->id = currentCustomerId;


            newNode->next = NULL;

            return newNode;

        }

    void addCustomer(){


        customers *newNode;
        customers *temp;
        newNode = getCNode();
        currentCustomerId++;

        Table movies;
        movies.add_row({"Id", "Name", "Email", "phone","Address", "Date"});
        movies.add_row({to_string(newNode->id), newNode->name, newNode->email, newNode->phone, newNode->address, newNode->date});

        for (size_t i = 0; i < 6; ++i) {
            movies[0][i].format()
                .font_color(Color::yellow)
                .font_align(FontAlign::center)
                .font_style({FontStyle::bold});

                movies[1][i].format()
                .font_color(Color::cyan)
                .font_align(FontAlign::center)
                .font_style({FontStyle::bold});
        }


        if(startC == NULL){

            startC = newNode;
            std::cout << movies << std::endl;
            successMessage("Customer added successfully.");
        }else{

            temp = startC;
            while(temp->next != NULL){
                temp = temp->next;
            }

            temp->next = newNode;
            std::cout << movies << std::endl;
            successMessage("Customer added successfully.");
        }


    }
```

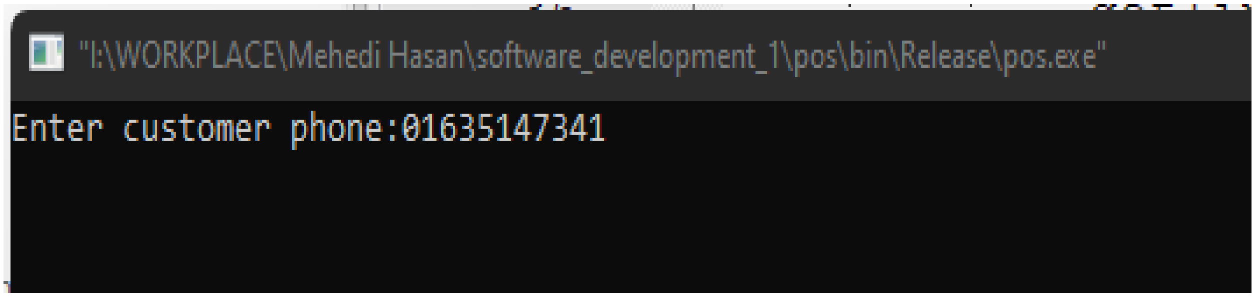
OUTPUT:


"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

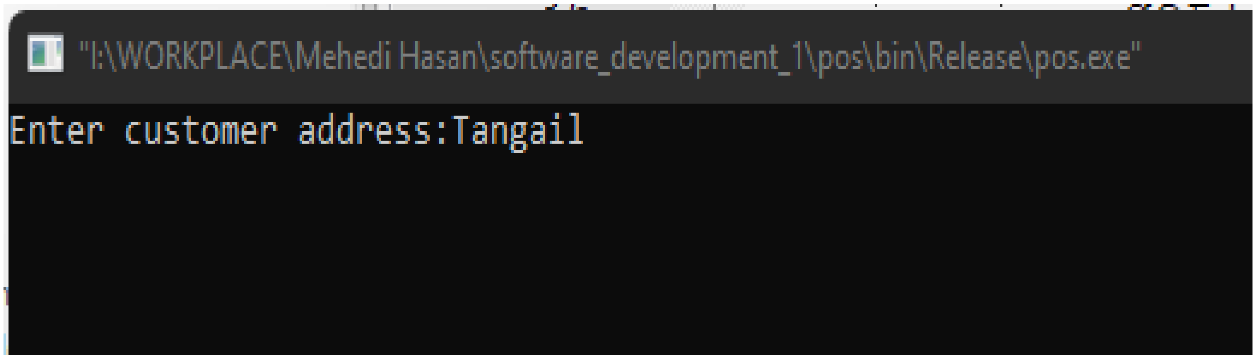
```
Enter customer name:hasan
```


"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

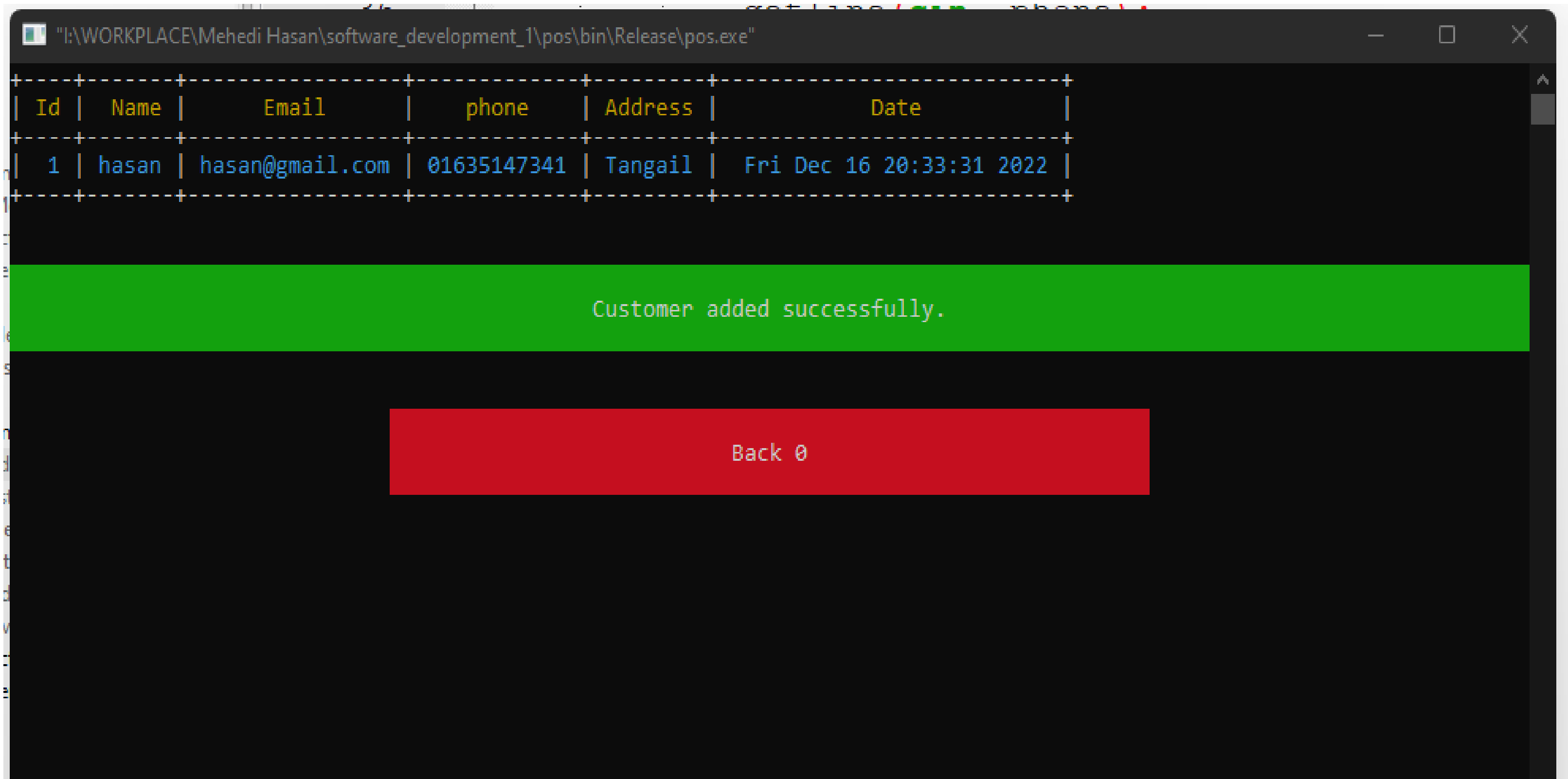
```
Enter customer email:hasan@gmail.com
```


"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
Enter customer phone:01635147341
```


"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
Enter customer address:Tangail
```


"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

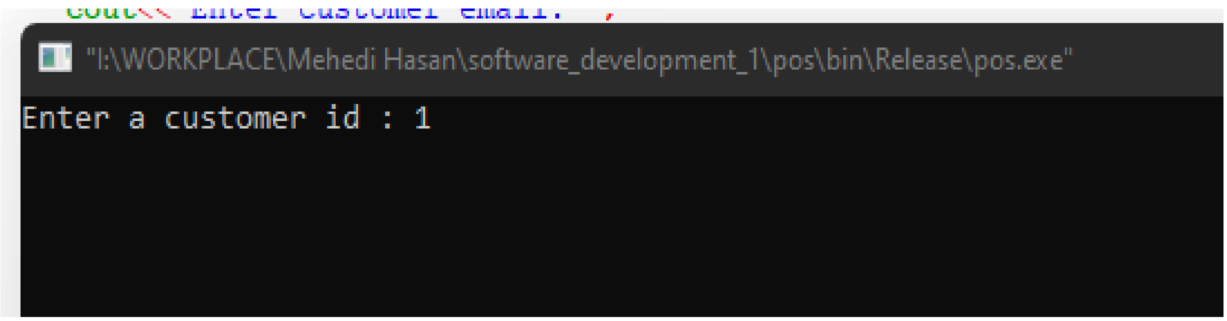
```
+----+-------+-----------------+-------------+---------+--------------------------+
| Id |  Name |      Email      |    phone    | Address |           Date           |
+----+-------+-----------------+-------------+---------+--------------------------+
|  1 | hasan | hasan@gmail.com | 01635147341 | Tangail |  Fri Dec 16 20:33:31 2022 |
+----+-------+-----------------+-------------+---------+--------------------------+

                            Customer added successfully.

                                      Back 0
```

File Name: editCustomer.h
Code:-

```
#include<iostream>
#include "../../../tabulate/table.hpp"

    using namespace std;
    using namespace tabulate;

    void editCustomer(){
        int customerId;

        viewCustomer();

        cout<<"Enter a supplier id : ";
        cin>>customerId;
        system ("CLS");

        customers* EC = findCustomer(customerId);

            cout<<"Current supplier name : ->[ " <<EC->name <<" ]" <<endl;
            string nam;
            cout<<"Enter supplier name:";
            getline(cin, nam);
            getline(cin, nam);
            EC->name = nam;
            system ("CLS");

            cout<<"Current supplier email : ->[ " <<EC->email <<" ]" <<endl;
            cout<<"Enter supplier email: ";
            string email;
            getline(cin, email);
            EC->email = email;
            system ("CLS");

            cout<<"Current supplier phone : ->[ " <<EC->phone <<" ]" <<endl;
            cout<<"Enter supplier phone: ";
            string phone;
            getline(cin, phone);
            EC->phone = phone;
```

```
      system ("CLS");

      cout<<"Current supplier address : ->[ " <<EC->address <<" ]" <<endl;
      cout<<"Enter supplier address: ";
      string address;
      getline(cin, address);
      EC->address = address;
      system ("CLS");

    Table movies;
    movies.add_row({"Id", "Name", "Email", "phone", "Address", "Date"});
    movies.add_row({to_string(EC->id), EC->name, EC->email, EC->phone, EC->address,
EC->date});

    for (size_t i = 0; i < 6; ++i) {
      movies[0][i].format()
        .font_color(Color::yellow)
        .font_align(FontAlign::center)
        .font_style({FontStyle::bold});

        movies[1][i].format()
        .font_color(Color::cyan)
        .font_align(FontAlign::center)
        .font_style({FontStyle::bold});
    }

    std::cout << movies << std::endl;
    successMessage("Customer update successfully.");

  }
```

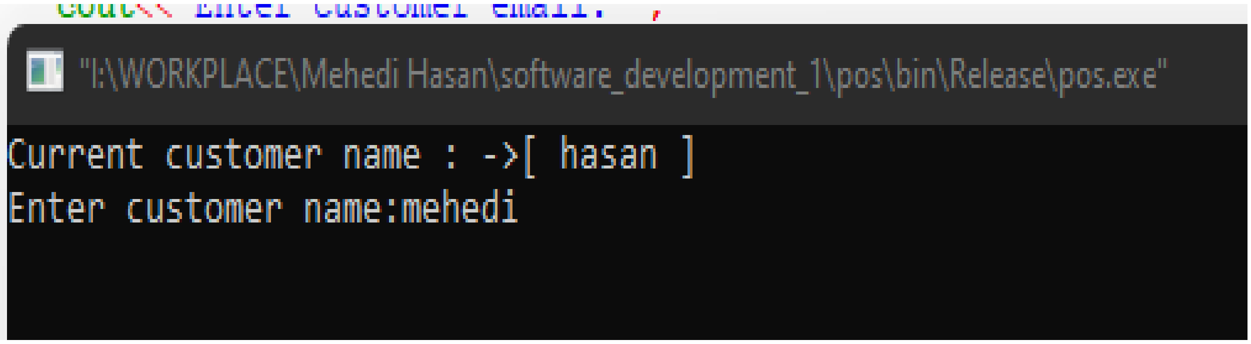
OUTPUT:



```
cout<<"Enter customer email: ";
```

"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

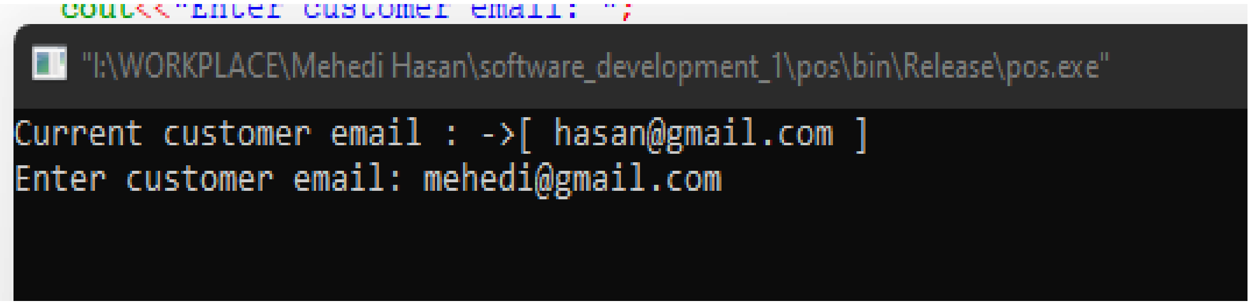
```
Enter a customer id : 1
```



```
cout<<"Enter customer email: ";
```

"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

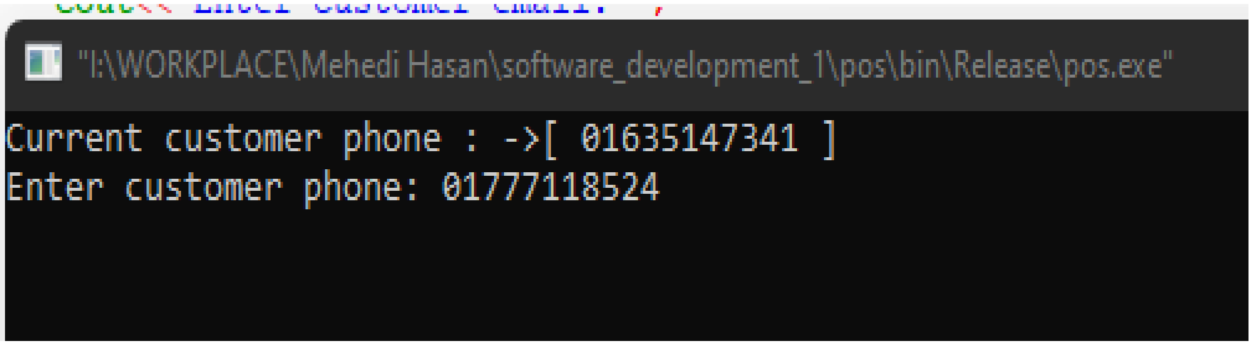
```
Current customer name : ->[ hasan ]
Enter customer name:mehedi
```



```
cout<<"Enter customer email: ";
```

"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

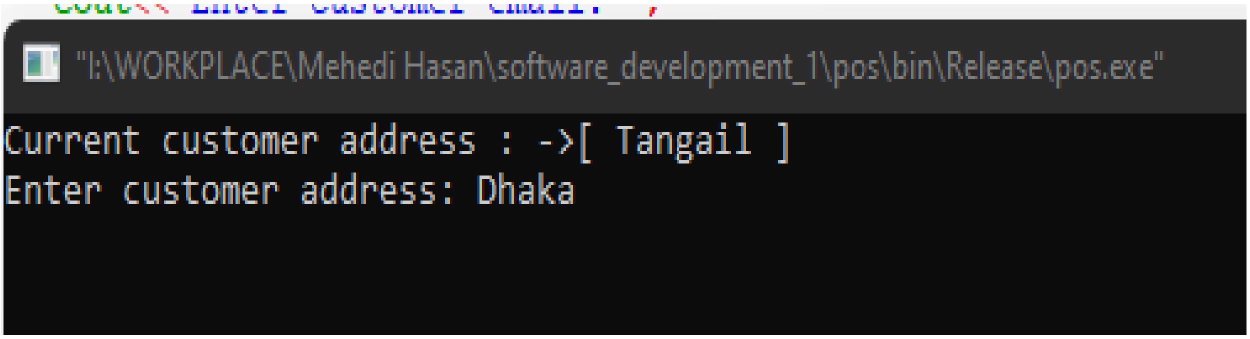
```
Current customer email : ->[ hasan@gmail.com ]
Enter customer email: mehedi@gmail.com
```



```
cout<<"Enter customer email: ";
```

"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

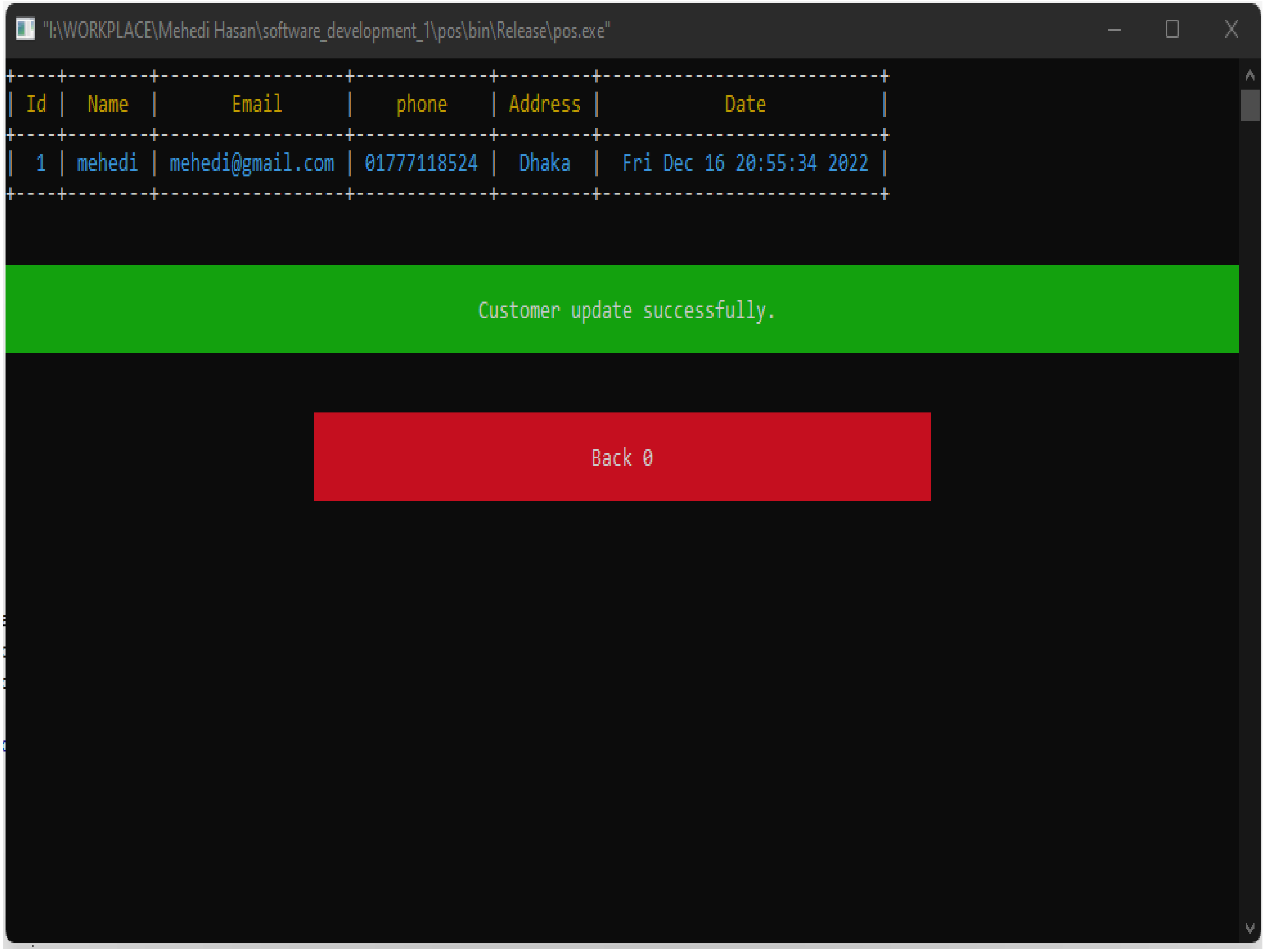
```
Current customer phone : ->[ 01635147341 ]
Enter customer phone: 01777118524
```



```
cout<<"Enter customer email: ";
```

"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
Current customer address : ->[ Tangail ]
Enter customer address: Dhaka
```


"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
+----+--------+-----------------+------------+---------+--------------------------+
| Id |  Name  |      Email      |   phone    | Address |           Date           |
+----+--------+-----------------+------------+---------+--------------------------+
|  1 | mehedi | mehedi@gmail.com | 01777118524 |  Dhaka  |  Fri Dec 16 20:55:34 2022 |
+----+--------+-----------------+------------+---------+--------------------------+


                    Customer update successfully.


                              Back 0
```

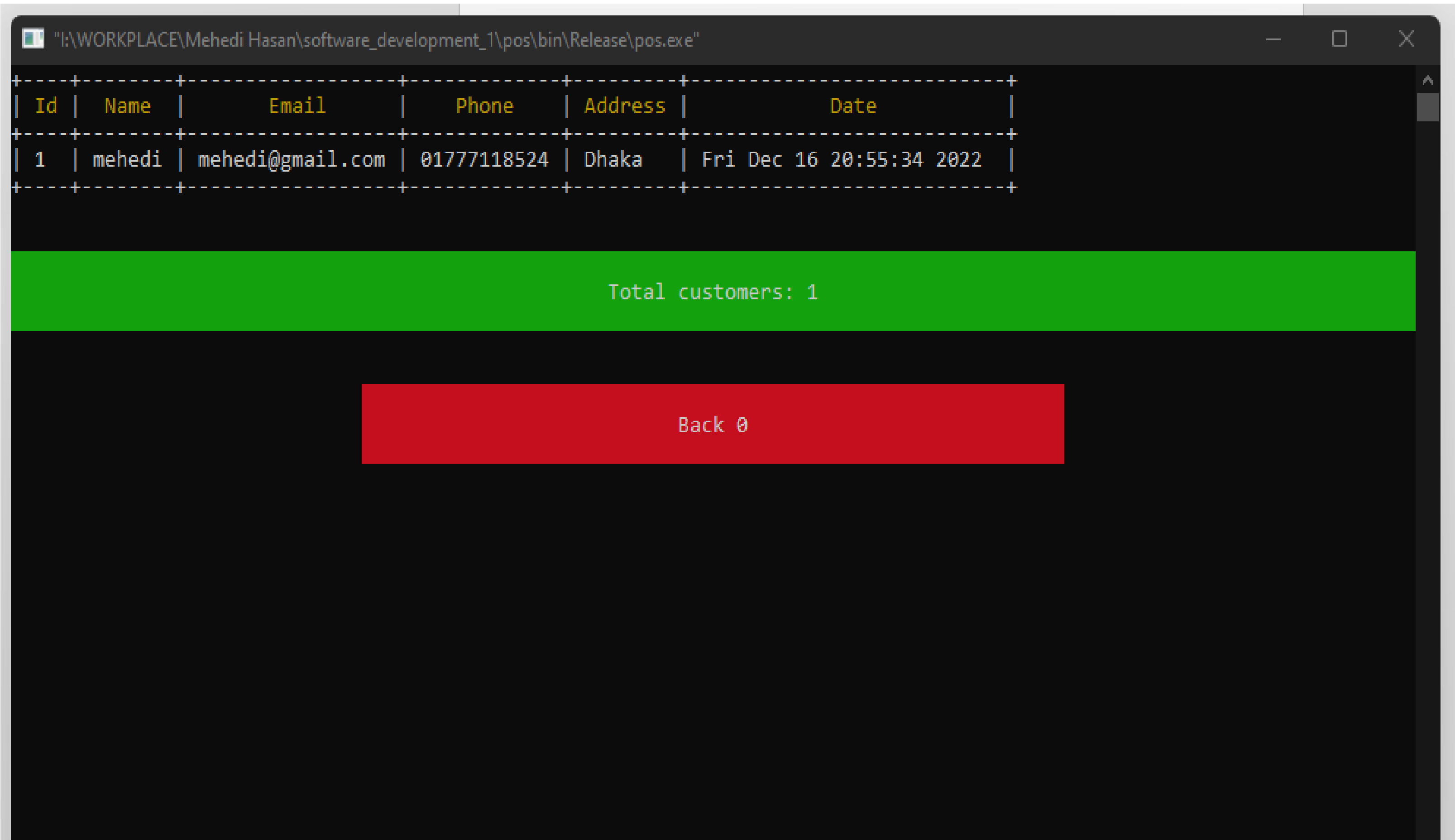
File Name: viewCustomer.h
Code:-

```
#include <iostream>
#include "../../../tabulate/table.hpp"
using namespace std;
using namespace tabulate;

    void viewCustomer(){

        customers *dataC = startC;

        Table movies;
        movies.add_row({"Id", "Name", "Email", "Phone","Address", "Date"});

        for (size_t i = 0; i < 6; ++i) {
            movies[0][i].format()
                .font_color(Color::yellow)
                .font_align(FontAlign::center)
                .font_style({FontStyle::bold});

        }

        int n = 0;
        string total ;
        while(dataC != NULL){
            n++;
            movies.add_row({to_string(dataC->id), dataC->name, dataC->email, dataC->phone,
dataC->address, dataC->date});

            dataC = dataC->next;
        }

        std::cout << movies << std::endl;
        total = "Total customers: " + to_string(n);
        successMessage(total);

    }
```

File Name: findCustomer.h
Code:-

```
#include<iostream>
#include "customerClass.h"
using namespace std;

    customers *findCustomer(int id){
        customers *dataFC = startC;

        while(dataFC != NULL){
            if(dataFC->id == id){
                return(dataFC);
            }
            dataFC = dataFC->next;
        }
        return(NULL);
    }
```

OUTPUT:



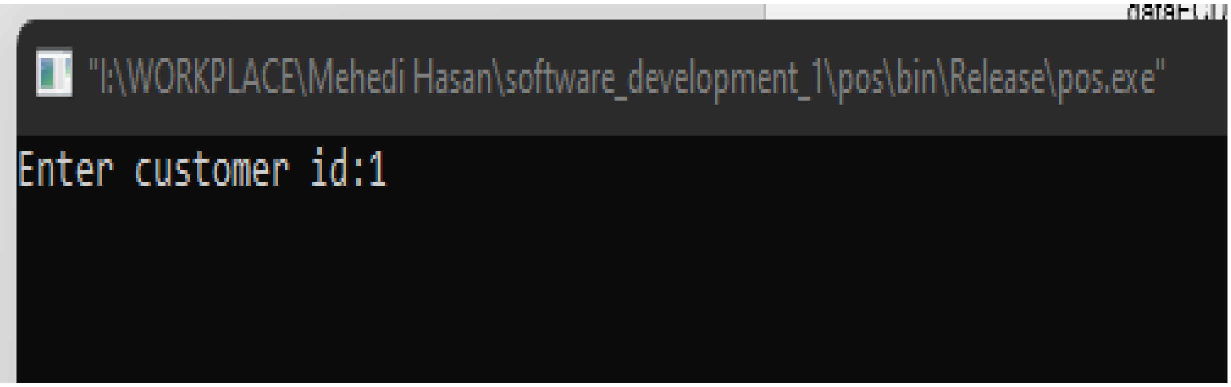
"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
+----+--------+------------------+-------------+---------+--------------------------+
| Id |  Name  |      Email       |    Phone    | Address |           Date           |
+----+--------+------------------+-------------+---------+--------------------------+
| 1  | mehedi | mehedi@gmail.com | 01777118524 | Dhaka   | Fri Dec 16 20:55:34 2022 |
+----+--------+------------------+-------------+---------+--------------------------+


                                    Total customers: 1


                                         Back 0
```

File Name: deleteCustomer.h
Code:-

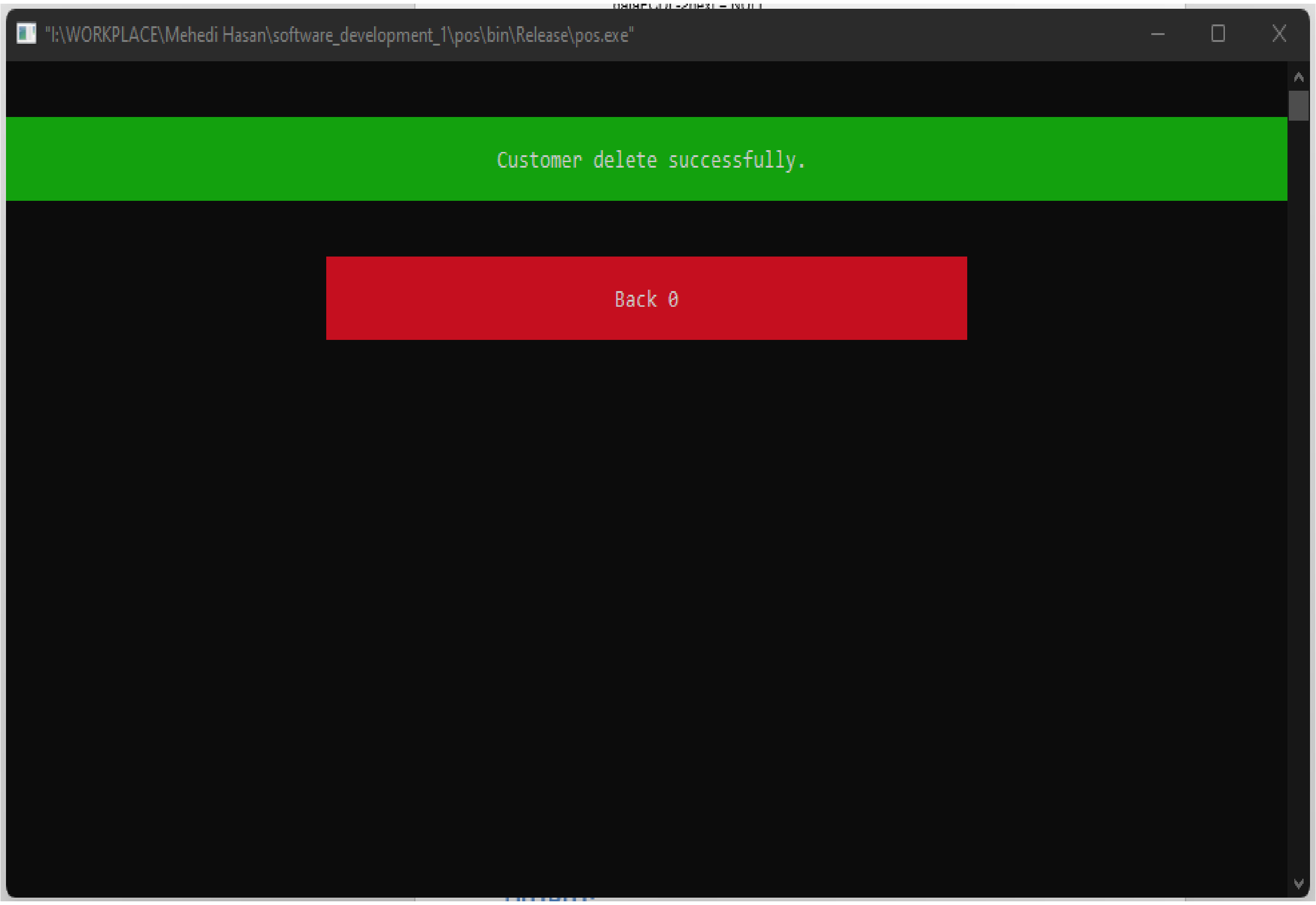
```
#include<iostream>
#include "../../../tabulate/table.hpp"

    using namespace std;
    using namespace tabulate;

        void deleteCustomer(){

        viewCustomer();
        int id;
        cout<< "Enter customer id:";
        cin>>id;
        system ("CLS");

        customers *dataFCDL = startC;
        customers *dataFCDL2;
        customers *dataFCDL3;

        if(startC->id == id && startC->next == NULL){
            free(startC);
            startC = NULL;
            successMessage("Customer delete successfully.");
        }else{
            if(startC->id == id ){
                free(startC);
                startC = dataFCDL->next;
                successMessage("Customer delete successfully.");
            }else{

                while(dataFCDL != NULL){
                    if(dataFCDL->next->id == id){
                        if(dataFCDL->next->next == NULL){
                            dataFCDL2 = dataFCDL->next->next;
                            free(dataFCDL2);
                            dataFCDL->next = NULL;
                            successMessage("Customer delete successfully.");
                            break;
                        }else{
                            dataFCDL2 = dataFCDL->next->next;
                            dataFCDL3 = dataFCDL->next;
                            free(dataFCDL3);
                            dataFCDL->next = dataFCDL2;
                            successMessage("Customer delete successfully.");
                            break;
                        }
                    }
                    dataFCDL = dataFCDL->next;

                }


            }

        }

    }
```

OUTPUT:



"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
Enter customer id:1
```


"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"
Back 0

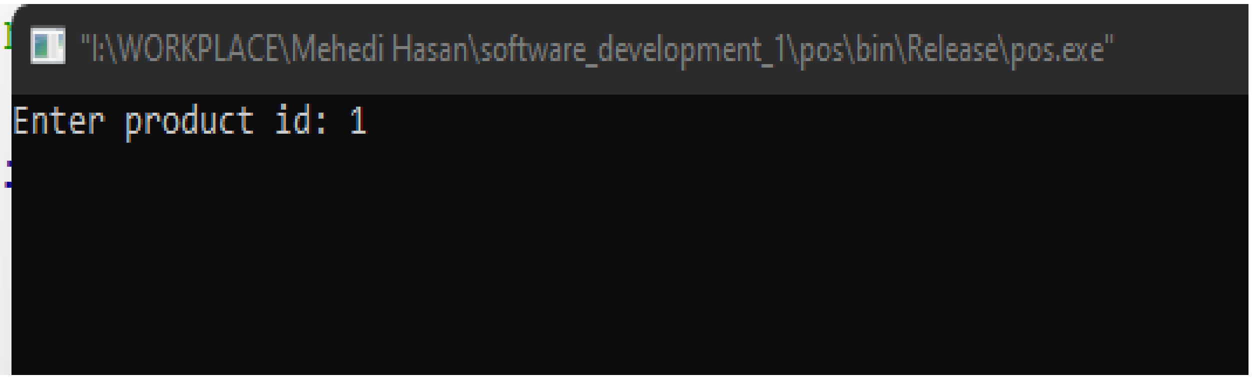
```
Customer delete successfully.
```

File Name: buyProduct.h
Code:-

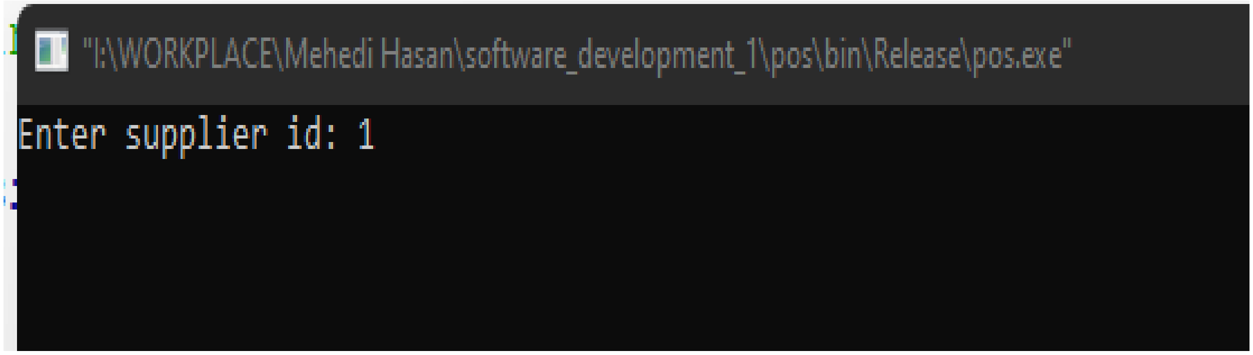
```
#include<iostream>
#include <stdlib.h>
#include "findProduct.h"
#include "../supplier/findSupplier.h"
#include "../supplier/viewSupplier.h"
#include "../../../tabulate/table.hpp"

using namespace std;
    using namespace tabulate;


    int currentBuyProductId = 1;

    struct buyProductList{
        int id;
        int productId;
        int supplierId;
        int purchasePrice;
        int totalPrice;
        int quantity;
        string date;
        string productName;
        string supplierName;
        struct buyProductList *next;
    };

    typedef struct buyProductList buyProducts;

    buyProducts *startB = NULL;


    buyProducts *getBNode(){

        buyProducts* newNode;
        newNode = (buyProducts*) malloc(sizeof(buyProducts));
    int productId;
    viewProduct();
    cout<<"Enter product id: ";
    cin>>productId;
    products* p = findProduct(productId);
    newNode->productId = p->id;
    newNode->productName = p->name;
    newNode->purchasePrice = p->purchasePrice;
    system ("CLS");



    int supplierId;
    viewSupplier();
    cout<<"Enter supplier id: ";
    cin>>supplierId;
    suppliers* s = findSupplier(supplierId);
    newNode->supplierId = s->id;
    newNode->supplierName = s->name;
    system ("CLS");

    cout<<"Enter product quantity: ";
    int quantity;
    cin>>quantity;
    newNode->quantity  = quantity;
    p->inStock = p->inStock + quantity;
    system ("CLS");

    time_t now = time(0);
    char* dt = ctime(&now);
    newNode->date = dt;
    newNode->id = currentBuyProductId;
    newNode->totalPrice = quantity * p->purchasePrice;


    newNode->next = NULL;

    return newNode;

}



void buyProduct(){
        buyProducts *newNode;
        buyProducts *temp;
        newNode =  getBNode();
        currentBuyProductId++;

        Table movies;
        movies.add_row({"Id", "PId", "PName", "SId", "SName", "Purchase Price", "Quantity", "Total Price", "Date"});
        movies.add_row({to_string(newNode->id), to_string(newNode->productId), newNode->productName, to_string(newNode->supplierId), newNode->supplierName, to_string(newNode->purchasePrice), to_string(newNode->quantity), to_string(newNode->totalPrice), newNode->date});

        for (size_t i = 0; i < 7; ++i) {
            movies[0][i].format()
                .font_color(Color::yellow)
                .font_align(FontAlign::center)
                .font_style({FontStyle::bold});

                movies[1][i].format()
                .font_color(Color::cyan)
                .font_align(FontAlign::center)
                .font_style({FontStyle::bold});
        }


        if(startB == NULL){

            startB = newNode;
            std::cout << movies << std::endl;
            successMessage("Product buy successfully.");

        }else{

            temp = startB;
            while(temp->next != NULL){
                temp = temp->next;
            }

            temp->next = newNode;
            std::cout << movies << std::endl;
            successMessage("Product buy successfully.");
        }
```

```
}
```

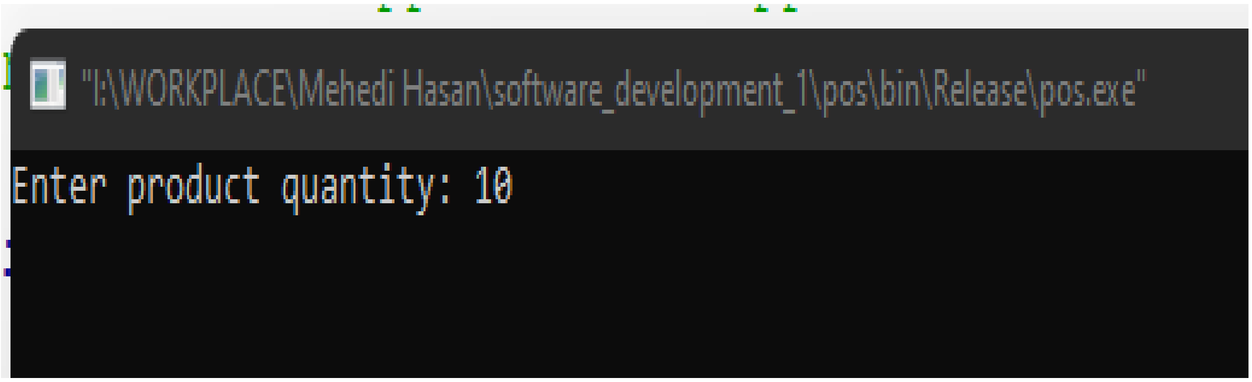
OUTPUT:


"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

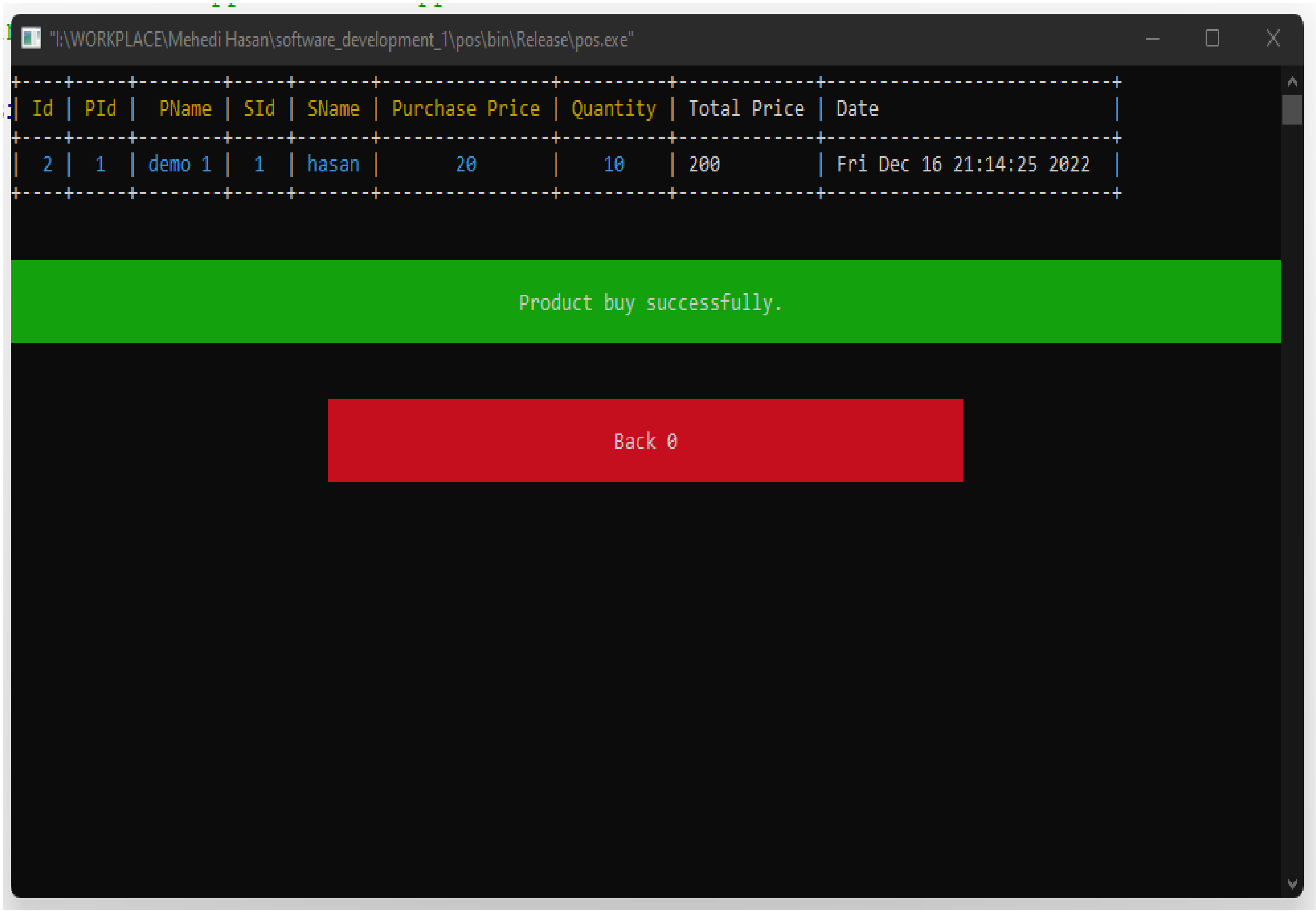
```
Enter product id: 1
```


"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
Enter supplier id: 1
```


"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
Enter product quantity: 10
```



"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
+----+-----+--------+-----+-------+----------------+----------+-------------+---------------------------+
| Id | PId |  PName | SId | SName | Purchase Price | Quantity | Total Price | Date                      |
+----+-----+--------+-----+-------+----------------+----------+-------------+---------------------------+
|  2 |  1  | demo 1 |  1  | hasan |       20       |    10    | 200         | Fri Dec 16 21:14:25 2022  |
+----+-----+--------+-----+-------+----------------+----------+-------------+---------------------------+


                                   Product buy successfully.


                                            Back 0
```

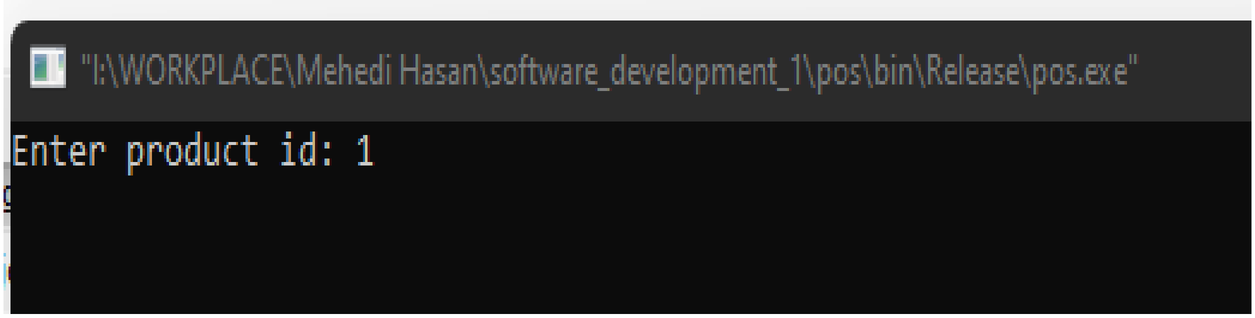
File Name: saleProduct.h

Code:-

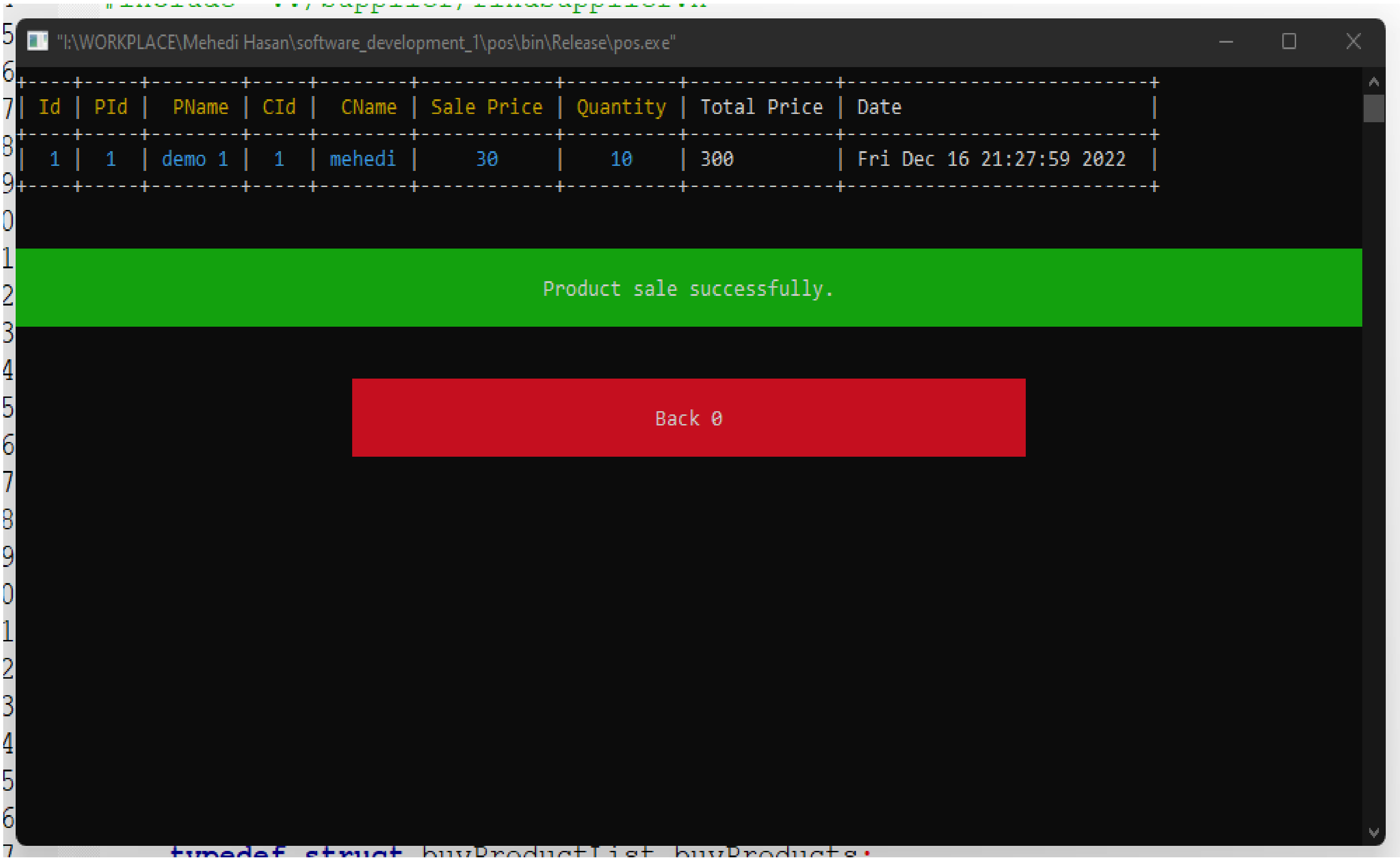
```
#include<iostream>
#include <stdlib.h>
//#include "findProduct.h"
#include "../customer/findCustomer.h"
#include "../customer/viewCustomer.h"
#include "../../../tabulate/table.hpp"

using namespace std;
    using namespace tabulate;


    int currentSaleProductId = 1;

    struct saleProductList{
        int id;
        int productId;
        int customerId;
        int salePrice;
        int totalPrice;
        int quantity;
        string date;
        string customerName;
        string productName;
        struct saleProductList *next;
    };

    typedef struct saleProductList saleProducts;

    saleProducts *startPS = NULL;


    saleProducts *getPSNode(){

        saleProducts* newNode;
        newNode = (saleProducts*) malloc(sizeof(saleProducts));


        int productId;
    viewProduct();
    cout<<"Enter product id: ";
    cin>>productId;
    products* p2 = findProduct(productId);
    newNode->productId = p2->id;
    newNode->productName = p2->name;
    newNode->salePrice = p2->salePrice;
    system ("CLS");



    int customerId;
    viewCustomer();
    cout<<"Enter customer id: ";
    cin>>customerId;
    customers* pc = findCustomer(customerId);
    newNode->customerId = pc->id;
    newNode->customerName = pc->name;
    system ("CLS");

    cout<<"Enter product quantity: ";
    int quantity;
    cin>>quantity;
    newNode->quantity  = quantity;
    p2->inStock = p2->inStock - quantity;
    system ("CLS");

    time_t now = time(0);
    char* dt = ctime(&now);
    newNode->date = dt;
    newNode->id = currentSaleProductId;
    newNode->totalPrice = quantity * p2->salePrice;


    newNode->next = NULL;

    return newNode;

}



void saleProduct(){
        saleProducts *newNode;
        saleProducts *temp;
        newNode =  getPSNode();
        currentSaleProductId++;

        Table movies;
        movies.add_row({"Id", "PId", "PName", "CId", "CName", "Sale Price", "Quantity", "Total Price", "Date"});
        movies.add_row({to_string(newNode->id), to_string(newNode->productId), newNode->productName, to_string(newNode->customerId), newNode->customerName, to_string(newNode->salePrice), to_string(newNode->quantity), to_string(newNode->totalPrice), newNode->date});

        for (size_t i = 0; i < 7; ++i) {
            movies[0][i].format()
                .font_color(Color::yellow)
                .font_align(FontAlign::center)
                .font_style({FontStyle::bold});

                movies[1][i].format()
                .font_color(Color::cyan)
                .font_align(FontAlign::center)
                .font_style({FontStyle::bold});
        }


        if(startPS == NULL){

            startPS = newNode;
            std::cout << movies << std::endl;
            successMessage("Product sale successfully.");

        }else{

            temp = startPS;
            while(temp->next != NULL){
                temp = temp->next;
            }

            temp->next = newNode;
            std::cout << movies << std::endl;
            successMessage("Product sale successfully.");
        }
```

```
}
```

OUTPUT:


"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
Enter product id: 1
```

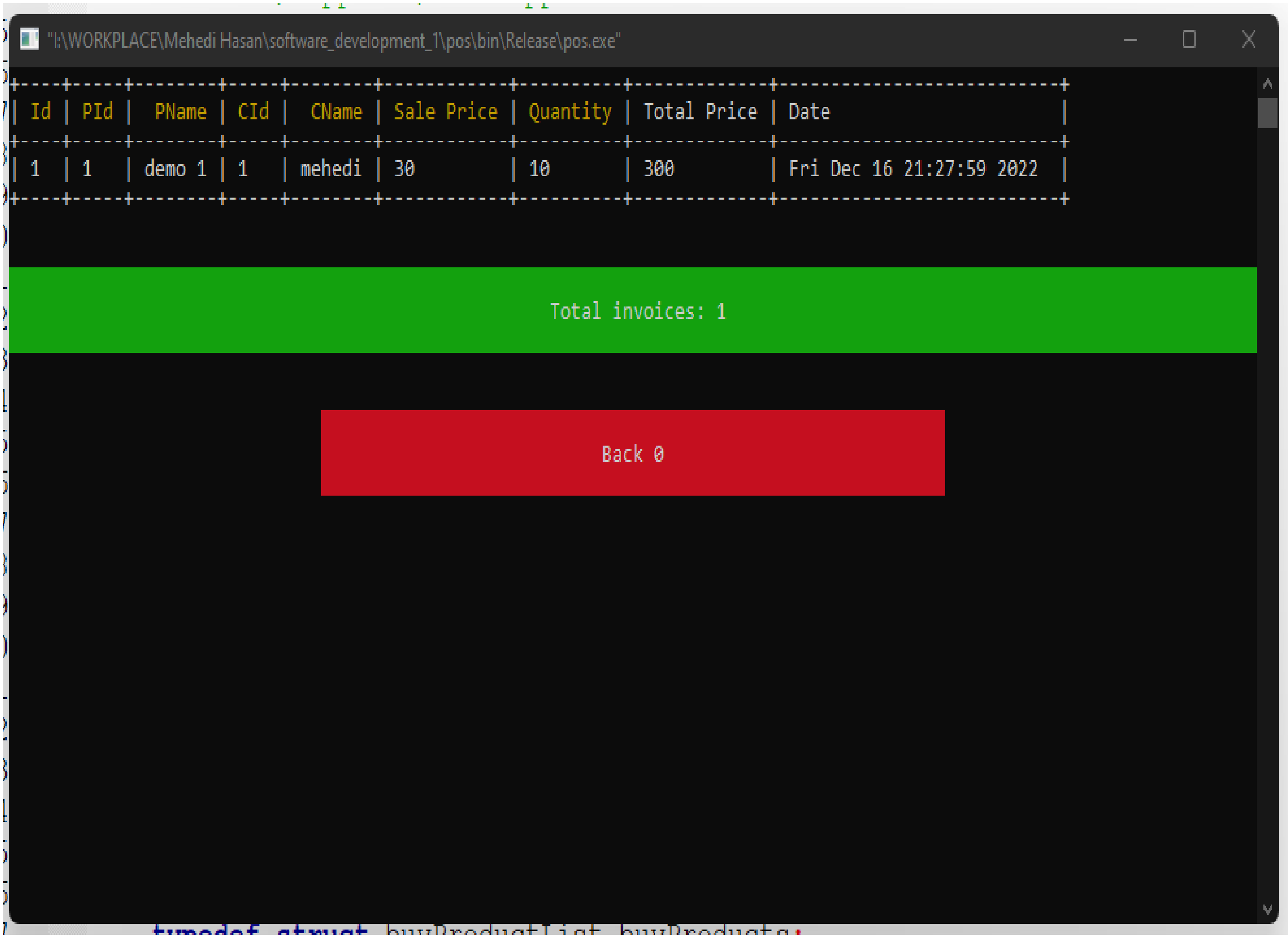

"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
+----+-----+--------+-----+--------+------------+----------+-------------+--------------------------+
| Id | PId |  PName | CId |  CName | Sale Price | Quantity | Total Price | Date                     |
+----+-----+--------+-----+--------+------------+----------+-------------+--------------------------+
| 1  |  1  | demo 1 |  1  | mehedi |     30     |    10    | 300         | Fri Dec 16 21:27:59 2022 |
+----+-----+--------+-----+--------+------------+----------+-------------+--------------------------+

                              Product sale successfully.

                                        Back 0
```

File Name: viewSale.h
Code:-

```
#include <iostream>
#include "../../../tabulate/table.hpp"
using namespace std;
using namespace tabulate;

    void viewSale(){

        saleProducts *dataPS1 = startPS;

        Table movies;
        movies.add_row({"Id", "PId", "PName", "CId", "CName", "Sale Price", "Quantity", "Total
Price", "Date"});

        for (size_t i = 0; i < 7; ++i) {
            movies[0][i].format()
                .font_color(Color::yellow)
                .font_align(FontAlign::center)
                .font_style({FontStyle::bold});
        }

        int nn = 0;
       string total ;
        while(dataPS1 != NULL){
            nn++;
            movies.add_row({to_string(dataPS1->id), to_string(dataPS1->productId), dataPS1-
>productName, to_string(dataPS1->customerId), dataPS1->customerName, to_string(dataPS1-
>salePrice), to_string(dataPS1->quantity), to_string(dataPS1->totalPrice), dataPS1->date});
            //cout<<dataPS1->customerName <<"--";
            dataPS1 = dataPS1->next;
        }

        std::cout << movies << std::endl;
        total = "Total invoices: " + to_string(nn);
        successMessage(total);

    }
```

OUTPUT:


"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

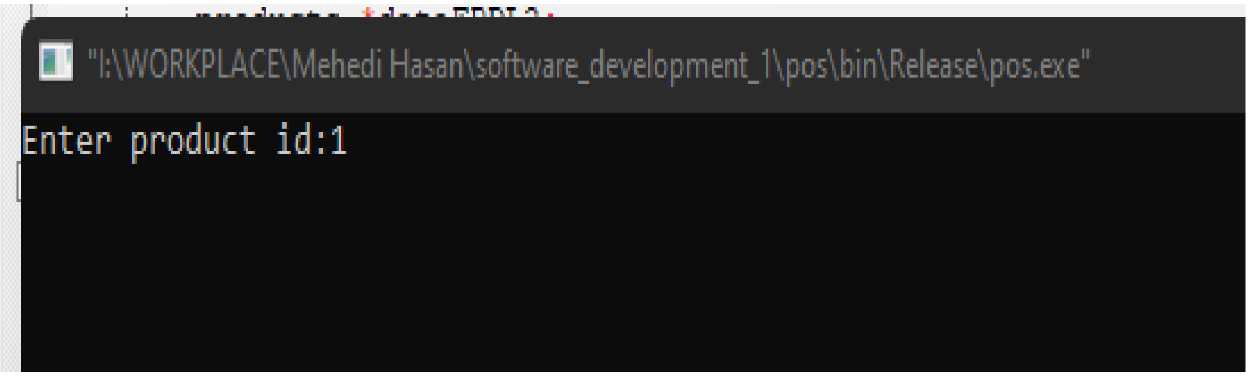
```
+----+-----+--------+-----+--------+-----------+---------+------------+-------------------------+
| Id | PId |  PName | CId |  CName | Sale Price | Quantity | Total Price | Date                    |
+----+-----+--------+-----+--------+-----------+---------+------------+-------------------------+
| 1  | 1   | demo 1 | 1   | mehedi | 30         | 10       | 300         | Fri Dec 16 21:27:59 2022 |
+----+-----+--------+-----+--------+-----------+---------+------------+-------------------------+


                              Total invoices: 1


                                    Back 0
```

File Name: deleteProduct.h

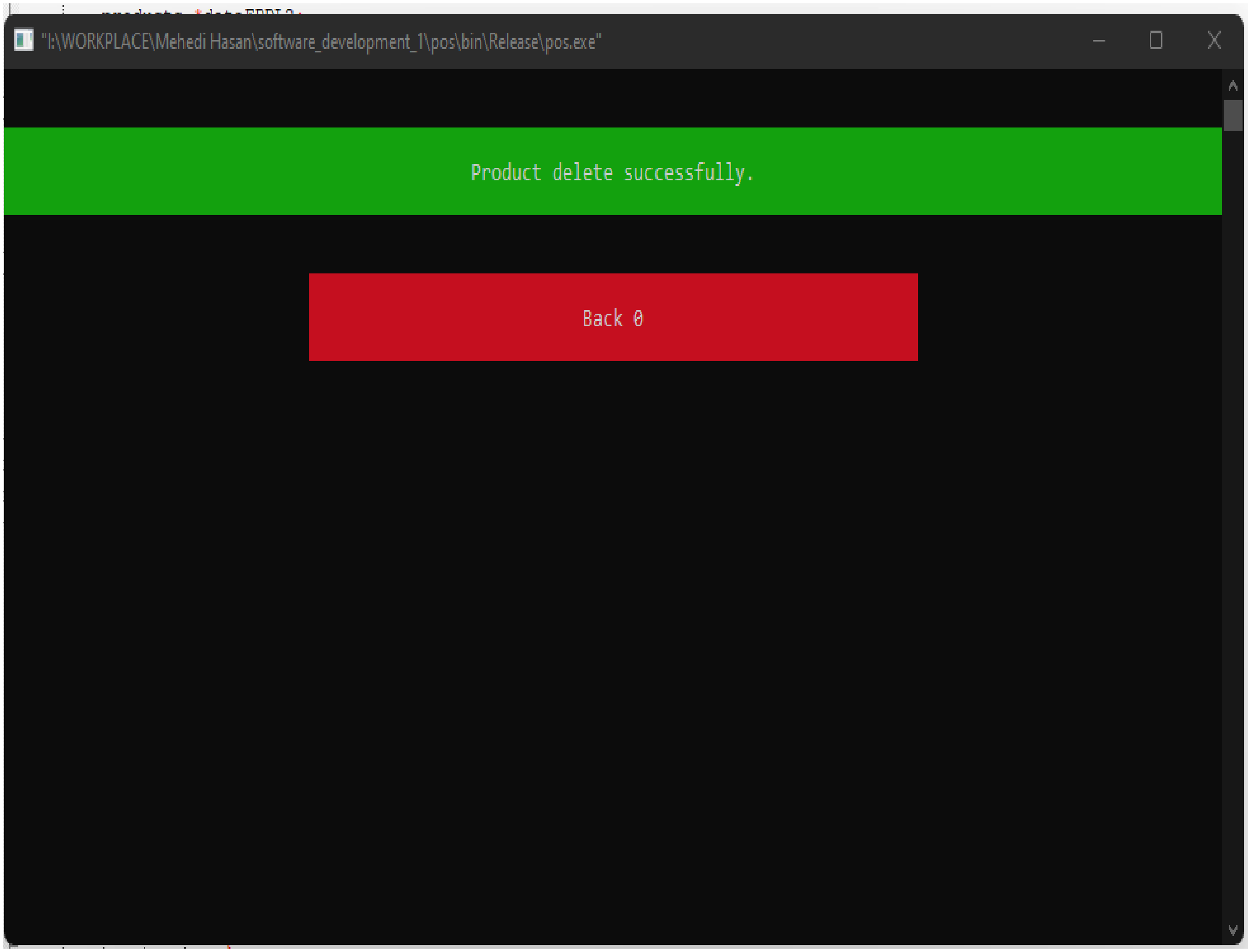
Code:-

```
#include<iostream>
#include "../../../tabulate/table.hpp"

    using namespace std;
    using namespace tabulate;

        void deleteProduct(){

        viewProduct();
        int id;
        cout<< "Enter product id:";
        cin>>id;
        system ("CLS");

        products *dataFPDL = start;
        products *dataFPDL2;
        products *dataFPDL3;

        if(start->id == id && start->next == NULL){
            free(start);
            start = NULL;
            successMessage("Product delete successfully.");
        }else{
            if(start->id == id ){
                free(start);
                start = dataFPDL->next;
                successMessage("Product delete successfully.");
            }else{

                while(dataFPDL != NULL){
                    if(dataFPDL->next->id == id){
                        if(dataFPDL->next->next == NULL){
                            dataFPDL2 = dataFPDL->next->next;
                            free(dataFPDL2);
                            dataFPDL->next = NULL;
                            successMessage("Product delete successfully.");
                            break;
                        }else{
                            dataFPDL2 = dataFPDL->next->next;
                            dataFPDL3 = dataFPDL->next;
                            free(dataFPDL3);
                            dataFPDL->next = dataFPDL2;
                            successMessage("Product0 delete successfully.");
                            break;
                        }
                    }
                    dataFPDL = dataFPDL->next;

                }


            }

        }

    }
```

OUTPUT:



```
"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"
Enter product id:1
```



"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

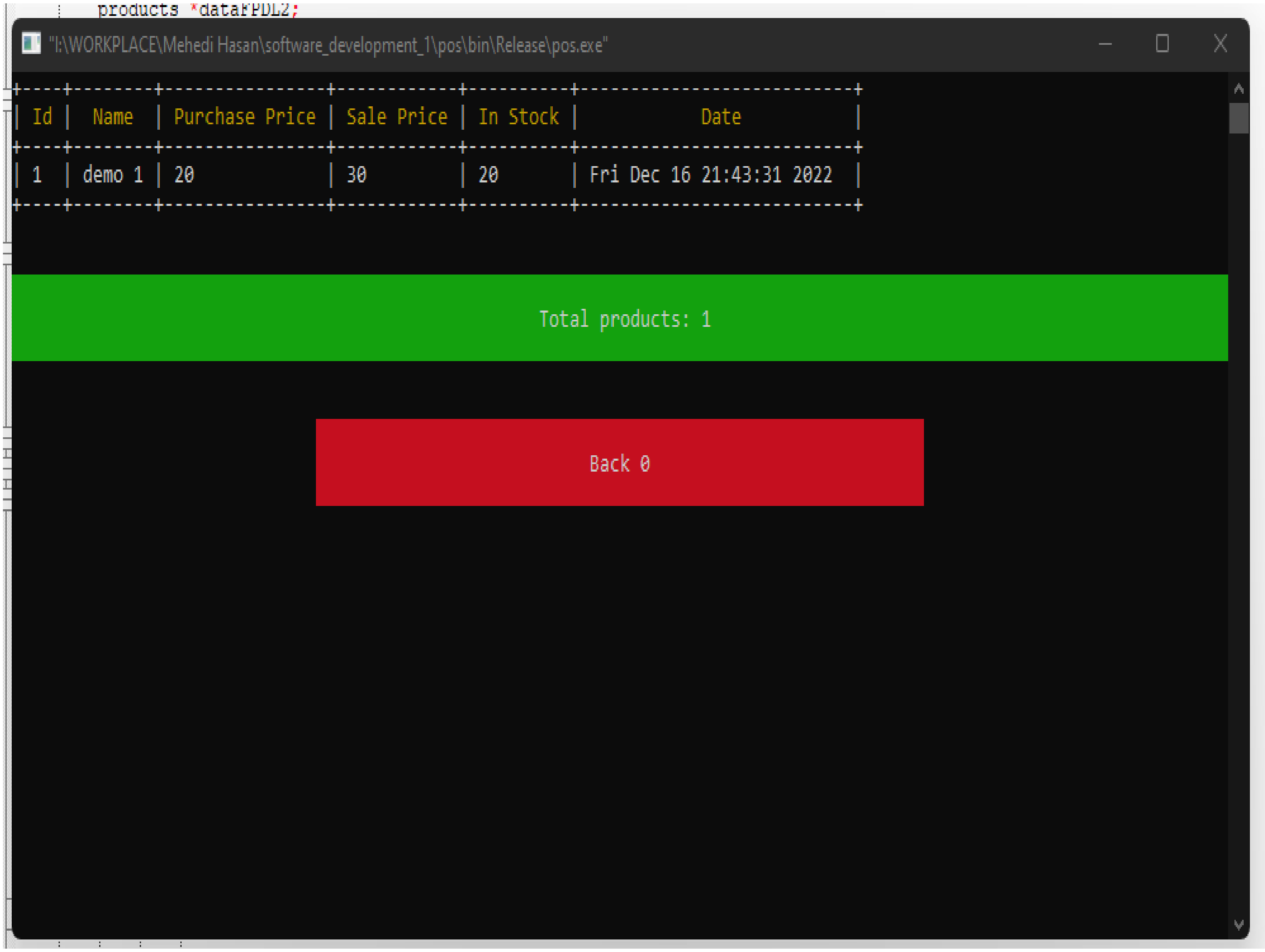
```
Product delete successfully.

Back 0
```

File Name: viewProduct.h

Code:-

```
#include <iostream>
#include "../../../tabulate/table.hpp"
using namespace std;
using namespace tabulate;

    void viewProduct(){

        products *dataP = start;

        Table movies;
        movies.add_row({"Id", "Name", "Purchase Price", "Sale Price","In Stock", "Date"});

        for (size_t i = 0; i < 6; ++i) {
            movies[0][i].format()
                .font_color(Color::yellow)
                .font_align(FontAlign::center)
                .font_style({FontStyle::bold});

        }

        int n = 0;
        string total ;
        while(dataP != NULL){
            n++;
            movies.add_row({to_string(dataP->id), dataP->name, to_string(dataP->purchasePrice),
to_string(dataP->salePrice),to_string(dataP->inStock), dataP->date});

            dataP = dataP->next;
        }

        std::cout << movies << std::endl;
        total = "Total products: " + to_string(n);
        successMessage(total);

    }
```

OUTPUT:



products *dataFPDL2;

"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

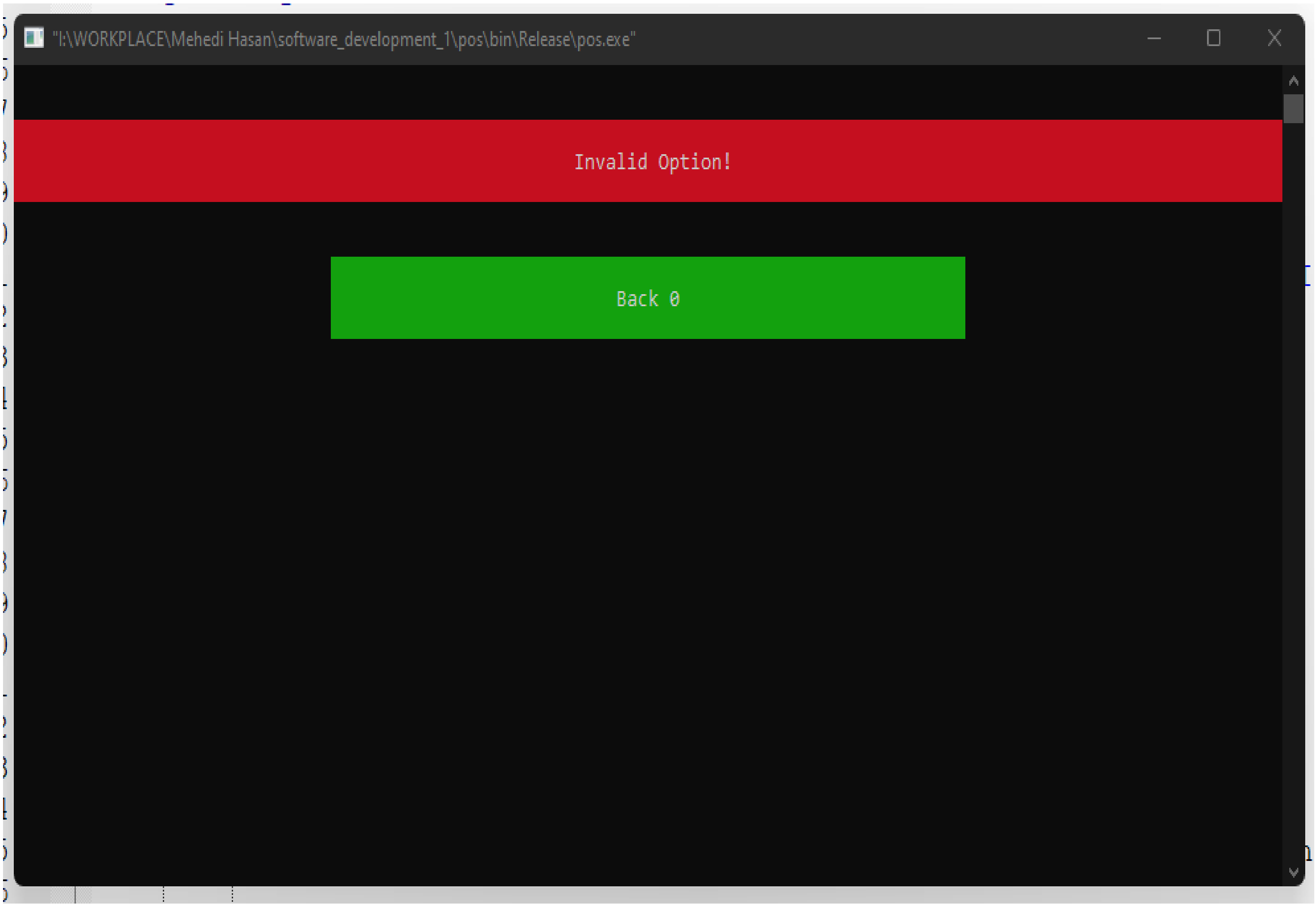
```
+----+--------+---------------+------------+----------+--------------------------+
| Id |  Name  | Purchase Price | Sale Price | In Stock |           Date           |
+----+--------+---------------+------------+----------+--------------------------+
| 1  | demo 1 | 20            | 30         | 20       | Fri Dec 16 21:43:31 2022  |
+----+--------+---------------+------------+----------+--------------------------+

                              Total products: 1

                                   Back 0
```

File Name: errorMessage.h

Code:-

```
#include<iostream>
#include <string>
#include "../../tabulate/table.hpp"
using namespace std;
using namespace tabulate;

    void errorMessage(string message){

        int option;

        Table universal_constants;

        universal_constants.add_row({"",message,""});
        universal_constants.add_row({"","Back 0"});

        universal_constants.format()
            .font_style({FontStyle::bold})
            .border_top(" ")
            .border_bottom(" ")
            .border_left("")
            .border_right("")
            .corner(" ");

        universal_constants[0][0].format()
            .padding_top(1)
            .padding_bottom(1)
            .font_align(FontAlign::center)
            .font_style({FontStyle::bold})
            .font_background_color(Color::red)
            .width(20);
        universal_constants[0][1].format()
            .padding_top(1)
            .padding_bottom(1)
            .font_align(FontAlign::center)
            .font_style({FontStyle::bold})
            .width(60)
            .font_background_color(Color::red);
    universal_constants[0][2].format()
        .padding_top(1)
        .padding_bottom(1)
        .font_align(FontAlign::center)
        .font_style({FontStyle::bold})
        .font_background_color(Color::red)
        .width(30);



    universal_constants[1][0].format()
        .padding_top(1)
        .padding_bottom(1)
        .font_align(FontAlign::center)
        .font_style({FontStyle::bold})
        .width(30);
    universal_constants[1][1].format()
        .padding_top(1)
        .padding_bottom(1)
        .font_align(FontAlign::center)
        .font_style({FontStyle::bold})
        .width(60)
        .font_background_color(Color::green);

    std::cout << universal_constants << std::endl;

    cout<<"\t\t\t\t\t\t\t";

    cin>>option;

    system ("CLS");

}
```

OUTPUT:



"I:\WORKPLACE\Mehedi Hasan\software_development_1\pos\bin\Release\pos.exe"

```
Invalid Option!

Back 0
```