

INTERNATIONAL INSTITUTE OF INFORMATION TECHNOLOGY



Object Oriented Programming using C++ Project

Supermarket File Management System

Group 11

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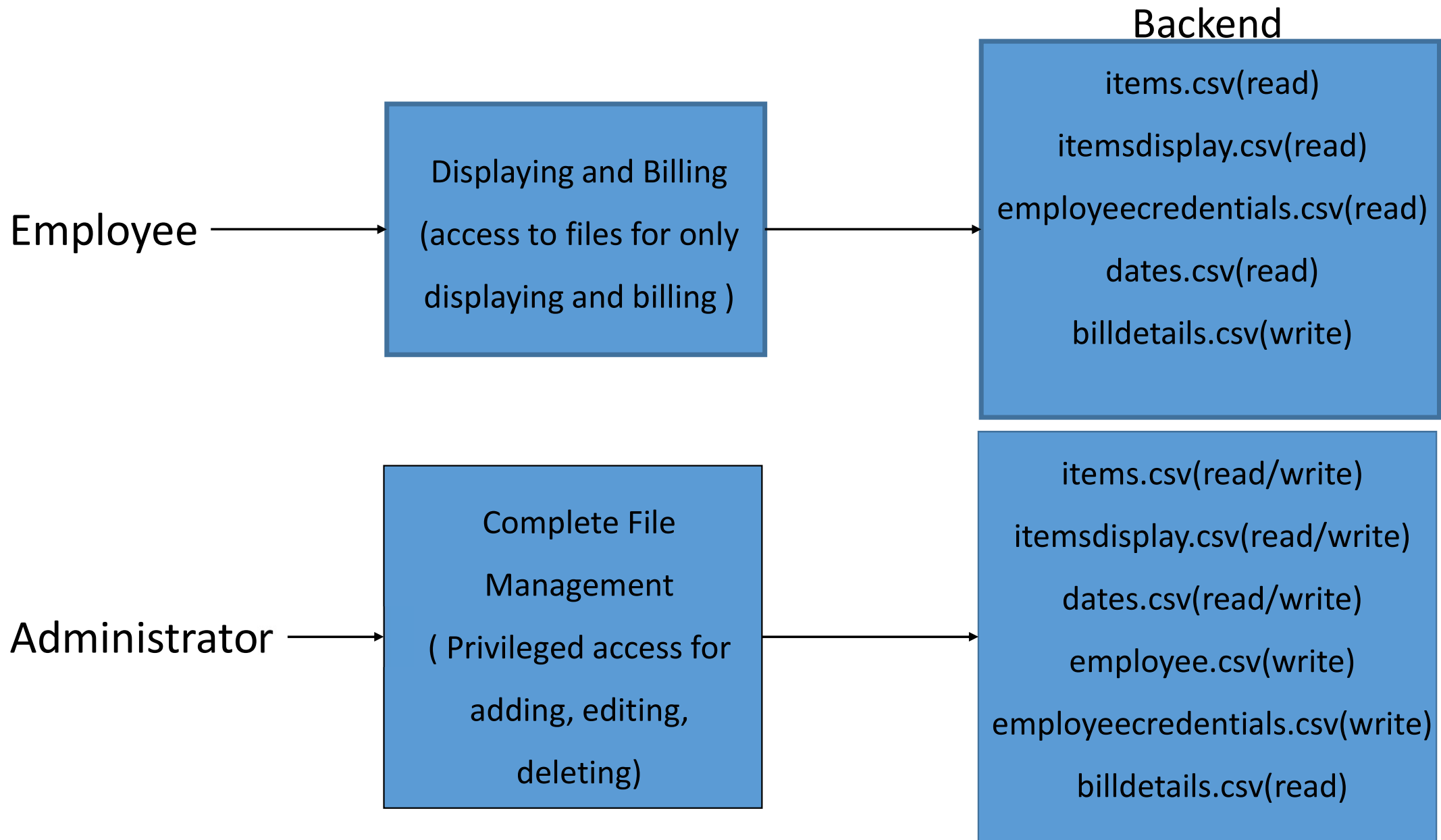
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Aim of the Project

- To create a file management system for a supermarket.
- To provide a user friendly methods to display, search, add or edit item details.
- To provide appropriate functions for discount calculation.
- To design a billing interface for shopping.
- To provide the specific method linked with billing interface to check festive season discount.
- To provide functions for display, add and edit festive seasons and view archived shopping details.

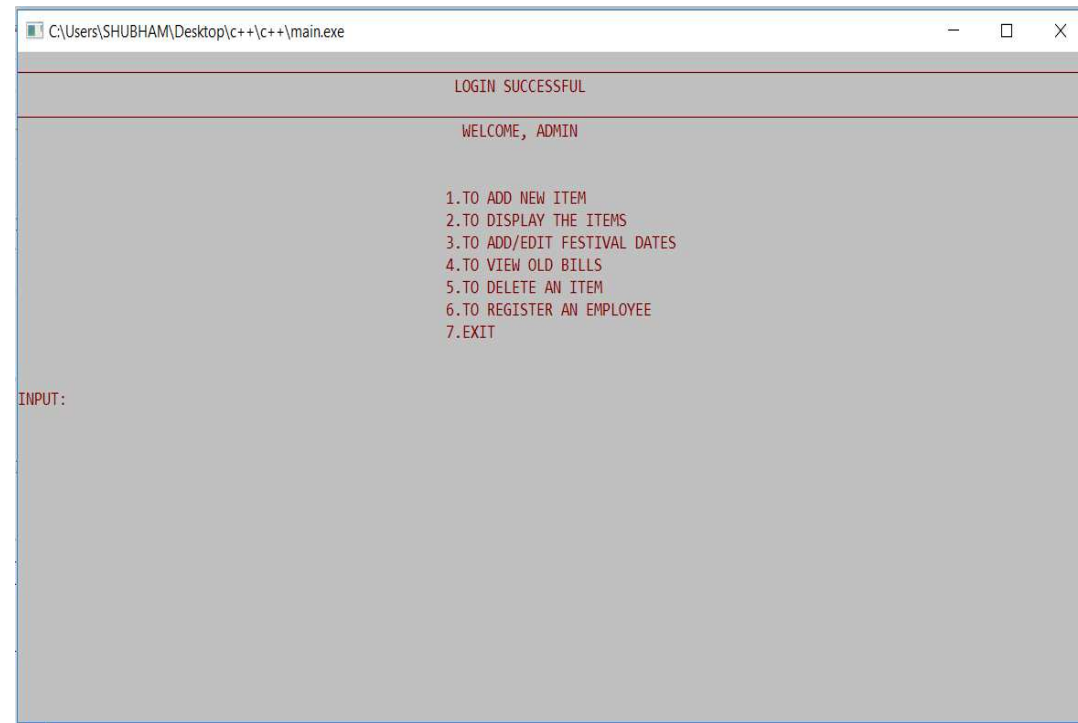


Project Details

- 'displayitem()' function in class 'item' to display the items in supermarket by reading 'itemsdisplay.csv' file.
- Login interface for employee and admin.



- 'void admin(char id[],char pass[])' function in class 'login_interface' matches the id and pass with the 'admin.csv' file's id and pass.
- Admin interface after successful login.



- Adding new item calls 'void edit()' function in class 'item' which checks for existing product id and then adds another item's details in the 'items.csv' and 'itemsdisplay.csv' files.
- Displaying of item is done in with 'void displayitem()' function and further asked to view or edit the details of an item.

C:\Users\SHUBHAM\Desktop\c++\main.exe

ADDING ITEM

Enter Product ID: I1

Enter Item Name: Item

Enter Quantity: 1pk

Enter Stock: 2

Enter Price(Rs): 5600

's' to Save and Exit
Any button to continue

C:\Users\SHUBHAM\Desktop\c++\main.exe

P_ID	ITEM	P_ID	ITEM	P_ID	ITEM	P_ID	ITEM	P_ID	ITEM
V1	Potato	B4	Min-Water	G5	Maida	M3	Allergy	PC8	Shaving-Cream
V2	Tomato	PC1	Soap	G6	Toor-Dal	V5	Palak	D5	Yogurt
V3	Onion	PC2	Dettol	O1	Papad	V6	Yeast	F4	Berries
V4	Carrot	PC3	Toothpaste	O2	Cocoa-Powder	V7	Broccoli	F5	Pears
G3	Moong-Dal	PC4	Shampoo	H1	Dettol	V8	Cucumber	F6	Oranges
G4	Sun-Oil	H2	Cleaner	H5	Odonil	V9	Squash	I1	Item
D1	Milk	H3	Band-Aid	F1	Apple	G7	Corn		
D2	Eggs	H4	Honey	F2	Bananas	O3	Automotive		
D3	Butter	p1	product	F3	Grapes	O4	Batteries		
D4	Paneer	k1	Item_1	S1	Cookies	PC4	Air-Freshner		
B1	BournVita	T1	Turmericc	S2	Oats	PC5	Cosmetics		
B2	Tea	G1	Sugar	M1	Antibiotic	PC6	Hair-Gel		
B3	Juice	G2	Idli-Rice	M2	Aspirin	PC7	Mouthwash		

1.TO VIEW/EDIT AN ITEM
ANY KEY TO RETURN....

1.TO VIEW DETAILS OF AN ITEM
2.TO EDIT DETAILS OF AN ITEM

INPUT: _

- Details of an item is shown with 'void edit(char x)' (overloaded) function in class 'item' if (x='1') with the help of 'items.csv' file details after product id is matched.
- While editing of an item old details of an item is shown with 'void edit(char x)' function in class 'item' if (x='2') with the help of 'items.csv' file details after product id is matched.

```

C:\Users\SHUBHAM\Desktop\c++\main.exe
V3  Onion      PC2  Dettol    O1  Papad    V6  Yeast     F4  Berries
V4  Carrot      PC3  Toothpaste O2  Cocoa-Powder V7  Broccoli F5  Pears
G3  Moong-Dal  PC4  Shampoo  H1  Dettol    V8  Cucumber F6  Oranges
G4  Sun-Oil    H2  Cleaner  H5  Odonil    V9  Squash   I1  Item
D1  Milk       H3  Band-Aid F1  Apple     G7  Corn
D2  Eggs       H4  Honey    F2  Bananas   O3  Automotive
D3  Butter     p1  product  F3  Grapes    O4  Batteries
D4  Paneer     k1  Item_1   S1  Cookies   PC4 Air-Freshner
B1  BournVita T1  Turmericc S2  Oats      PC5 Cosmetics
B2  Tea       G1  Sugar    M1  Antibiotic PC6 Hair-Gel

1.TO VIEW/EDIT AN ITEM
ANY KEY TO RETURN....

1.TO VIEW DETAILS OF AN ITEM
2.TO EDIT DETAILS OF AN ITEM

INPUT:1
ENTER PRODUCT ID :h4

DATA
ID      Name      Qty.      Stock      Price(Rs)
H4      Honey      500g      46         @100

ANY KEY TO RETURN....

```

```

C:\Users\SHUBHAM\Desktop\c++\main.exe

OLD DATA
ID      Name      Qty.      Stock      Price(Rs)
p1      product  20g       3          @2500

Enter New/Old ID : P1
Enter New/Old ITEM name : Product
Enter New/Old Quantity : 100g
Enter New/Old Stock :4
Enter New/Old Price :2500

CHANGES SAVED ...
ANY KEY TO RETURN....

```

- Discount dates displayed by 'void display_date()' in class 'cart' (inherited from item), new festival date/name can be added for festive discount by 'void edit_date()' function in class 'cart' (inherited from item) by adding details in 'dates.csv' file.
- Existing festival date/name can be edited in same function by editing 'dates.csv' file.

```

C:\Users\SHUBHAM\Desktop\c++\c++\main.exe
FESTIVAL DATES
01-01-2017 New-Year      12-03-2017 Holi          16-08-2017 Independence-Day  25-12-2017 Christmas
02-01-2017 New-Year      13-03-2017 Holi          25-08-2017 Ganesh-Chaturthi 26-12-2017 Christmas
04-01-2017 Makar-Sankranti 04-04-2017 Ram-Navami    01-09-2017 Id-ul-Juha      31-12-2017 New-Year
15-01-2017 Makar-Sankranti 05-04-2017 Ram-Navami    02-09-2017 Id-ul-Juha      03-02-2017 Hello_Day
25-01-2017 Republic-Day  14-04-2017 Good-Friday  21-09-2017 Muharram      02-01-2017 newtest
26-01-2017 Republic-Day  25-06-2017 Id-ul-Fitr   27-09-2017 Saptami          28-09-2017 Durga-Puja
27-01-2017 Republic-Day  26-06-2017 Id-ul-Fitr   29-09-2017 Dussehra         30-09-2017 Dussehra
01-02-2017 Vasant-Panchami 27-06-2017 Id-ul-Fitr   30-09-2017 Dussehra         17-10-2017 Deewali
10-02-2017 Developer-Disc 06-08-2017 Raksha-Bandhan 17-10-2017 Deewali          18-10-2017 Deewali
13-02-2017 Zalentine       07-08-2017 Raksha-Bandhan 18-10-2017 Deewali          19-10-2017 Deewali
24-02-2017 Maha-Shivratri  14-08-2017 Janmashtami  19-10-2017 Deewali          24-12-2017 Christmas
25-02-2017 Maha-Shivratri  15-08-2017 Independence-Day

Enter Date to ADD/EDIT: 02-10-2017

ADD Festival Name: Gandhi_Jayanti

CHANGES SAVED...
ANY KEY TO RETURN....

```

```

C:\Users\SHUBHAM\Desktop\c++\c++\main.exe
FESTIVAL DATES
01-01-2017 New-Year      12-03-2017 Holi          16-08-2017 Independence-Day  25-12-2017 Christmas
02-01-2017 New-Year      13-03-2017 Holi          25-08-2017 Ganesh-Chaturthi 26-12-2017 Christmas
04-01-2017 Makar-Sankranti 04-04-2017 Ram-Navami    01-09-2017 Id-ul-Juha      31-12-2017 New-Year
15-01-2017 Makar-Sankranti 05-04-2017 Ram-Navami    02-09-2017 Id-ul-Juha      03-02-2017 Hello_Day
25-01-2017 Republic-Day  14-04-2017 Good-Friday  21-09-2017 Muharram      02-01-2017 newtest
26-01-2017 Republic-Day  25-06-2017 Id-ul-Fitr   27-09-2017 Saptami          02-10-2017 Gandhi_Jayanti
27-01-2017 Republic-Day  26-06-2017 Id-ul-Fitr   28-09-2017 Durga-Puja
01-02-2017 Vasant-Panchami 27-06-2017 Id-ul-Fitr   29-09-2017 Dussehra
10-02-2017 Developer-Disc 06-08-2017 Raksha-Bandhan 30-09-2017 Dussehra
13-02-2017 Zalentine       07-08-2017 Raksha-Bandhan 17-10-2017 Deewali
24-02-2017 Maha-Shivratri  14-08-2017 Janmashtami  18-10-2017 Deewali
25-02-2017 Maha-Shivratri  15-08-2017 Independence-Day 19-10-2017 Deewali
24-12-2017 Christmas

Enter Date to ADD/EDIT: 14-04-2017

FESTIVAL DETAIL
Date      Festival
14-04-2017 Good-Friday

Enter New/Old Date: 13-04-2017

Enter New/Old Festival: Good-Friday

CHANGES SAVED...
ANY KEY TO RETURN....

```


- Bill Details according to the given date can be viewed by 'void see_archived_details(char date[])' in class 'bill' by accessing 'billdetails.csv' file.
- Deletion of an item is done by 'void remove_item(char pid)' in class 'item' by editing 'items.csv' and 'itemsdisplay.csv' file.

```

C:\Users\SHUBHAM\Desktop\c++\main.exe

BILL DETAILS
Date      Customer   Contact
Enter Date: 26-01-2017

26-01-2017 Customer1 9988776655
BournVita 500g    @208
Tea        500g    @205
Potato     1kg     @17
Tomato     1kg     @24
Moong-Dal  1kg     @89
BILL      Rs      510.3
26-01-2017 Customer2 987654432
Potato     1kg     @17
Potato     1kg     @17
Tomato     1kg     @24
Moong-Dal  1kg     @89
Sun-Oil    1ltr    @90
BILL      Rs      213.3

ANY KEY TO RETURN....

```

```

C:\Users\SHUBHAM\Desktop\c++\main.exe

P_ID  ITEM      P_ID  ITEM      P_ID  ITEM      P_ID  ITEM      P_ID  ITEM
P_ID  ITEM      B3     Juice      G2     Idli-rice  V5     Palak      D5     Yogurt
V1     Potato    B4     Min-Water  G5     Maida      V6     Yeast      F4     Berries
V2     Tomato    PC1    Soap        G6     Toor-Dal   V7     Broccoli   F5     Pears
V3     Onion     PC2    Dettol      H1     Dettol     V8     Cucumber   F6     Oranges
V4     Carrot    PC3    Toothpaste  H5     Odonil     V9     Squash     I1     Item
G3     Moong-Dal PC4     Shampoo    F1     Apple      G7     Corn
G4     Sun-Oil   H2     Cleaner     F2     Bananas    O3     Automotive
D1     Milk      H3     Band-Aid    F3     Grapes     O4     Batteries
D2     Eggs      H4     Honey       S1     Cookies    PC4     Air-Freshner
D3     Butter    P1     Product     S2     Oats       PC5     Cosmetics
D4     Paneer    k1     Item_1      M1     Antibiotic  PC6     Hair-Gel
B1     BournVita T1     Turmericc   M2     Aspirin    PC7     Mouthwash
B2     Tea       G1     Sugar       M3     Allergy    PC8     Shaving-Cream

DELETING ITEM
Enter Product id: f6

DELETED DATA
ID      Name      Qty.      Stock      Price(Rs)
F6      Oranges   500g      50         @120

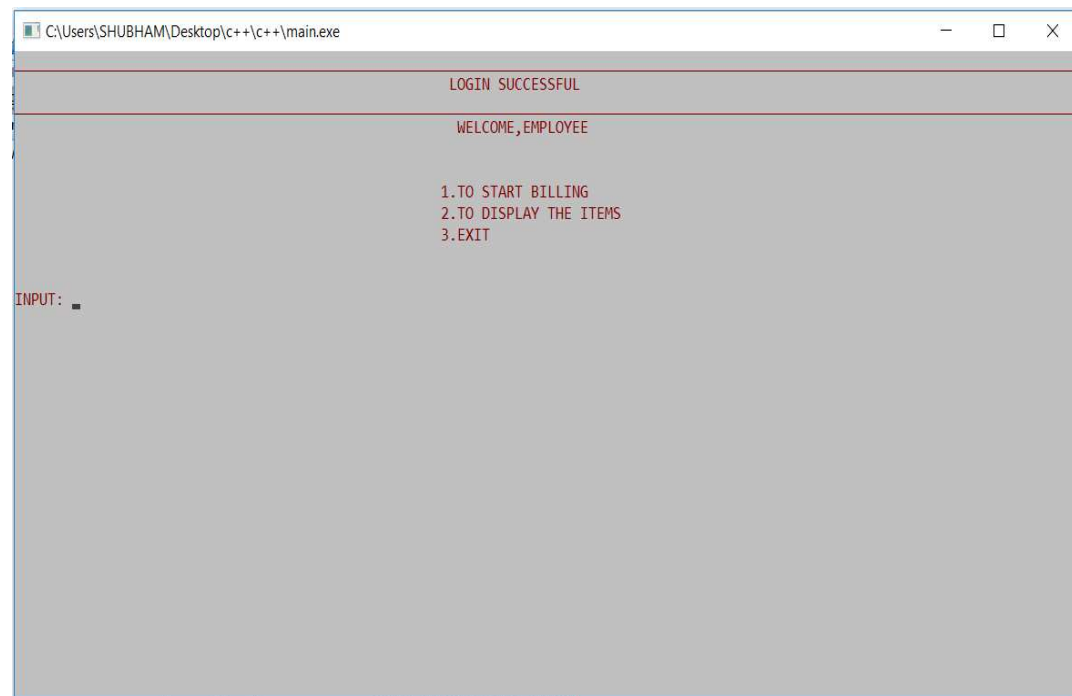
Any Key to continue...

```

- Employee registration is done by 'void credentials()' function in class 'login' by adding details in 'employees.csv' file and its id and password in 'employeecredentials.csv' file.
- For login 'void employee(char id[], char pass[])' function in class 'login' is used and details checked from 'employeecredentials.csv' file.



```
EMPLOYEE REGISTRATION
Enter Name: employee
Enter Age: 22
Login ID: emp2
Password: user2
's' TO SAVE
```



```
LOGIN SUCCESSFUL
WELCOME, EMPLOYEE
1.TO START BILLING
2.TO DISPLAY THE ITEMS
3.EXIT
INPUT: 
```

- 'void billdetails()' function in class 'bill' is accessed and fetches item by accessing 'double itemfetch(char pid[])' in class 'cart' which returns the MRP of that item and is further passed to 'double billamt(double mrp)' of same class 'bill' which further returns new 10% discounted value and that is added to total bill.
- Each time an item is fetched, above procedure repeats and total bill is updated.

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INFINITY SUPER MARKET							
P_ID	ITEM	P_ID	ITEM	P_ID	ITEM	P_ID	ITEM
V1	Potato	B3	Juice	G2	Idli-rice	V5	Palak
V2	Tomato	B4	Min-Water	G5	Maida	D5	Yogurt
V3	Onion	PC1	Soap	G6	Toor-Dal	F4	Berries
V4	Carrot	PC2	Dettol	H1	Dettol	F5	Pears
G3	Moong-Dal	PC3	Toothpaste	H5	Odonil	I1	Item
G4	Sun-Oil	PC4	Shampoo	F1	Apple		
D1	Milk	H2	Cleaner	F2	Bananas		
D2	Eggs	H3	Band-Aid	F3	Grapes		
D3	Butter	H4	Honey	S1	Cookies		
D4	Paneer	P1	Product	S2	Oats		
B1	BournVita	k1	Item_1	M1	Antibiotic		
B2	Tea	T1	Turmericc	M2	Aspirin		
		G1	Sugar	M3	Allergy		
				PC8	Shaving-Cream		

ADD ITEMS

ENTER DATE (DD-MM-YYYY): 12-02-2017
 ENTER CUSTOMER NAME: Cust_Name
 ENTER CONTACT NO: 9870264731

ENTER PRODUCT ID: f3

's' TO SAVE AND EXIT OR ANY KEY TO CONTINUE: _

ITEM	QTY.	MRP.	
Honey	500g	@100	
Grapes	500g	@65	

Total Amount: 148.5

C:\Users\SHUBHAM\Desktop\c++\c++\main.exe

INFINITY SUPER MARKET							
P_ID	ITEM	P_ID	ITEM	P_ID	ITEM	P_ID	ITEM
V1	Potato	B3	Juice	G2	Idli-rice	V5	Palak
V2	Tomato	B4	Min-Water	G5	Maida	D5	Yogurt
V3	Onion	PC1	Soap	G6	Toor-Dal	F4	Berries
V4	Carrot	PC2	Dettol	H1	Dettol	F5	Pears
G3	Moong-Dal	PC3	Toothpaste	H5	Odonil	I1	Item
G4	Sun-Oil	PC4	Shampoo	F1	Apple		
D1	Milk	H2	Cleaner	F2	Bananas		
D2	Eggs	H3	Band-Aid	F3	Grapes		
D3	Butter	H4	Honey	S1	Cookies		
D4	Paneer	P1	Product	S2	Oats		
B1	BournVita	k1	Item_1	M1	Antibiotic		
B2	Tea	T1	Turmericc	M2	Aspirin		
		G1	Sugar	M3	Allergy		
				PC8	Shaving-Cream		

ADD ITEMS

ENTER DATE (DD-MM-YYYY): 12-02-2017
 ENTER CUSTOMER NAME: Cust_Name
 ENTER CONTACT NO: 9870264731

ENTER PRODUCT ID: k1

's' TO SAVE AND EXIT OR ANY KEY TO CONTINUE: _

ITEM	QTY.	MRP.	
Honey	500g	@100	
Grapes	500g	@65	
Sun-Oil	1ltr	@90	
Item_1	500g	@2500	

Total Amount: 2479.5

- Total bill amount and date are passed to another function 'void discount(double billedamt, char date[])' in class 'bill' and further discount operations are checked depending on total bill amount and checking festive season date from 'dates.csv' file.
- While fetching item 'double itemfetch(char pid)' also checks for the stock.

```

C:\Users\SHUBHAM\Desktop\c++\c++\main.exe
INFINITY SUPER MARKET
P_ID  ITEM      P_ID  ITEM      P_ID  ITEM      P_ID  ITEM      P_ID  ITEM
P_ID  ITEM      B3    Juice      G2    Idli-rice  V5    Palak      D5    Yogurt
V1    Potato    B4    Min-Water  G5    Maida      V6    Yeast      F4    Berries
V2    Tomato   PC1    Soap       G6    Toor-Dal   V7    Broccoli   F5    Pears
V3    Onion    PC2    Dettol     H1    Dettol     V8    Cucumber   I1    Item
V4    Carrot   PC3    Toothpaste H5    Odonil     V9    Squash
G3    Moong-Dal PC4    Shampoo   F1    Apple      G7    Corn
G4    Sun-Oil  H2    Cleaner    F2    Bananas    O3    Automotive
D1    Milk     H3    Band-Aid   F3    Grapes     O4    Batteries
D2    Eggs     H4    Honey      S1    Cookies    PC4    Air-Freshner
D3    Butter   P1    Product    S2    Oats       PC5    Cosmetics
D4    Paneer   k1    Item_1     M1    Antibiotic PC6    Hair-Gel
B1    BournVita T1    Turmericc M2    Aspirin    PC7    Mouthwash
B2    Tea      G1    Sugar      M3    Allergy    PC8    Shaving-Cream

ADD ITEMS

ENTER DATE (DD-MM-YYYY): 12-02-2017
ENTER CUSTOMER NAME: Cust_Name
ENTER CONTACT NO: 9870264731

ENTER PRODUCT ID: m1

ITEM      QTY.    MRP.
Honey     500g    @100
Grapes    500g    @65
Sun-Oil   1ltr    @90
Item_1    500g    @2500
Antibiotic 1pk     @120

Total Amount: 2587.5

With 10% Discount On Each Item
FINAL BILL= Rs2587.5

Press Any Key to Return...

```

```

C:\Users\SHUBHAM\Desktop\c++\c++\main.exe
INFINITY SUPER MARKET
P_ID  ITEM      P_ID  ITEM      P_ID  ITEM      P_ID  ITEM      P_ID  ITEM
P_ID  ITEM      B3    Juice      G2    Idli-rice  V5    Palak      D5    Yogurt
V1    Potato    B4    Min-Water  G5    Maida      V6    Yeast      F4    Berries
V2    Tomato   PC1    Soap       G6    Toor-Dal   V7    Broccoli   F5    Pears
V3    Onion    PC2    Dettol     H1    Dettol     V8    Cucumber   I1    Item
V4    Carrot   PC3    Toothpaste H5    Odonil     V9    Squash
G3    Moong-Dal PC4    Shampoo   F1    Apple      G7    Corn
G4    Sun-Oil  H2    Cleaner    F2    Bananas    O3    Automotive
D1    Milk     H3    Band-Aid   F3    Grapes     O4    Batteries
D2    Eggs     H4    Honey      S1    Cookies    PC4    Air-Freshner
D3    Butter   P1    Product    S2    Oats       PC5    Cosmetics
D4    Paneer   k1    Item_1     M1    Antibiotic PC6    Hair-Gel
B1    BournVita T1    Turmericc M2    Aspirin    PC7    Mouthwash
B2    Tea      G1    Sugar      M3    Allergy    PC8    Shaving-Cream

ADD ITEMS

ENTER DATE (DD-MM-YYYY): 10-02-2017
ENTER CUSTOMER NAME: Kustom
ENTER CONTACT NO: 9870321345

ENTER PRODUCT ID: k1

ITEM      QTY.    MRP.
Product   100g    @2500
ITEM OUT OF STOCK
Grapes    500g    @65
Item_1    500g    @2500

Total Amount: 6808.5

```

- According to the total bill amount and after checking the festive season discount various types of discount are given.

C:\Users\SHUBHAM\Desktop\c++\c++\main.exe

INFINITY SUPER MARKET							
P_ID	ITEM	P_ID	ITEM	P_ID	ITEM	P_ID	ITEM
V1	Potato	B3	Juice	G2	Idli-rice	V5	Palak
V2	Tomato	B4	Min-Water	G5	Maida	V6	Yeast
V3	Onion	PC1	Soap	G6	Toor-Dal	V7	Broccoli
V4	Carrot	PC2	Dettol	H1	Dettol	V8	Cucumber
G3	Moong-Dal	PC3	Toothpaste	H5	Odonil	V9	Squash
G4	Sun-Oil	PC4	Shampoo	F1	Apple	G7	Corn
D1	Milk	H2	Cleaner	F2	Bananas	O3	Automotive
D2	Eggs	H3	Band-Aid	F3	Grapes	O4	Batteries
D3	Butter	H4	Honey	S1	Cookies	PC4	Air-Freshner
D4	Paneer	P1	Product	S2	Oats	PC5	Cosmetics
B1	BournVita	k1	Item_1	M1	Antibiotic	PC6	Hair-Gel
B2	Tea	T1	Turmericc	M2	Aspirin	PC7	Mouthwash
		G1	Sugar	M3	Allergy	PC8	Shaving-Cream

ADD ITEMS

ENTER DATE (DD-MM-YYYY): 12-02-2017
 ENTER CUSTOMER NAME: Cust_na
 ENTER CONTACT NO: 9876544321

's' TO SAVE AND EXIT OR ANY KEY TO CONTINUE:

ENTER PRODUCT ID: v2

ITEM	QTY.	MRP.			
Item	1pk	@5600	Paneer	200g	@65
Cookies	1pk	@120	Turmericc	100g	@45
Air-Freshner1pkg		@100	Eggs	6pcs	@35
Hair-Gel	1pk	@121	Milk	500ml	@23
Potato	1kg	@17	Eggs	6pcs	@35
Tomato	1kg	@24	Cookies	1pk	@120
Onion	1kg	@15	Tomato	1kg	@24
Carrot	500g	@38			
Milk	500ml	@23			
Eggs	6pcs	@35			
Butter	1pc	@44			

Total Amount: 5835.6

With 10% Discount On Each Item

5% Extra Discount for >5000

FINAL BILL= Rs5543.82

Press Any Key to Return...

C:\Users\SHUBHAM\Desktop\c++\c++\main.exe

INFINITY SUPER MARKET							
P_ID	ITEM	P_ID	ITEM	P_ID	ITEM	P_ID	ITEM
V1	Potato	B3	Juice	G2	Idli-rice	V5	Palak
V2	Tomato	B4	Min-Water	G5	Maida	V6	Yeast
V3	Onion	PC1	Soap	G6	Toor-Dal	V7	Broccoli
V4	Carrot	PC2	Dettol	H1	Dettol	V8	Cucumber
G3	Moong-Dal	PC3	Toothpaste	H5	Odonil	V9	Squash
G4	Sun-Oil	PC4	Shampoo	F1	Apple	G7	Corn
D1	Milk	H2	Cleaner	F2	Bananas	O3	Automotive
D2	Eggs	H3	Band-Aid	F3	Grapes	O4	Batteries
D3	Butter	H4	Honey	S1	Cookies	PC4	Air-Freshner
D4	Paneer	P1	Product	S2	Oats	PC5	Cosmetics
B1	BournVita	k1	Item_1	M1	Antibiotic	PC6	Hair-Gel
B2	Tea	T1	Turmericc	M2	Aspirin	PC7	Mouthwash
		G1	Sugar	M3	Allergy	PC8	Shaving-Cream

ADD ITEMS

ENTER DATE (DD-MM-YYYY): 13-03-2017
 ENTER CUSTOMER NAME: Custom
 ENTER CONTACT NO: 9080876542

's' TO SAVE AND EXIT OR ANY KEY TO CONTINUE:

ENTER PRODUCT ID: v1

ITEM	QTY.	MRP.			
Product	100g	@2500			
Automotive	1kg	@1200			
Air-Freshner1pkg		@100			
Potato	1kg	@17			

Total Amount: 3435.3

With 10% Discount On Each Item

Festive Season, Its *Holi*

40% *Holi* Discount >2000

FINAL BILL= Rs2061.18

Press Any Key to Return...

Basic OOP features implemented

- Data Abstraction and Encapsulation

Data abstraction and encapsulation are extensively used in our project. Classes like 'item' (for item specific details and implementations), 'bill' (for bill related details and implementations).

- Inheritance

For the shopping purpose derived class 'addtocart' is inheriting members from base class 'item'.

- Polymorphism

Static Polymorphism: In this project 'edit()' function is overloaded for the purpose of editing and viewing detail of an item.

Dynamic Polymorphism: Virtual functions named 'itemfetch()', 'edit_date()', 'display_date()'.

- Dynamic memory management is used while reading files, to save space and to reduce the reading time.
- Administrator and Employee functions are segregated to avoid any type of data interference.