

PIZZA COMPANY MANAGEMENT SYSTEM



Introduction

The aim of the project is to provide a management system to a Pizza Company, which stores relevant details about the stock and helps save money and delivery time by using an algorithm which computes the shortest possible path between two locations.

Overview

The Management System has a database which can be used to store and retrieve items in stock. It also abstracts the operations that can be performed on the database at different terminals like a user at Kitchen, a Waiter or a Delivery Person. The system offers full access to control and perform data-related activities like monitoring stocks,

assigning work, to the system Administrator. It also helps the delivery boy who delivers packages to various customers across the city by computing the shortest path from his location to his next delivery point.

Team

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Data Structures

The Data Structures used are listed below.

- B Trees
- Graphs
- List

B Trees

Since we are using a database to store and retrieve stock details, a B Tree can do the job so well. Also it makes the data easy to access and provides an efficient method to store data.

Graphs

Since we are using locations and delivery points to deliver packages, we decided to use Graphs to represent the locations.

Lists

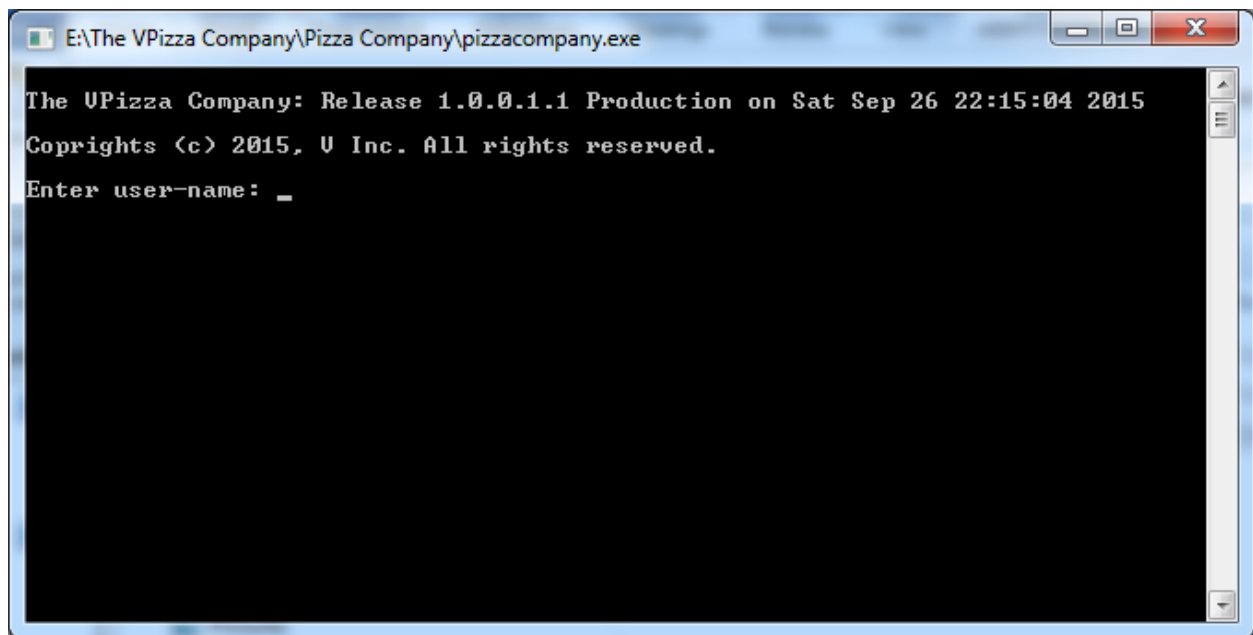
Lists are used to store the details about the items ordered by the customers and helps Waiters and Delivery persons have a look at items served and items yet to be served.

Modules

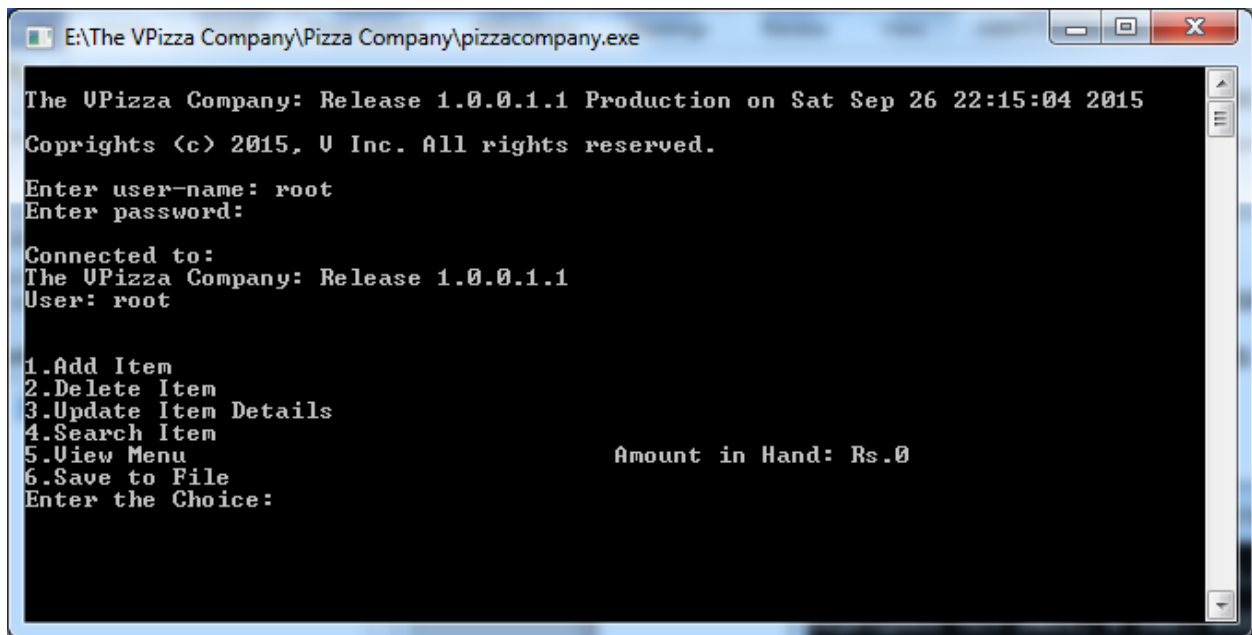
Login

The Login Screen provides security to the System by allowing only the authorized users to access the System. It checks the username and password and gives control to the particular user.

The Screenshot shows the Login Screen.



The Screenshot below shows 'root' user logged into the System.



```
E:\The VPizza Company\Pizza Company\pizzacompany.exe

The UPizza Company: Release 1.0.0.1.1 Production on Sat Sep 26 22:15:04 2015
Coprights (c) 2015, U Inc. All rights reserved.

Enter user-name: root
Enter password:

Connected to:
The UPizza Company: Release 1.0.0.1.1
User: root

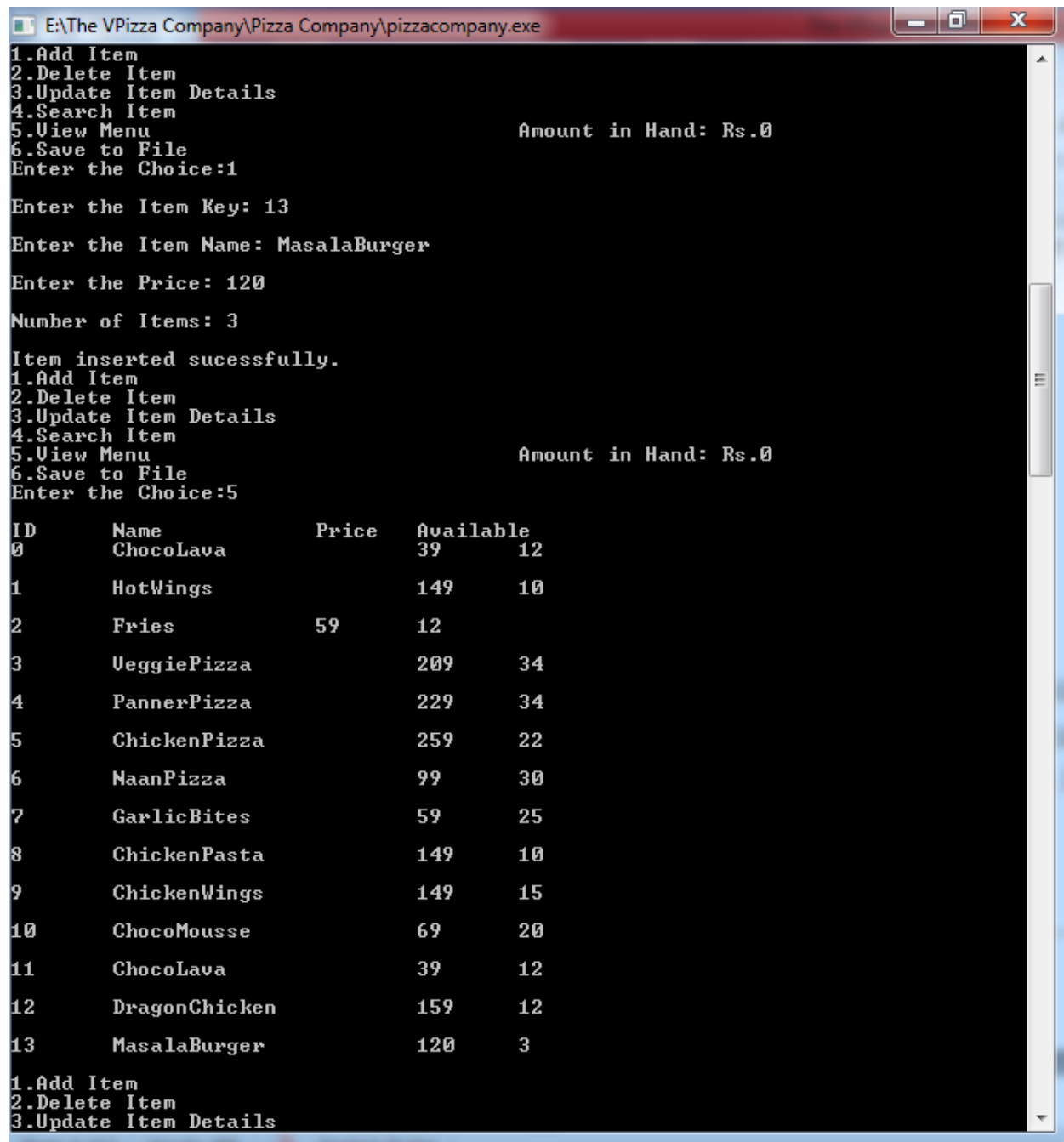
1.Add Item
2.Delete Item
3.Update Item Details
4.Search Item
5.View Menu
6.Save to File
Enter the Choice:

Amount in Hand: Rs.0
```

Add Item

This adds a new item to the Menu Card. Only the Administrator can access this Feature. No other users are permitted to add a new item to the Menu Card.

The Screenshot below shows an item added by the user 'root'.

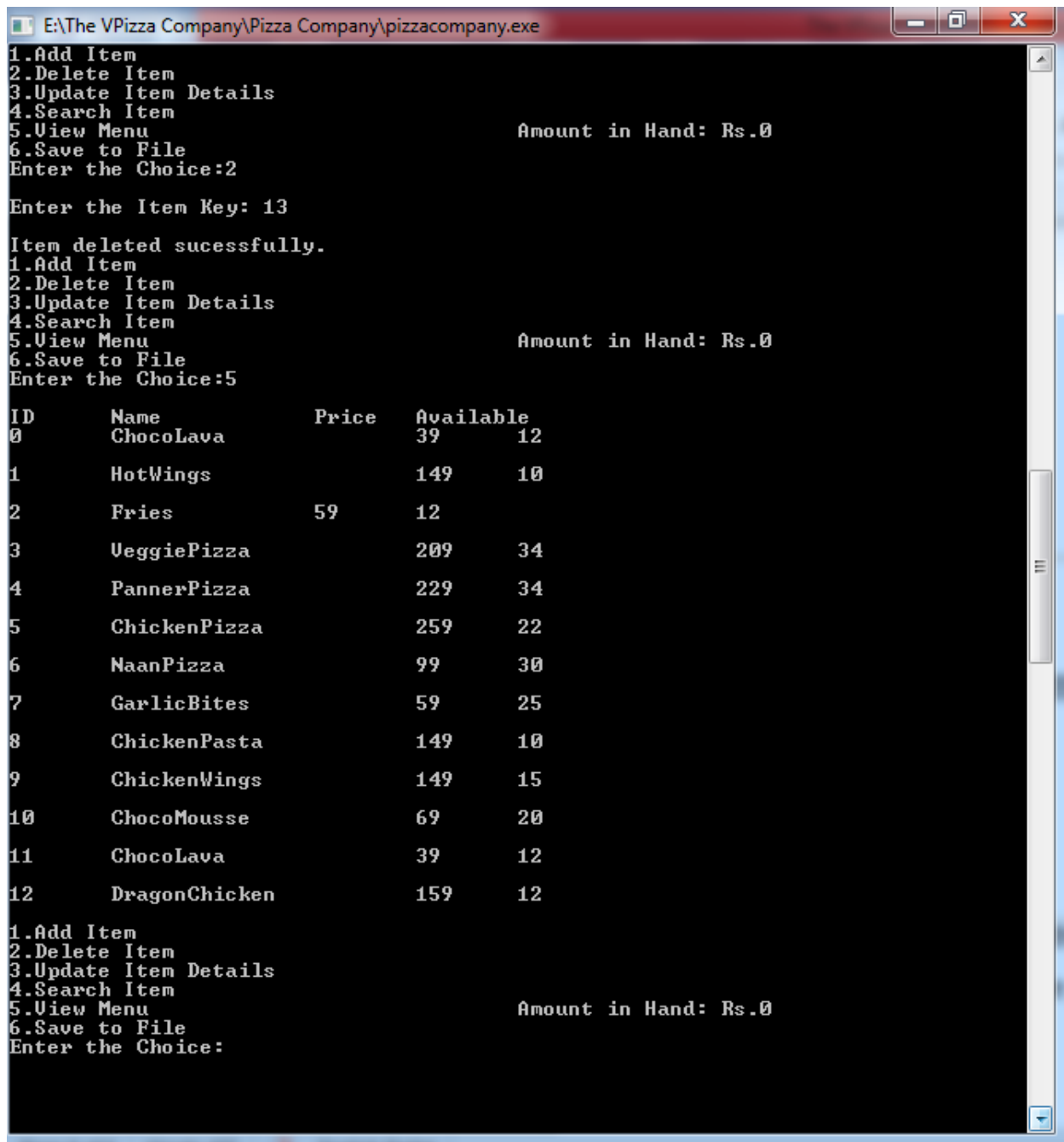


```
E:\The VPizza Company\Pizza Company\pizzacompany.exe
1.Add Item
2.Delete Item
3.Update Item Details
4.Search Item
5.View Menu
6.Save to File
Amount in Hand: Rs.0
Enter the Choice:1
Enter the Item Key: 13
Enter the Item Name: MasalaBurger
Enter the Price: 120
Number of Items: 3
Item inserted sucessfully.
1.Add Item
2.Delete Item
3.Update Item Details
4.Search Item
5.View Menu
6.Save to File
Amount in Hand: Rs.0
Enter the Choice:5
ID      Name      Price  Available
0       ChocoLava    39      12
1       HotWings     149     10
2       Fries        59      12
3       VeggiePizza  209     34
4       PannerPizza 229     34
5       ChickenPizza 259     22
6       NaanPizza    99      30
7       GarlicBites  59      25
8       ChickenPasta 149     10
9       ChickenWings 149     15
10      ChocoMousse  69      20
11      ChocoLava    39      12
12      DragonChicken 159     12
13      MasalaBurger 120      3
1.Add Item
2.Delete Item
3.Update Item Details
```

Delete Item

This deletes an item from the Menu Card. Only the Administrator can access this Feature. No other users are permitted to delete items from the Menu Card.

The Screenshot show deleting an item by the user 'root'.



```
E:\The VPizza Company\Pizza Company\pizzacompany.exe
1.Add Item
2.Delete Item
3.Update Item Details
4.Search Item
5.View Menu                               Amount in Hand: Rs.0
6.Save to File
Enter the Choice:2

Enter the Item Key: 13

Item deleted sucessfully.
1.Add Item
2.Delete Item
3.Update Item Details
4.Search Item
5.View Menu                               Amount in Hand: Rs.0
6.Save to File
Enter the Choice:5

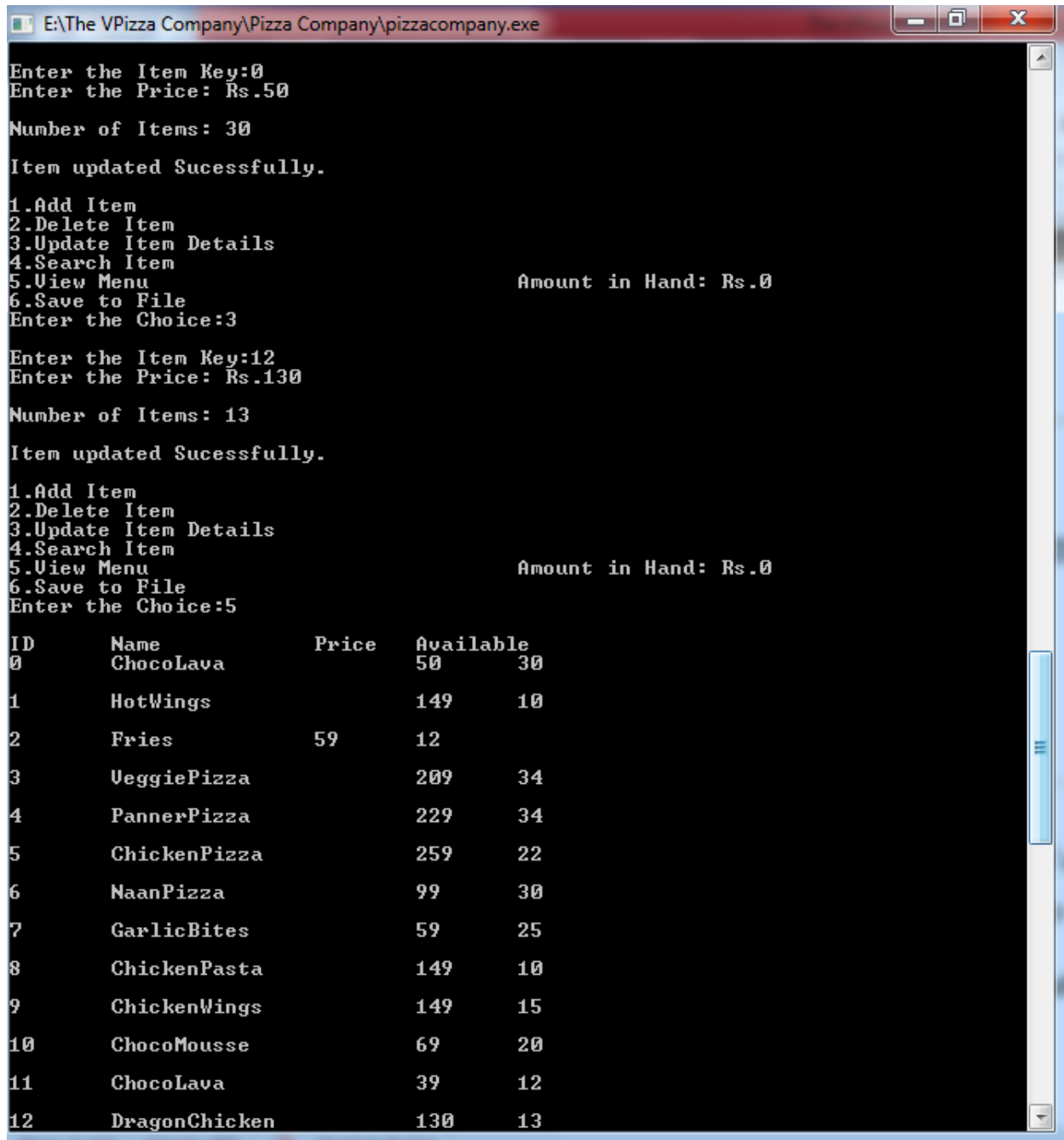
ID      Name      Price  Available
0       ChocoLava    39      12
1       HotWings    149     10
2       Fries       59      12
3       VeggiePizza 209     34
4       PannerPizza 229     34
5       ChickenPizza 259    22
6       NaanPizza   99      30
7       GarlicBites 59      25
8       ChickenPasta 149    10
9       ChickenWings 149    15
10      ChocoMousse 69      20
11      ChocoLava   39      12
12      DragonChicken 159    12

1.Add Item
2.Delete Item
3.Update Item Details
4.Search Item
5.View Menu                               Amount in Hand: Rs.0
6.Save to File
Enter the Choice:
```

Update Item Details

This updates the details of an item in the Menu Card. Both the Administrator and the Chef has the permission to update the details.

The following Screenshot shows updating the details of an Item by 'root'.



```
E:\The VPizza Company\Pizza Company\pizzacompany.exe
Enter the Item Key:0
Enter the Price: Rs.50
Number of Items: 30
Item updated Sucessfully.
1.Add Item
2.Delete Item
3.Update Item Details
4.Search Item
5.Uiew Menu
6.Save to File
Enter the Choice:3
Amount in Hand: Rs.0
Enter the Item Key:12
Enter the Price: Rs.130
Number of Items: 13
Item updated Sucessfully.
1.Add Item
2.Delete Item
3.Update Item Details
4.Search Item
5.Uiew Menu
6.Save to File
Enter the Choice:5
Amount in Hand: Rs.0
```

ID	Name	Price	Available
0	ChocoLava	50	30
1	HotWings	149	10
2	Fries	59	12
3	VeggiePizza	209	34
4	PannerPizza	229	34
5	ChickenPizza	259	22
6	NaanPizza	99	30
7	GarlicBites	59	25
8	ChickenPasta	149	10
9	ChickenWings	149	15
10	ChocoMousse	69	20
11	ChocoLava	39	12
12	DragonChicken	130	13

The following Screenshot shows update of details by 'kitchen'. The Chef can only update the number of items. He cannot change the price of the item.

```
E:\The VPizza Company\Pizza Company\pizzacompany.exe

4      PannerPizza      229      34
5      ChickenPizza     259      22
6      NaanPizza        99       30
7      GarlicBites      59       25
8      ChickenPasta     149      10
9      ChickenWings     149      15
10     ChocoMousse      69       20
11     ChocoLava        39       12
12     DragonChicken    130      17

1.Update Item Details
2.Search Item
3.View Menu
Enter the Choice:1

Enter the Item Key:5

Number of Items made: 4

Item updated Sucessfully.

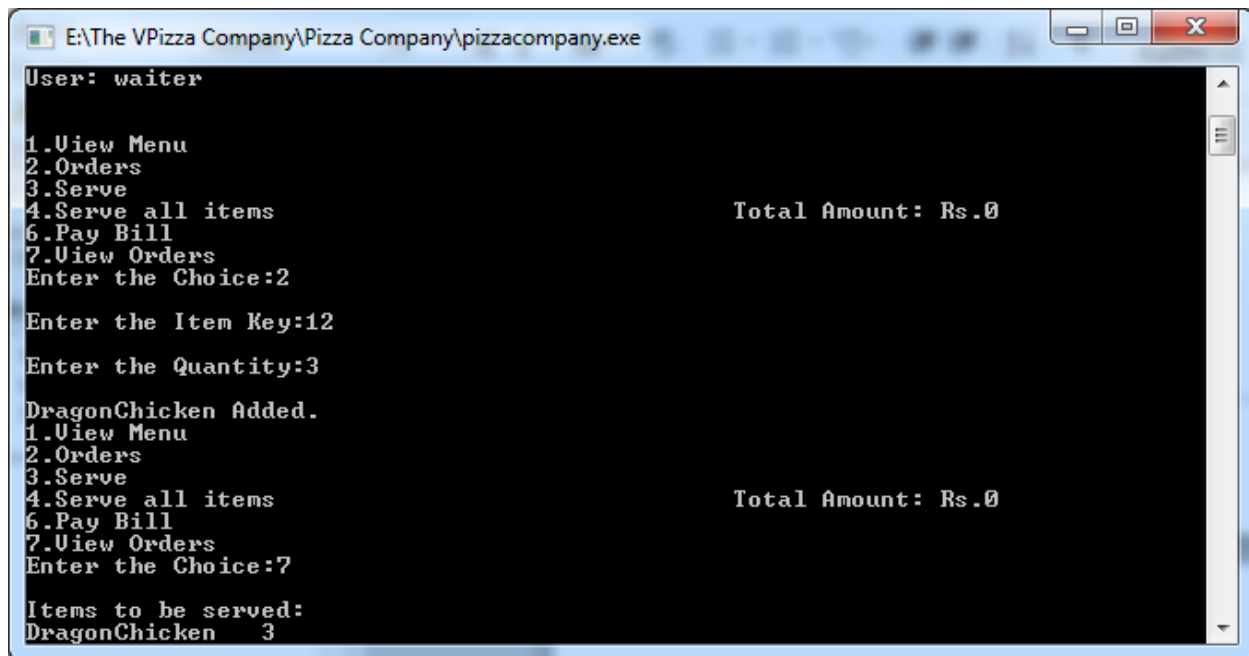
1.Update Item Details
2.Search Item
3.View Menu
Enter the Choice:3

ID      Name      Price  Available
0      ChocoLava      50      30
1      HotWings      149      10
2      Fries        59      12
3      UeggiePizza   209      34
4      ChickenPizza 259      22
5      ChickenPizza 259      26
6      NaanPizza    99       30
7      GarlicBites  59       25
8      ChickenPasta 149      10
9      ChickenWings 149      15
10     ChocoMousse   69       20
```

Add to Order List

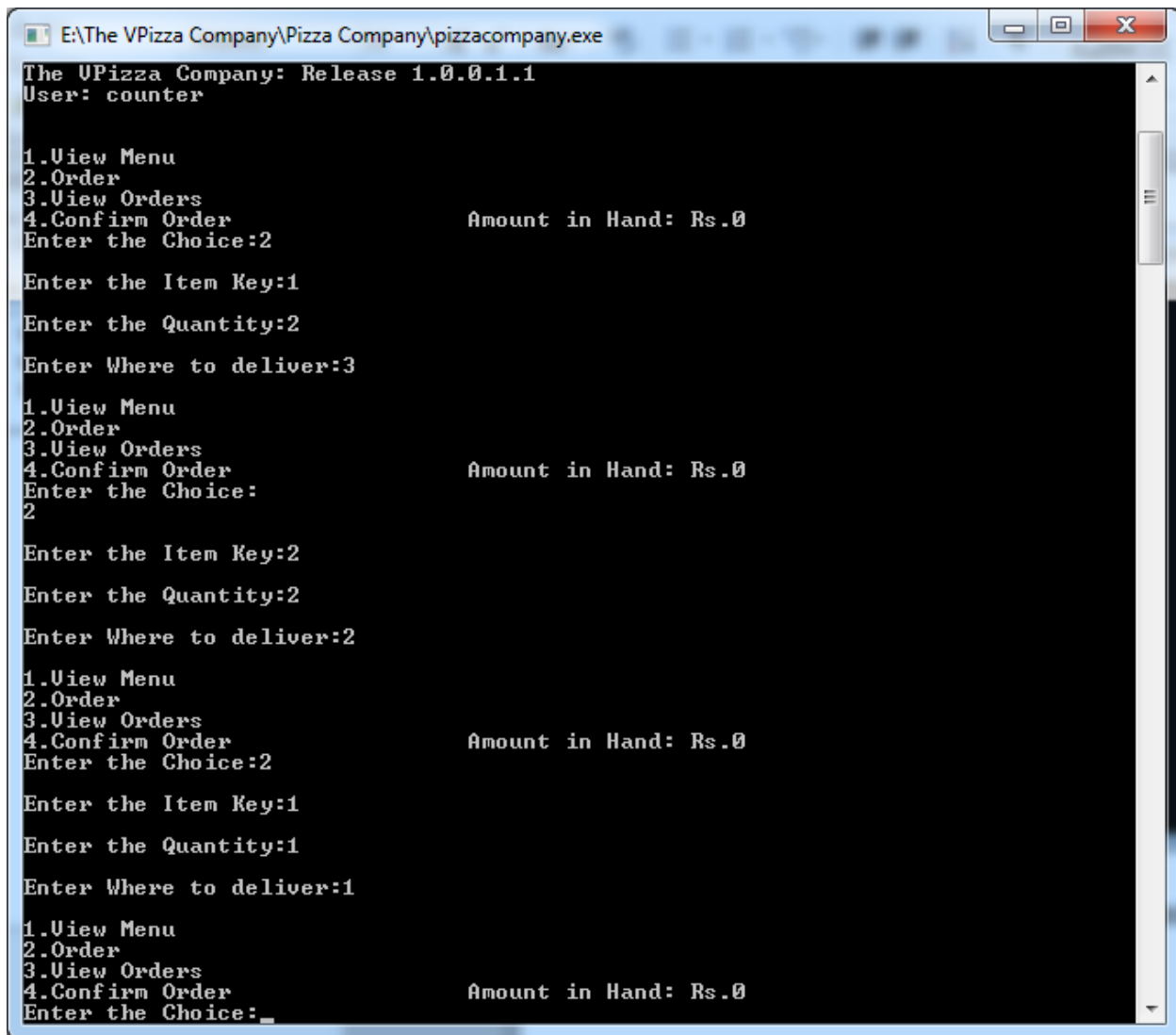
This adds an item to the Delivery list or Order list depending on who uses it. If a Waiter uses this module, it will add an item to his Orders List. If a person at the Cash Counter uses it, it will add the item to the Delivery list.

The Screenshot below shows a Waiter adding an order to his list.



```
E:\The VPizza Company\Pizza Company\pizzacompany.exe
User: waiter
1.View Menu
2.Orders
3.Serve
4.Serve all items
6.Pay Bill
7.View Orders
Enter the Choice:2
Enter the Item Key:12
Enter the Quantity:3
DragonChicken Added.
1.View Menu
2.Orders
3.Serve
4.Serve all items
6.Pay Bill
7.View Orders
Enter the Choice:7
Items to be served:
DragonChicken 3
Total Amount: Rs.0
Total Amount: Rs.0
```

The Screenshot below shows a Cash Collector adding an order to the Delivery list.



```
E:\The VPizza Company\Pizza Company\pizzacompany.exe
The VPizza Company: Release 1.0.0.1.1
User: counter

1.View Menu
2.Order
3.View Orders
4.Confirm Order
Amount in Hand: Rs.0
Enter the Choice:2

Enter the Item Key:1
Enter the Quantity:2
Enter Where to deliver:3

1.View Menu
2.Order
3.View Orders
4.Confirm Order
Amount in Hand: Rs.0
Enter the Choice:
2

Enter the Item Key:2
Enter the Quantity:2
Enter Where to deliver:2

1.View Menu
2.Order
3.View Orders
4.Confirm Order
Amount in Hand: Rs.0
Enter the Choice:2

Enter the Item Key:1
Enter the Quantity:1
Enter Where to deliver:1

1.View Menu
2.Order
3.View Orders
4.Confirm Order
Amount in Hand: Rs.0
Enter the Choice:_
```

Get Shortest Path

This is accessible only by the Delivery Person. This provides the delivery person the shortest path to his next delivery point enabling him to save time and fuel.

The following Screenshot shows a delivery person getting the shortest path to his next delivery point.

```
E:\The VPizza Company\Pizza Company\pizzacompany.exe
Enter user-name: delivery
Enter password:

Connected to:
The UPizza Company: Release 1.0.0.1.1
User: delivery

1.Orders
2.Deliver
3.Get Path to Next Location
Enter the Choice:3

Enter the Next Location based on Priority:4

Go along this path to reach the delivery point Faster.
0 4

1.Orders
2.Deliver
3.Get Path to Next Location
Enter the Choice:2

Delivering Items.
Delivering DragonChicken

1.Orders
2.Deliver
3.Get Path to Next Location
Enter the Choice:2

Delivering Items.
Delivering DragonChicken

1.Orders
2.Deliver
3.Get Path to Next Location
Enter the Choice:1

Items to be Delivered:
HotWings      1      1
1.Orders
2.Deliver
3.Get Path to Next Location
Enter the Choice:3

Enter the Next Location based on Priority:1

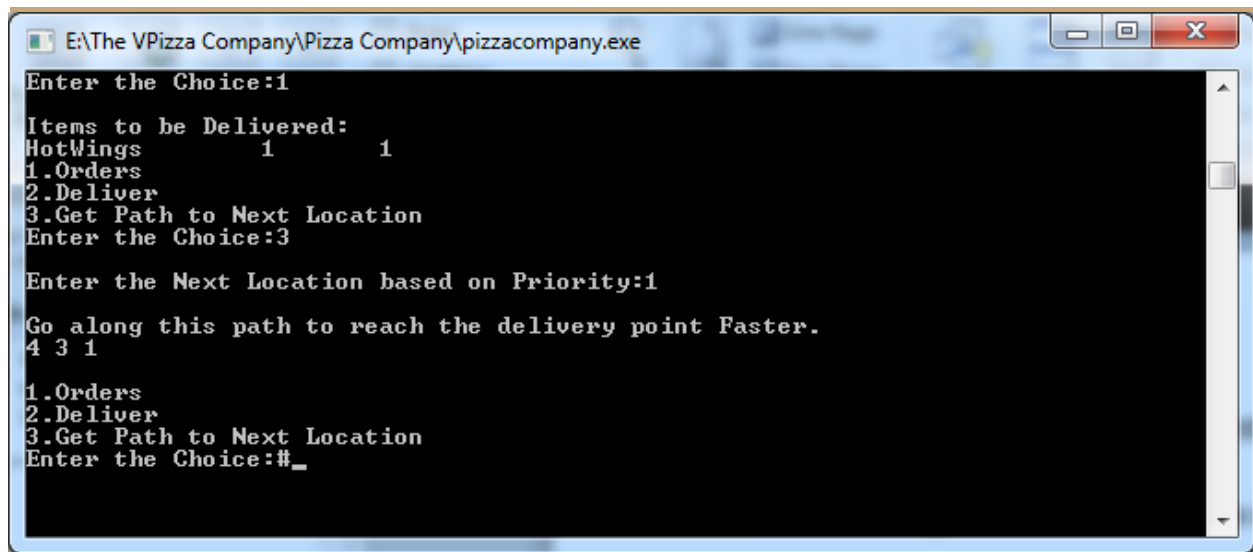
Go along this path to reach the delivery point Faster.
4 3 1

1.Orders
2.Deliver
3.Get Path to Next Location
Enter the Choice:
```

Logout

The '#' is used to log out of the System.

The following Screenshot shows a delivery person logging out of the System.



```
E:\The VPizza Company\Pizza Company\pizzacompany.exe
Enter the Choice:1
Items to be Delivered:
HotWings      1      1
1.Orders
2.Deliver
3.Get Path to Next Location
Enter the Choice:3
Enter the Next Location based on Priority:1
Go along this path to reach the delivery point Faster.
4 3 1
1.Orders
2.Deliver
3.Get Path to Next Location
Enter the Choice:#_
```



```
E:\The VPizza Company\Pizza Company\pizzacompany.exe
Connection closed to: delivery
Logged out Sucessfully.
Enter user-name: _
```

Conclusion

We have provided a management system to a Pizza Company to store relevant details about the stock and help save money and delivery time by using an algorithm which computes the shortest possible path between two locations.