

Discussion: I choose to implement the iterator design pattern since I figured it would make going through all of the different food options easier. I also implemented the decorator design pattern to allow further interaction with the items with the addition of adding sides to each item. Using these patterns somewhat streamlined the overall process for utilizing the data. Also using the aggregator was a tremendous help. The overall design was meant to give the customer additional options that could later be expanded upon in future updates. Utilizing the adapter design pattern to give the user the ability to add a tip

Extra classes and patterns:

Adapter Design Pattern:

TipAdapter, iTab: The iTab class is the interface for the tab and tipadapter which allows for an adapter to be added to tip. This adapter

Iterator Design Pattern:

iOrders, iMenuItem, iMenu, MenuItem, OrderItem, Menu, Orders: all of the “i” classes are interfaces used for iterating through items

Decorator Design Pattern: The menuitems and orderitems are used to allow the user to add a side to their order, the orderitem holds an additional value which correlates with the selected side dish. This is later used to read both the entree and the side and estimate to total cost

Walk through of program:

Step 1: upon opening you are greeted by the home screen

```
-----Sides LOADED!!!-----
```

```
-----MENU LOADED!!!-----
```

```
1. Look at menu  
2. Add item to order  
3. remove item from order  
4. Show current Tab  
5. Submit Order  
0. Exit  
Option:
```

Step 2: select an option

Step 2.1:

```
-----MENU-----
```

```
1 - Pizza - 10.99
```

```
2 - Burger - 8.49
```

```
3 - Salad - 6.99
```

```
4 - Wings - 7.99
```

```
5 - Fillet Mignon - 67.49
```

```
6 - Chicken Tenders - 4.99
```

```
-----  
1. Look at menu  
2. Add item to order  
3. remove item from order  
4. Show current Tab  
5. Submit Order  
0. Exit  
Option: |
```

Step 2.2: Select a food

```

Option: 2
-----MENU-----
1 - Pizza - 10.99
2 - Burger - 8.49
3 - Salad - 6.99
4 - Wings - 7.99
5 - Fillet Mignon - 67.49
6 - Chicken Tenders - 4.99
-----
What would you like?
Option: 

```

2.2.1: when selecting a food then enter y/n to pick a side dish
step

Step 2.4: will show your current tab;

```

Current Tab:

2 - Burger - 8.49

-----
1. Look at menu
2. Add item to order
3. remove item from order
4. Show current Tab
5. Submit Order
0. Exit
Option: 

```

```

Option: 4
-----
Current Tab:

1 - Pizza with Fries - 15.98

4 - Wings - 7.99
-----

```

STEP 2.5:

```
Total: $10.99
```

```
-----  
1. Look at menu  
2. Add item to order  
4. Show current Tab  
5. Submit Order  
0. Exit  
Option: 
```

```
-----  
Pizza with Fries - $15.98  
Wings - $7.99
```

```
Total: $23.97
```

```
-----  
Would you like to add a tip(y/n): y  
How much would you like to give: 20
```

2.5.2 add a tip