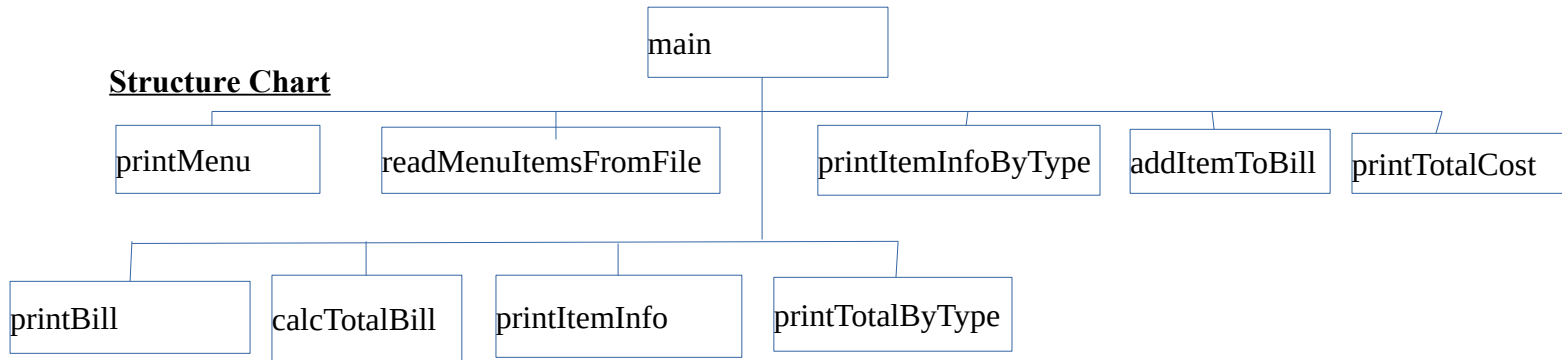


CSC 250 – Program Design Document

Structure Chart



Function Design (give the prototype and a short description for each function)

```
int printMenu(const string[], int, string &); // prints the menu to the screen
int readMenuItemsFromFile(MenuItem []); //reads the menuitems from the file taco_menu.txt
//and stores them in the given array
void printItemInfoByType(MenuItem [], ItemType); // menu option 1 - prints the item info
//of all the items matching the given itemtype
void printItemInfo(MenuItem); // prints the info of the given menuitem
void addItemToBill(MenuItem[], MenuItem [], int); // add the menuItem at the given index
//to the given position in the bill (menu,bill,index)
// also increments cumulativeSales of menuItems
void searchItems(MenuItem[], MenuItem[], string); //searches the first array for the given
string and fills the second array with the results
void printTotalCost(MenuItem[]); // prints the total cost of the items in the array
void printBill(MenuItem[], MenuItem[]); // finalizes the sale, prints the bill and clears
all selections
void printTotalByType(MenuItem[], ItemType); // calculates the total cumulative sales of
//the given item type
void calcTotalBill(MenuItem[], Bill &); // calculates the total cost and tax/tip of items
//in the array and fill the Bill with it
```

Time Estimate

| | Estimated Time | Actual Time |
|--|----------------|-------------|
| Program Design | <u>20</u> | |
| (list each function name and the time required to code each) | | |
| <u>printMenu</u> | <u>5</u> | |
| <u>readMenuItemsFromFile</u> | <u>10</u> | |

| | | |
|-----------------------------------|-------------------|--|
| <u>printItemInfoByType</u> | <u>10</u> | |
| <u>printItemInfo</u> | <u>5</u> | |
| <u>addItemToBill</u> | <u>5</u> | |
| <u>searchItems</u> | <u>10</u> | |
| <u>printTotalCost</u> | <u>5</u> | |
| <u>printBill</u> | <u>15</u> | |
| <u>printTotalByType</u> | <u>10</u> | |
| <u>calcTotalBill</u> | <u>5</u> | |
| Program Test | <u>15</u> | |
| Total Time | <u>115</u> | |