# CSC 250 – Program Design Document

```
                              ┌──────┐
                              │ main │
                              └──────┘

┌──────────────────┐   ┌──────────┐  ┌────────────┐  ┌──────────────────┐  ┌──────────────┐  ┌───────────┐
│displayFlavourData│art│modifyItem│  │listFlavours│  │displayStockValues│  │ displayPrompt│  │ clearFile │
└──────────────────┘   └──────────┘  └────────────┘  └──────────────────┘  └──────────────┘  └───────────┘
```

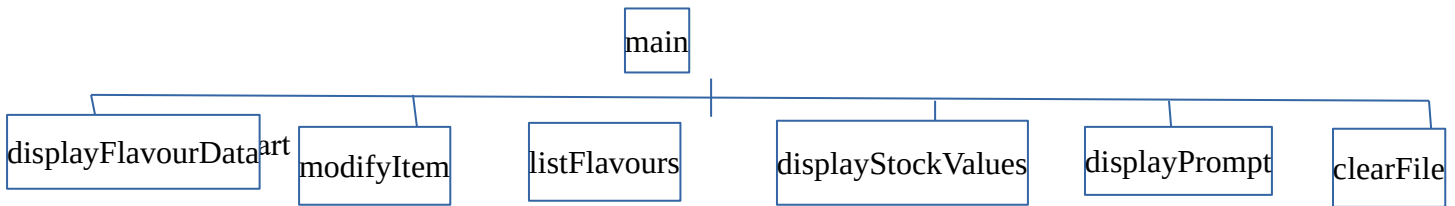**Function Design (give the prototype and a short description for each function)**

```cpp
void displayFlavourData(IceCream &); //prints the given ice cream data
void modifyItem(fstream &, bool); // modifies the next IceCream item in the file if bool
//if false, otherwise appends a new IceCream item
void listFlavours(fstream &); // reads all of the IceCream items from the file and prints
//the data on the screen
void displayStockValue(fstream &); // calculates the monetary value of all on hand
//IceCream and prints it to the screen
int displayPrompt(const string[], int, string &); // displays the contents of the array,
//of the given size, as a menu and prompts user for input stored in string
// returns value based on input type (0 => string, 1 => int, -1 => combo or failure)
void clearFile(fstream &); // clears the content of the file; destroys the stock record
void searchFlavours(fstream &); // prompts the user for an item search
void showStreamState(fstream &); // shows the various error states of the file stream
```

**Time Estimate**

|  | Estimated Time | Actual Time |
|---|---|---|
| **Program Design** (list each function name and the time required to code each) | **15** |  |
| **displayFlavourData** | **5** |  |
| **modifyItem** | **15** |  |
| **listFlavours** | **10** |  |
| **displayStockValue** | **10** |  |
| **displayPrompt** | **3** |  |
| **clearFile** | **3** |  |
| **searchFlavours** | **10** |  |
| Program Test | **20** |  |
| **Total Time** | **91** |  |