

The core of the data stored in the program is stored in two arrays:

```
int storage[][]; //30 size both dimensions
string airports[] //30 size
```

Storage holds the table of data read in from the file, containing information about the prices of each airport. Airports holds the names of the airports, and is parallel to the storage array in the sense airports [3] matches the airport prices in storage[3][].

```
void printThis(const int[][MAX_SIZE], int);
```

Debug function for printing stream results, not used in real program.

```
int readThisFile(int[][MAX_SIZE], string[]);
```

Reads the file from airports.txt, appends data to storage[][] and airports[].

*Open stream*

*Set int num to first line*

*If loop < num, append airport codes to airport[]*

*If loop > num, append airport data to storage[][]*

*Each row has num # of elements*

*Close stream, return num*

```
void writeTable(const int[][MAX_SIZE], const string[], int);
```

Prints the table of airports and prices from data in storage[][] and airports[].

*Two for loops*

*if first loop, use another for loop print airport names*

*print airport name based on first for loop*

*use first and second to print out prices in second for loop*

*storage[first][second]*

```
void writeDest(const int[][MAX_SIZE], const string[], int);
```

Prints the routes available from each airport

*First for loop*

*Create string array for storing matches*

*First inner for loop, count number of prices > 0, add to string array*

*Print this number after airport shortcode*

*Second loops iterates string array, prints out matched airports saved*

```
void writeList(const int[][MAX_SIZE], const string[], int);
```

Prints of routes possible between airports (no repeats)

*Double for loop*

*Copy storage to local array using std::copy*

*If value > 0, print out the route, then use storage[second][first] to delete second one*

```
void writeCheap(const int[][MAX_SIZE], const string[], int);
```

Prints the cheapest routes from each airport

*Double for loop*

*int Cheapest = MAX\_INT, if price is cheaper, replaces. After loop, prints out cheapest.*