```
// Chapter 7, Programming Challenge 20: Theater Seating
// Constants for rows and columns
// Suggested Function prototypes
// displayMenu
//  getChoice
// displaySeats
// displayPrices
// displaySales
// purchaseTicket

//suggestion for int main()
{
        //declaration section
        // Initialize theater with #'s -- all seats available
//suggestion use a for loop
        // Get seat prices for each of the ROWS rows
 //suggestion use a for loop
        //cout << "Please enter ticket price for Row " << setw(2) << row+1
        // Set print formats
        //cout << fixed << showpoint << setprecision(2);
 //suggestion use a do..while loop with a nested switch
     // to create a menu which calls each function.

        return 0;
}
```

```
// ********************************************************
// Function displayMenu                                   *
// Displays the menu of program options                   *
// ********************************************************
//   // Display menu of choices
//   cout << "\n\n\n\t\tC++ Theatre" << endl << endl;
//   cout << "\n\t1.  View Available Seats";
//   cout << "\n\t2.  View Seating Prices";
//   cout << "\n\t3.  View Ticket Sales";
//   cout << "\n\t4.  Purchase a Ticket";
//   cout << "\n\t5.  Exit the Program\n\n";
//   cout << "\n\tEnter your choice(1-5):  ";


// ********************************************************
// Function getChoice                                     *
// This function inputs, validates, and returns the       *
// user's choice                                          *
// ********************************************************
//suggestion use a while loop
                //cout << "Choice must be between 1 and 5. Please re-enter: ";
                //Return the choice
// ********************************************************
// Function displaySeats                                  *
// Displays a chart showing sold and available seats      *
// ********************************************************
        //cout << "\n\t\tSeats";
        //cout << "\n       12345678901234567890123456789O" << endl;
```

```
        //suggestion use a nested for loop to go through the array
        //      cout << "\n\n\n\tLegend:\t* = Sold";
        //      cout << "\n\t\t# = Available";
        //      cout << "\n\n\nPress the Enter key to continue.";
        //      cin.ignore();
        //      cin.get();
// ********************************************************
// Function displayPrices                       *
// Displays ticket prices for each row          *
// ********************************************************
         //cout << "\nTicket Prices By Row  " << endl << endl;
         // cout << "     Row    Price" << endl;
          //cout << "     ---    -----" << endl;
   //suggestion use a for loop
            //  cout << setw(8) << row+1 << setw(10) << price[row] << endl;
           // cout << "\n\n\nPress the Enter key to continue.";
           //cin.ignore();
           // cin.get();

// ********************************************************
// Function purchaseTicket                      *
// Handles ticket purchases                     *
// ********************************************************
        //      cout << "\n\t\t      C++ Theatre" << endl;
        //      cout << "\t\tTicket Purchase Opportunity" << endl << endl;
        //      cout << "Do you wish to view the chart of available seats \n"
        //           << "before making your selections (y/n)? ";
//suggestion after the decision
```

//use a do loop with a nested while

//within nested loop you'll need another decision to check to see of seat is available

//cout << "\nPlease enter desired row number (1-" << ROWS << "): ";

//cout << "Row must be between 1 and " << ROWS << ". Please re-enter: ";

//cout << "\nPlease enter desired seat number (1-" << COLS << "): ";

//cout << "Seat must be between 1 and " << COLS << ". Please re-enter: ";

// if the seat is available

// mark the seat is taken

// add to patron's ticket total

// add to patron's $ total

//cout << "\nPurchase confirmed\n";

// otherwise seat has been sold

//cout << "\nSorry. That seat has been sold.\n";

//cout << "\nWould you like to purchase another seat (y/n)? ";

// Display a purchase summary for the patron

//cout << "\n\nYou have purchased a total of " << numTickets << " tickets " << "for a total price of $" << totPrice;

// Add patron's purchases to theater total puchases

// **********

// Function displaySales *

// Displays total sales information *

// **********

//cout << "\n\nTotal Sales to Date: $" << totalSales << "\n\n";