SOLUTION TO EXERCISE 6 – NESTED LOOP CODING PROBLEM

The following source code provides one solution for the programming Exercise 6.

#include <iostream>  // Input/Output Stream Objects
#include <iomanip>   // Input/Output Stream Manipulators
using namespace std; // Specifies default namespace for objects

int main ()
{
    int COL,    /* Column Counter */
        DAY1,   /* Column of 1st Day of Month */
        QDAYS, /* Quantity of days in the month */
        DAYNUM; /* Day numeral to display on calendar */

    system ("cls");
    cout << "ONE MONTH CALENDAR\n";
    cout << "==================\n";
    cout << "Written by Randolph Gibson\n";
    cout << "Coded by Joe Student\n";

    cout << "Select from the menu below the numeral indicating which day of the week\n";
    cout << "should appear as the first day of the month on your calendar.\n";
    cout << "FIRST DAY OF MONTH MENU\n";
    cout << "1. Sunday\n";
    cout << "2. Monday\n";
    cout << "3. Tuesday\n";
    cout << "4. Wednesday\n";
    cout << "5. Thursday\n";
    cout << "6. Friday\n";
    cout << "7. Saturday\n";
/* Request and Store a Valid Menu Response */
do {
cout << "\nNumeral (1-7)? ";
cin >> DAY1; }
while (DAY1<1||DAY1>7);

/* Request and Store a Valid Response for QDAYS */
do {
cout << "\nHow many days are in this month (28-31)? ";
cin >> QDAYS; }
while (QDAYS<28||QDAYS>31);

/* Display Calendar Header */
cout << "\n+---------+---------+---------+---------+---------+---------+---------+
\n|   SUN   |   MON   |   TUE   |   WED   |   THU   |   FRI   |   SAT   |
\n+---------+---------+---------+---------+---------+---------+---------+
\n\nDAYNUM = 1;

while (DAYNUM<=QDAYS)
    { /* Body of Outside Loop (Step VI) to display one row of the calendar */
        for (COL=1; COL<=7; COL=COL+1)
            { /* Body of Inside Loop (Step A) to display one column/day of the calendar */
                cout << "\n"
                if (DAYNUM==1 && COL<DAY1 || DAYNUM>QDAYS) cout << "        ";
                else { cout << setw(9) << left << DAYNUM; DAYNUM=DAYNUM+1; } 
            } /* End of Inside Loop */
        cout << "\n"
        cout << "|         |         |         |         |         |         |         |
\n+---------+---------+---------+---------+---------+---------+---------+
    } /* End of Outside Loop */

system ("pause");       // Debugging support statement to be removed
return 0;       // Send a null error code to the parent process