```cpp
 1/**************************************************************************
 2* AUTHOR      : Andrew Gharios and Jiaqi Li
 3* STUDENT ID : 1449366 and 1220875
 4* LAB # 15    : Advanced selection in C++
 5* CLASS       : CS1A
 6* SECTION     : MW: 8am
 7* DUE DATE    : 4/19/21
 8**************************************************************************/
 9#include <iostream>
10#include <iomanip>
11#include <cstring>
12using namespace std;
13
14
15int main()
16{
17    /**************************************************************************
18     * CONSTANTS
19     * ----------------------------------------------------------------------
20     * OUTPUT - USED FOR CLASS HEADING
21     * ----------------------------------------------------------------------
22     * PROGRAMMER : Programmer's Name
23     * CLASS       : Student's Course
24     * SECTION     : Class Days and Times
25     * LAB_NUM     : Lab Number (specific to this lab)
26     * LAB_NAME    : Title of the Lab
27     * PROBLEM     : Problem number.
28     **************************************************************************/
29
30    const char PROGRAMMER[] = "Andrew Gharios and Jiaqi Li";
31    const char CLASS[]      = "CS1A";
32    const char SECTION[]    = "MW 8:00a - 10:30a";
33    const int  LAB_NUM      = 15;
34    const char LAB_NAME[]   = "Advanced selection in C++";
35    const int  PROB_NUM     = 4;
36
37
38    char classCode;
39    bool invalid;
40
41    /**************************************************************************
42     * OUTPUT - Class Heading
43     **************************************************************************/
44    cout << left;
45    cout << "***********************************************\n";
46    cout << "* PROGRAMMED BY : "  << PROGRAMMER << endl;
47    cout << "* "        << setw(14) << "CLASS"     << ": " << CLASS     << endl;
48    cout << "* "        << setw(14) << "SECTION"   << ": " << SECTION   << endl;
49    cout << "* LAB #" << setw(9)  << LAB_NUM     << ": " << LAB_NAME << endl;
50    cout << "* "        << setw(14) << "PROBLEM "  << ": " << PROB_NUM << endl;
51    cout << "***********************************************\n\n";
52    cout << right;
53
54
55    do
56    { //do while
57        cout << "Please enter the letter: ";
58        cin >> classCode;
59        classCode = toupper(classCode);
60        invalid   = classCode != 'F' &&
61                    classCode != 'S' &&
62                    classCode != 'J' &&
```

```cpp
63                 classCode != 'R';
64
65        if (invalid)
66        {
67            cout << classCode << " is an invalid input - Please try again!";
68            cout << endl;
69        }
70
71    }while(invalid); //do while
72    cout << classCode << " is valid - Thank you!";
73    return 0;
74
75 } //all
76
```