```cpp
1    using namespace std;
2
3    class test {
4    private:
5        test_question tQuest;                  // Temporary testing question object
6        test_progress tProg;                   // Temporary testing progres object
7        test_ui tUI;                           // Temporary testing UI iobject
8        void generateClassHeading(string);
9    public:
10       void executeTests();
11
12   };
13
14   void test::generateClassHeading(string filename) {
15       // Visual element, generates boxed headings for each class
16       // Requirements: N/A
17
18       // Get the length of the string, add 4 for the boxes
19       int c = filename.length() + 4;
20
21       // Some padding
22       cout << endl;
23       cout << endl;
24       cout << endl;
25
26       // Output the top of the box
27       for (int i = 0; i <= c; i++) {
28           cout << "-";
29       }
30
31       // Output a newline and then the file name with sides
32       cout << endl;
33       cout << "| " << filename << " |" << endl;
34
35       // Output the bottom of the box
36       for (int j = 0; j <= c; j++) {
37           cout << "-";
38       }
39
40       // One more line break, for luck
41       cout << endl;
42   }
43
44   void test::executeTests() {
45       bool finalTestStatus_questions = true;  // Whether the question tests passed
46       bool finalTestStatus_progress = true;   // Whether the progress tests passed
47       bool finalTestStatus_ui = true;         // Whether the ui tests passed
48
49       // Output the mode of the program, to avoid confusion
50       cout << "Tests executing..." << endl;
51
52       // Running tests on question.h
53       generateClassHeading("question.h");
```

```
54          finalTestStatus_questions = tQuest.executeTests();
55
56          // Running tests on progress.h
57          generateClassHeading("progress.h");
58          finalTestStatus_progress = tProg.executeTests();
59
60          // Running tests on ui.h
61          generateClassHeading("ui.h");
62          finalTestStatus_ui = tUI.executeTests();
63
64          // Output the final test status of question.h
65          cout << "Final Test Status (Question class): ";
66          if (finalTestStatus_questions) {
67              cout << "Succeeded!" << endl;
68          }
69          else {
70              cout << "Failed :(" << endl;
71          }
72
73          // Output the final test status of progress.h
74          cout << "Final Test Status (Progress class): ";
75          if (finalTestStatus_progress) {
76              cout << "Succeeded!" << endl;
77          }
78          else {
79              cout << "Failed :(" << endl;
80          }
81
82          // Output the final test status of ui.h
83          cout << "Final Test Status (UI class): ";
84          if (finalTestStatus_ui) {
85              cout << "Succeeded!" << endl;
86          }
87          else {
88              cout << "Failed :(" << endl;
89          }
90      }
```