```cpp
1:  ///////////////////////////////////////////////////////////////////////////
2:  // Faculty of Computing, Universiti Teknologi Malaysia
3:  // SCSJ1023- Programming Technique II
4:  // Semester 1, 2017/2018
5:  // Skill-based Test 1
6:  // October 12, 2017
7:  // Solution
8:  ///////////////////////////////////////////////////////////////////////////
9:  // Test run start: 5:56
10:
11: #include<iostream>
12: using namespace std;
13:
14: // Task 1: Complete the definition of class Box.
15:
16: class Box{
17:     private:
18:         int width, length, height;
19:
20:     public:
21:         Box(int w=0, int l=0, int h=0) { width=w; length=l; height=h;}
22:
23:         void setWidth(int w){width=w;}
24:         void setLength(int l){length=l;}
25:         void setHeight(int h){height=h;}
26:
27:         int getWidth()const{ return width;}
28:         int getLength()const{ return length;}
29:         int getHeight()const{ return height;}
30:
31:         int getVolume() const {return width*length*height;}
32:         // 6:00
33: };
34:
35: // Task 2: The following function is partialy given. The function is meant to print
36: //         Complete the code of the function.
37:
38: // Restart: 8 Oct, 2017, 3:11pm
39: void printBox(Box b)
40: {
41:     cout << "Dimension = " << b.getWidth() << " X " << b.getLength() << " X " << b.getHeigh
42:     cout << "Volume    = " << b.getVolume() << endl << endl;
43: }
44: // 3:12pm, 3:14pm
45:
46: //6:00
47: int main()
48: {
49:     // Task 3: Create an array to hold 5 boxes and initliize the first two boxes with s
50:
51:     Box boxes[5] = {{10,10,10}, {20,20,20} };  // 6:01
52:
53:     // Task 4: using a loop, set the dimensions the remaining boxes with inputs entered
54:
55:     for (int i=2; i<5; i++){
56:         int w, l, h;
57:         cout <<"Enter box dimension (w l h) => ";
58:         cin >> w >> l >> h;
59:
60:         boxes[i].setWidth(w);
```

```cpp
61:            boxes[i].setLength(l);
62:            boxes[i].setHeight(h);
63:        }
64:        // 6:04
65:
66:        // Task 5: Using an appropriate function and another loop, print all the boxes.
67:        // 3:12pm
68:        for (int i=0; i<5; i++)
69:            printBox(boxes[i]);
70:        cout << endl;
71:
72:        //3:14pm
73:
74:        // Task 6: Calculate and print the total volume of all boxes.
75:        int totalVolume = 0;
76:
77:        for (int i=0; i<5; i++)
78:            totalVolume += boxes[i].getVolume();
79:
80:        //6:05
81:
82:        cout << endl;
83:        cout << "Total volume = " << totalVolume << endl;
84:
85:        // 6:05
86:
87:        // Restart for compile 6:14
88:        return 0;
89: }
```