

CSE 143 Au00 Quiz 1 – October 5, 2000

The questions at the bottom of the page are about the following class definition and test program.

Header file `Blob.h`

```
class Blob {
public:
    Blob();
    Blob(int val);
    void update(int change);
    int value();
private:
    int n;
};
```

Implementation file `Blob.cpp` (unusual layout to save space on the page)

```
#include "Blob.h"

Blob::Blob() { n = 42; }
Blob::Blob(int val) { n = val; }
int Blob::value() { return n; }
void Blob::update(int change) { n = n + change; }
```

Test program `main.cpp`

```
#include "Blob.h"
int main() {
    Blob a, b;
    Blob c(17);
    b.update(2); // line 1
    c.n++; // line 2
    cout << a.value() << endl; // line 3
    cout << b.value() << endl; // line 4
    cout << c.value() << endl; // line 5

    return 0;
}
```

Describe briefly what happens when each labeled line in the test program is executed. If there is a compile- or run-time error (uninitialized variable, etc.), explain what's wrong.

Line 1: **Increases the value of b.n by 2, i.e., b.n = 44.**

Line 2: **Compile time error. n is a private member of class Blob, so cannot be accessed directly outside the class.**

Line 3: **Prints 42.**

Line 4: **Prints 44.**

Line 5: **Prints 17.**