

# Classes

May 7, 2020

## 1 Creating A Class

Define your own Date class, and provide the proper set of invariants.

```
In [ ]: #include <iostream>
        #include <cassert>

class Date {
public:
    int Day() { return day; }
    void Day(int d) {
        if (d >= 1 && d <= 31) day = d;
    }
    int Month() { return month; }
    void Month(int m) {
        if (m >= 1 && m <= 12) month = m;
    }
    int Year() { return year; }
    void Year(int y) {
        if (y >= 0) year = y;
    }

private:
    int day{1};
    int month{1};
    int year{0};
};

// Test in main
int main()
{
    Date date;
    date.Day(-1);
    date.Month(14);
    date.Year(2000);
    assert(date.Day() != -1);
    assert(date.Month() != 14);
}
```

```
    assert(date.Year() == 2000);  
    std::cout<<date.Day()<<"/"<<date.Month()<<"/"<<date.Year()<<"\n";  
}
```

Compile & Run

Explain

Loading terminal (id\_8urr4x6), please wait...