CMSC 131

Fall 2018

Announcements

- Project #2 has been posted
- Exam #1 two weeks from today

Let's Look at Project #2

- You will be making use of a class I wrote called MyGrid

  If g is a MyGrid object:

  - g.getHt() returns height of the grid
  - g.getWd() returns width of the grid
  - Use g.setColor(row, col, color) to color in a single square of the grid

- You will be writing a static method called drawFlag

- Allow me to demonstrate...

Type Casting with Primitives

double   WIDEST

float

long

int

short

byte   NARROWEST

- Examples of implicit casting
- Examples where Java won't do implicit casting
- Explicit casting:

```
int x = (int)3.9;
```

Details about Casting...

```
double x = 58.7;
int y = (int)x;
```

What value is stored in y? Has x changed?

Does this work?

```
int x = 3
int y = 4
double z = x / y;
```

How can we fix it with casting?

Self Test

Which of the following are OK, and which are errors?

```
long x = 3.5;
float x = 3;
float x = 3.7;
float x = 3.7F;
double h = 3.5F;
long x = 3;
int x = 3737373737373737377373;
long x = 373773377337373773737373;
long x = 373737373737373737373773L;
byte x = 12;      // this one surprises me
byte x = 155;
```

Intro to Object Oriented Programming

What is an object?

Examples (What kind of objects might there be)?

- Simple chess game that people play online
- Software to monitor banking transactions
- Simulation of the University of MD
- Project #2

State and Behaviors

- What is state?
- What are behaviors?

- Examples (What might comprise state and behaviors)?
  - BankAccount
  - Student
  - MyGrid
  - String
  - Scanner