Another Program

```java
public class Welcome {
    public static void main(String[] args) {
        String[] greeting = new String[3];
        greeting[0] = "Welcome to ";
        greeting[1] = "the second class of ";
        greeting[2] = "CS520 ";
        for (int i = 0; i < greeting.length; i++)
            System.out.println(greeting[i]);
    }
}
```

Setting Class Path

```
Bourne Shell
echo CLASSPATH=. > .bashrc
Cshell
setenv CLASSPATH .
```

Primitive Data Types

- boolean
- char
- byte
- short
- int
- long
- float
- double

Setting Execution Path

```
Bourne Shell
export PATH=/usr/local2/bin:
```

Cshell
```
export PATH=/usr/local2/bin:
```
Basic Programming Structures

Statements

Assignments

Blocks

Conditional Statements

While Loops

Do Loops

For Loops

Switch Statement

Statements

Assignments

Blocks

Conditional Statements

Same as C++

Classes and Objects

An Object is defined by its class.

Classes define methods.

Each object is an instance of a class.

A method is invoked on an object.

An object is defined by its class.

Strings

class StringsDemo {
public static void main(String[] args) {
    String myName = "Petronius"
    myName = myName + " Arbiter"
    System.out.println("Name= "+ myName)
} 
}

Strings

Simple Class: Celestial Bodies

class Body {
    public long idNum;
    public String name;
    public Body orbits;
    public static long nextID = 0;
}

Body mercury

A Simple Class: Celestial Bodies

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A Simple Class: Celestial Bodies

class Body {
    public long idNum;
    public String name;
    public Body orbits;
    public static long nextID = 0;
}

Body mercury
Creating Objects

```java
Body sun = new Body();
sun.idNum = Body.nextID++;
sun.name = "Sol";
// sun orbits earth

Body earth = new Body();
earth.idNum = Body.nextID++;
earth.name = "Earth";
earth.orbits = sun;
// earth orbits sun
```

Constructors

```java
class Body {
    public long idNum;
    public String name = "unnamed";
    public Body orbits = null;
    public static long nextID = 0;

    Body() {
        idnum = nextID++;
    }
}
```

Constructors (cont)

```java
Body sun = new Body(); // idNum is 0
sun.name = "Sol";
Body earth = new Body(); // idNum is 1
earth.name = "Earth";
earth.orbits = sun;
```
Continued

```java
public class Body {
    public long idNum;
    public String name = "unnamed";
    public Body orbits = null;
    private static long nextID = 0;
    {
        idNum = nextID++;
    }
    public Body(String bodyName, Body orbitsAround) {
        name = bodyName;
        orbits = orbitsAround;
    }
}

Continued (con)