AP Computer Science
Chapter 9 Notes (5)

Name: _____

WRAPPER CLASSES

Wrapper Class: Special classes that convert primitives into objects.

`Integer` class

java.lang.Integer
-value: int +MAX_VALUE: int +MIN_VALUE: int
+Integer(value: int) +Integer(s: String) +byteValue(): byte +shortValue(): short +intValue(): int +longVlaue(): long +floatValue(): float +doubleValue(): double +compareTo(o: Integer): int +toString(): String +valueOf(s: String): Integer +valueOf(s: String, radix: int): Integer +parseInt(s: String): int +parseInt(s: String, radix: int): int

`Double` class

java.lang.Double
-value: double +MAX_VALUE: double +MIN_VALUE: double
+Double(value: double) +Double(s: String) +byteValue(): byte +shortValue(): short +intValue(): int +longVlaue(): long +floatValue(): float +doubleValue(): double +compareTo(o: Double): int +toString(): String +valueOf(s: String): Double +valueOf(s: String, radix: int): Double +parseDouble(s: String): double +parseDouble(s: String, radix: int): double

`Character` class

java.lang.Character	
+Character(value: char)	Constructs a character object with char value.
+charValue(): char	Returns the char value from this object.
+compareTo(anotherCharacter: Character): int	Compares this character with another.
+equals(anotherCharacter: Character): boolean	Returns true if this character is equal to another.
+isDigit(ch: char): boolean	Returns true if the specified character is a digit.
+isLetter(ch: char): boolean	Returns true if the specified character is a letter.
+isLetterOrDigit(ch: char): boolean	Returns true if the character is a letter or a digit.
+isLowerCase(ch: char): boolean	Returns true if the character is a lowercase letter.
+isUpperCase(ch: char): boolean	Returns true if the character is an uppercase letter.
+toLowerCase(ch: char): char	Returns the lowercase of the specified character.
+toUpperCase(ch: char): char	Returns the uppercase of the specified character.

Constructing Objects from Wrapper Classes:

There are two constructors for each class that take one parameter. One constructor takes its equivalent primitive data type and the other takes a `String`.

Example 1: Constructing an Object from the Wrapper Classes

```
Double obj1 = new Double(4.5);
Double obj2 = new Double("4.76");

Integer obj3 = new Integer(19);
Integer obj4 = new Integer("8");
```

Example 2: "Auto-boxing" or "Auto-wrapping"

```
Double obj5 = 19.54;

Integer obj6 = 18;
```

Converting Back to Primitive Data Types:

Example 3: Using Methods

```
double d1 = obj1.doubleValue();

int i1 = obj3.intValue();
```

Example 4: "Auto-unboxing" or "Auto-unwrapping"

```
double d2 = obj2;

int i2 = obj4;
```

Other Methods to Know:

* `equals`

* `compareTo`

* `valueOf`

* "Parsing" Methods