sizeof

- sizeof function returns size of a data type in bytes.
- The result is system-dependent.
- The argument may be a data type:
  ```
  sizeof(int)
  // result is 4 on most systems
  ```
- The argument may be a variable:
  ```
  double salary;
  cout << sizeof(salary);
  // result is 8 on most systems
  ```
Variable Assignment and Initialization

- `<variable> = <rhs>`
- `=` is the assignment operator
- The left hand side must be a variable
- **Variable initialization:** assigning values in a variable definition:
  - `double bankRate = 0.15;`
  - `int age = 21;`

Arithmetic Operators

- Arithmetic operators manipulate numbers
- Unary operators have one operand/argument:
  - `-5`
  - `+9`
  - `-x`
- minus sign (unary op) is called the *negation operator*. 
Arithmetic Operators

- Binary operators have two operands:

<table>
<thead>
<tr>
<th>Operator</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>addition</td>
<td>x + y</td>
</tr>
<tr>
<td>-</td>
<td>subtraction</td>
<td>index - 1</td>
</tr>
<tr>
<td>*</td>
<td>multiplication</td>
<td>hours * rate</td>
</tr>
<tr>
<td>/</td>
<td>division</td>
<td>total / count</td>
</tr>
<tr>
<td>%</td>
<td>modulus</td>
<td>count % 3</td>
</tr>
</tbody>
</table>

- Integer division: if both operands are integers, the result has no fractional part

```
21 / 5    //value is: 4
21.0 / 5  //value is: 4.2
21 % 5    //value is: 1
```

Comments

- Single-Line Comments

// this text is ignored, to end of line

- Multi-Line Comments

/* Anything occurring between a slash star and a star slash is ignored. Even when spanning multiple lines. */

- Use comments to explain your code to a human reader who knows C++. 