Lecture 15

Ch 9.2
Topics

- cin.get
- cout.put
- cin.putback
- cin.peek
- cin.ignore
- <cctype> functions
- toupper
cin.get

- Pulls in only one character from command line input
- This character can be ‘\n’ or a space
- char nextSymbol;
- cin.get(nextSymbol);
cout.put

• Puts one character out to command line
• This can be a ‘\n’ or space
• cout.put(‘a’);
• Puts a value back into the cin input stream.
• The can be any value (doesn’t have to be the last value received)
• char a;
• a = cin.get();
• cin.putback(a);
cin.peek

• Allows you to check what the next character is without using it (without it being pull out of the stream)
• char a,b;
• a =cin.peek();
• cin >> b;
cin.ignore

• Allows you to ignore input up to a certain number of characters or until a certain character.
• cin.ignore(256,’\n‘);
### `<cctype>` functions

<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>toupper(x)</code></td>
<td>Returns the uppercase version of char (but as a value of type int)</td>
</tr>
<tr>
<td><code>tolower(x)</code></td>
<td>Returns the lower case version of char (int)</td>
</tr>
<tr>
<td><code>isupper(x)</code></td>
<td>Returns true if it is in uppercase</td>
</tr>
<tr>
<td><code>islower(x)</code></td>
<td>Returns true if it is in lowercase</td>
</tr>
<tr>
<td><code>isalpha(x)</code></td>
<td>Returns true if it is in the alphabet</td>
</tr>
<tr>
<td><code>isdigit(x)</code></td>
<td>Returns true if it is a digit (‘0’ – ‘9’)</td>
</tr>
<tr>
<td><code>isalnum(x)</code></td>
<td>Returns true if it is a digit or a letter of the alphabet</td>
</tr>
<tr>
<td>Function</td>
<td>Description</td>
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<tr>
<td>isspace(x)</td>
<td>Returns true if it is a whitespace character</td>
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<tr>
<td>ispunct(x)</td>
<td>Returns true if it is a punctuation.</td>
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<tr>
<td>isprint(x)</td>
<td>Returns true if it is a printable character</td>
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<tr>
<td>isgraph(x)</td>
<td>Returns true if it is a printable character that isn’t whitespace</td>
</tr>
<tr>
<td>isctrl(x)</td>
<td>Returns true if it is a control character.</td>
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</tbody>
</table>
toupper

• This can be tricky.
• Both toupper and tolower return int version of the character.
• cout << toupper(‘a’);
  – Instead try one of these
• char c = toupper(‘a’);
  – Or
• cout << static_cast<char>(toupper(‘a’));