Switch

Switch statements are statements that take a variable and execute an appropriate sequence of code depending on the contents of the variable. The variable is not limited to being an integer. If it is a char, for example, the purple numbers on right would be replaced with the char of your choice, such as case 'A': There are several points of syntax.

```
switch(variable) {
    case 1:    One line of code
               break;
    case 2: { More than one
               line of code
               with local var
               break; }
    case 3:    line(s) of code
    case 4: { lines of code
               break; }
    default:   one or more
               lines of code
}
```

The variable to be evaluated goes into the parenthesis on the right of the switch keyword. Let's say this variable is an integer. One of the cases will execute. If the variable holds the number one, then case 1: will be executed. If the variable holds the number five, then the default: case will be executed as there is no case for the number five. Each case is followed immediately by a colon.

After the colon, one or more lines of code may be written. For case 1: There is one line of code followed by a break; statement. The break; statement is present to get out of the switch statement. Otherwise, it would "fall through" to the next case(s). An example of this is with case 3: and case 4: If the variable contains the number three, then both cases will execute due to the omission of the break; statement.

There are able to be local variables that will be within the scope of curly brackets. This is evident in case 2: It is important to note that the curly brackets are required for local variables in switch statements or else the compiler will issue errors for the cases past the one with the variable.

case 3: and case 4: both show that you are able to write one or more lines of code with or without curly brackets. The exception to this is the above paragraph (introduction of local variable).

The default case is for any other value the variable holds. The same concept applies to char variables as well. If cases 1-4 were now cases 'A'-'D', then letters E-Z and a-z would trigger the default case. There is no break statement as this is the last case to execute with no others below it. Curly brackets here are optional.

One last point to make is all switch statements can be converted into if/else if/else statements. Not all if/else if/else statements can be converted into switch statements as switch statements cannot do comparisons.