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Programming in C++
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and C++ How To Program edited for our own purposes

switch

The syntax of the switch statement is a bit peculiar. Its objective is to check several possible constant values for an expression. Something similar to what we did with the concatenation of several if and else...if instructions.

It has the following form:

```
switch (expression)
{
  case constant1:
     group of statements 1;
     break;
  case constant2:
     group of statements 2;
     break;
  .
  .
  .
  default:
     default group of statements
}
```

It works in the following way: switch evaluates ***expression*** and checks if it is equivalent to ***constant1***, if it is, it executes ***group of statements 1*** until it finds the ***break*** statement. When it finds this ***break*** statement the program jumps to the end of the ***switch*** selective structure.

If expression was not equal to ***constant1*** it will be checked against ***constant2***. If it is equal to this, it will execute group of ***statements2*** until a break keyword is found, and then will jump to the end of the switch selective structure.

Finally, if the value of expression did not match any of the previously specified constants (you can include as many case labels as values you want to check), the program will execute the statements included after the default: label, if it exists (since it is optional).

Both of the following code fragments have the same behavior:

switch example	if-else equivalent
`switch (x) {`	`if (x == 1) {`
`  case 1:`	`  cout << "x is 1";`
`    cout << "x is 1";`	`  }`
`    break;`	`else if (x == 2) {`
`  case 2:`	`  cout << "x is 2";`
`    cout << "x is 2";`	`  }`
`    break;`	`else {`
`  default:`	`  cout << "value of x unknown";`
`    cout << "value of x unknown";`	`  }`
`  }`	

Notice that switch can only be used to compare an expression against constants. If you need to check ranges or values that are not constants, use a concatenation of if and else … if statements.