
switch Selection Structure

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Example

```
int grade; // one grade
int aCount = 0; // number of As
int bCount = 0; // number of Bs
int cCount = 0; // number of Cs
int dCount = 0; // number of Ds
int fCount = 0; // number of Fs

cout << "Enter the letter grades." << endl
     << "Enter the EOF character to end input."
     << endl;

// loop until user types end-of-file key sequence
while ((grade = cin.get()) != EOF)
{
```

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Example

```
switch ( grade )
{
  case 'A':
  case 'a':
    ++aCount;
    break;
  case 'B':
  case 'b':
    ++bCount;
    break;
  case 'C':
  case 'c':
    ++cCount;
    break;
  case 'D':
  case 'd':
    ++dCount;
    break;
}
```

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Example

```
case 'F':
case 'f':
    ++fCount;
    break;
case '\n':
case '\t':
case ' ':
    break;
default:
    cout << "Incorrect letter grade entered."
         << " Enter a new grade." << endl;
    break;
}
}
```

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cin.get()

- Used to read one character from the keyboard at a time
- Also reads new lines, spaces, and tabs as a character
 - '\n': new line
 - '\t': tab
 - ' ': space

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ASCII Values

- All characters have integer values called ASCII values
 - 'a': 97
 - 'b': 98
 - 'z': 122
 - 'A': 65
 - 'B': 66
 - 'Z': 90

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EOF

- An integer constant defined in the `<iostream>` library
- On Unix it is:
 - `<ctrl-d>`
- On Windows it is:
 - `<ctrl-z>`

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Change to switch

```
if (speed > 35)
{
    fee = 20.00;
}
else if (speed > 50)
{
    fee = 40.00;
}
else if (speed > 75)
{
    fee = 60.00;
}
```

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Examples

- Write an `if` statement that prints out the level of schooling. (0, none; 1 through 6, elementary; 7 through 8, middle school; 9 through 12, high school; > 12, college)

```
int levelOfSchooling;
cin >> levelOfSchooling;
```

- Write a `switch` statement to do the same

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