

## 4.13 C++ example: Domain name validation with loops

zyDE 4.13.1: Validate domain names.

A **top-level domain** (TLD) name is the last part of an Internet domain name like .com in example.com. A **core generic top-level domain** (core gTLD) is a TLD that is either .com, .net, .org, or .info. A **second-level domain** is a single name that precedes a TLD as in apple in apple.com

The following program uses a loop to repeatedly prompt for a domain name, and indicates whether that domain name consists of a second-level domain followed by a core gTLD. An example of a valid domain name for this program is apple.com. An invalid domain name for this program is support.apple.com because the name contains two periods. The program ends when the user presses just the Enter key in response to a prompt.

1. Run the program and enter domain names to validate. Note that even valid input is flagged as invalid.
2. Change the program to validate a domain name. A valid domain name for this program has a second-level domain followed by a core gTLD. Run the program again.

Load default template...

```
1 #include <iostream>
2 #include <string>
3 using namespace std;
4
5 int main() {
6     string coreGtld1;
7     string coreGtld2;
8     string coreGtld3;
9     string coreGtld4;
10    string inputName;
11    string searchName;
12    string theTld;
13    bool isCoreGtld;
14    // FIXME: Add variable periodCounter to count periods in a domain name
15    int periodPosition;    // Position of the period in the domain name
16    unsigned int j;
17
18    coreGtld1 = ".com";
```

apple.com  
APPLE.COM  
apple.comm

Run

Feedback?

A solution for the above problem follows.

zyDE 4.13.2: Validate domain names (solution).

Load default template...

```
1 #include <iostream>
2 #include <string>
3 using namespace std;
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5 int main() {
6     string coreGtld1;
7     string coreGtld2;
8     string coreGtld3;
9     string coreGtld4;
10    string inputName;
11    string searchName;
12    string theTld;
13    bool isCoreGtld;
14    int periodCounter;
15    int periodPosition;
16    unsigned int j;
17    unsigned int i;
18
```

apple.com  
APPLE.COM  
apple.comm

Run

Feedback?

How was this section?



Provide section feedback