Clockwise/Spiral Rule in C/C++ with Examples

Difficulty Level : Medium   ●   Last Updated : 22 Sep, 2021

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The Spiral/Clockwise Method is a magic tool for C/C++ programmers to define the meaning of syntax declaration in the head within seconds. This method was created by **David Anderson** and here is a short brief about how to apply this method.

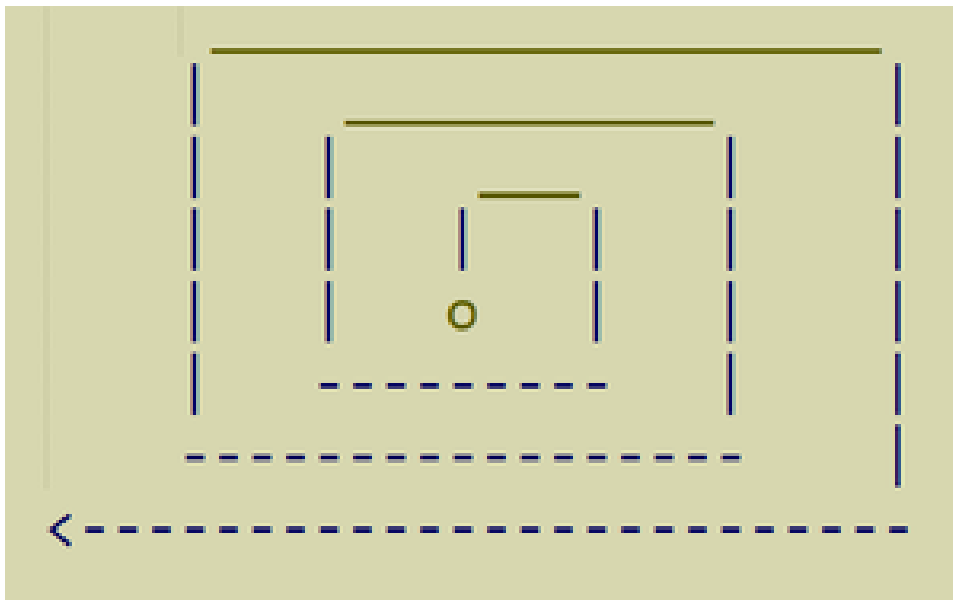While coding, when someone comes across a new unwanted syntax declaration:

```
string(const** f(int, void (*const p)(int)))(char[]);
```

The question here arises is what is the meaning of the function name "f"? There is an infamous way that will help one to deduce the meaning of this function "f" in seconds.

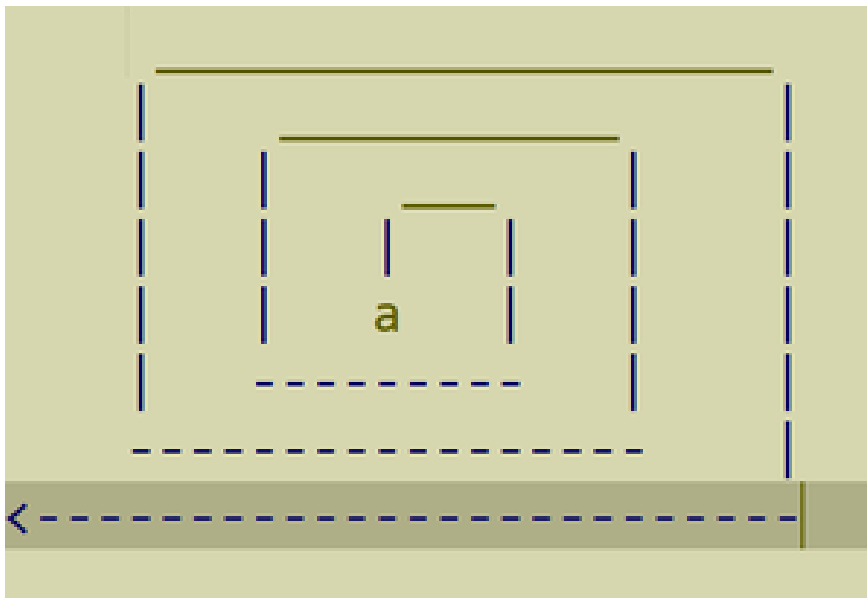**Approach:**
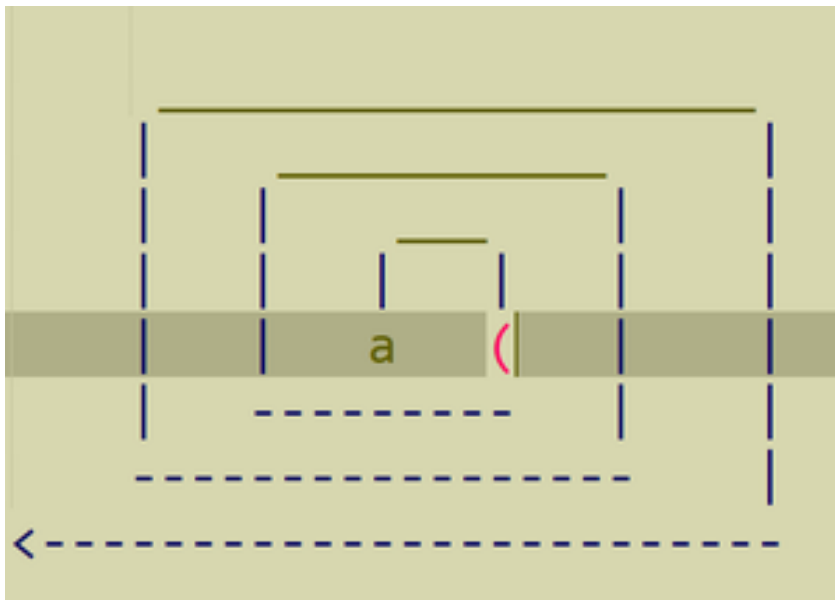
**Step 1:** Consider this Clockwise-spiral.

Step 2: Replace *O* with *a*.

Step3: Now, along the clockwise path, replace "|" with some words and try to get the meaning of syntax, and replace "|" with "(". The round brackets explain its function and say "'a' is a function".

Step 4: Consider seeing what is inside of the round brackets/function, so the open brackets (remember like from precedence of operators, brackets are always opened first) and go from left to right until the end of round brackets ")" are encountered. It can be said that "'a' is a function with the integer 'x' as an argument".
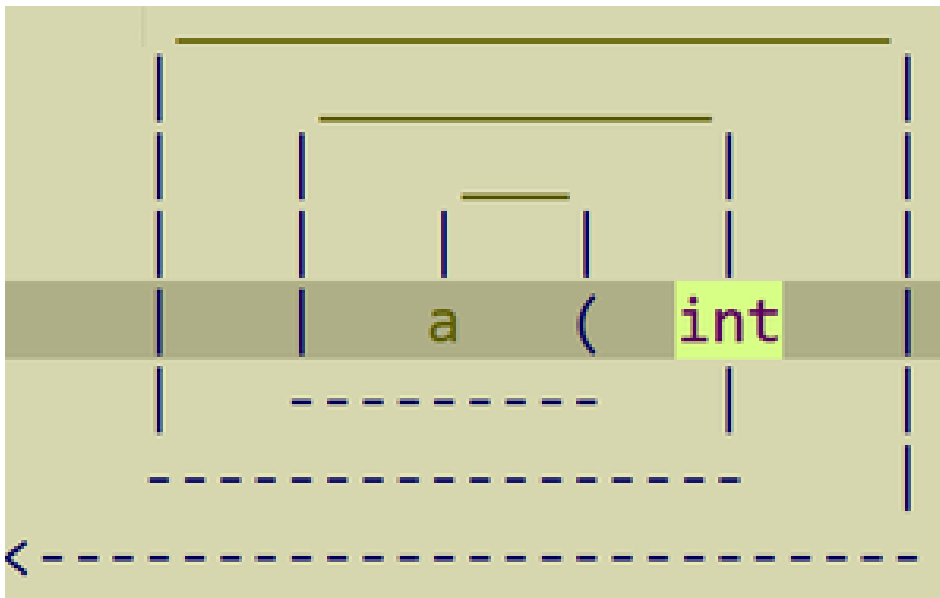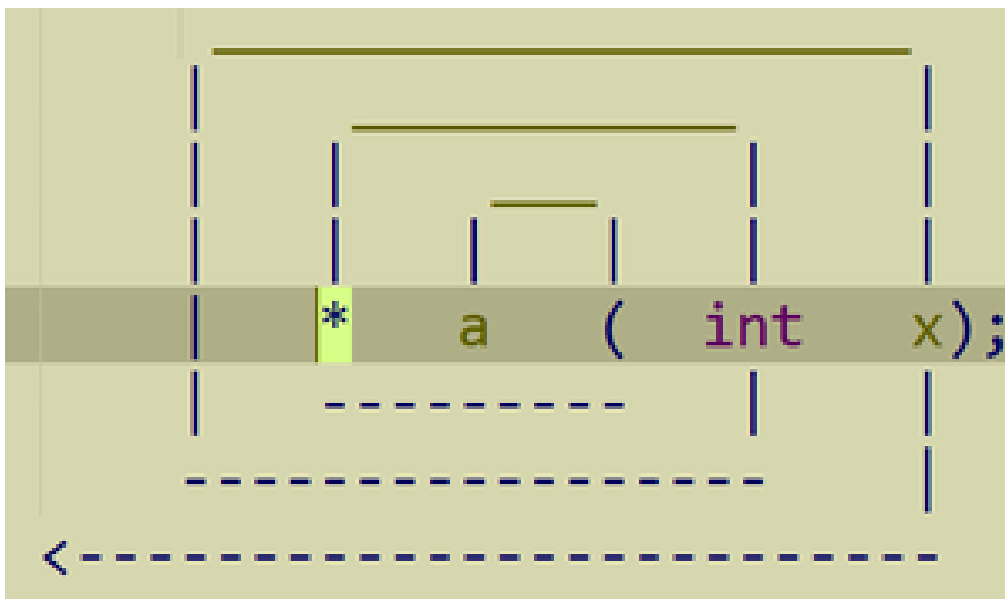

Step 5: Now come back to the first round bracket and continue the spiral path from "(". Replace "|" with "*". This means a return value and pointer. Here "'a' is a function with the integer 'x' as an argument which returns a pointer to ".
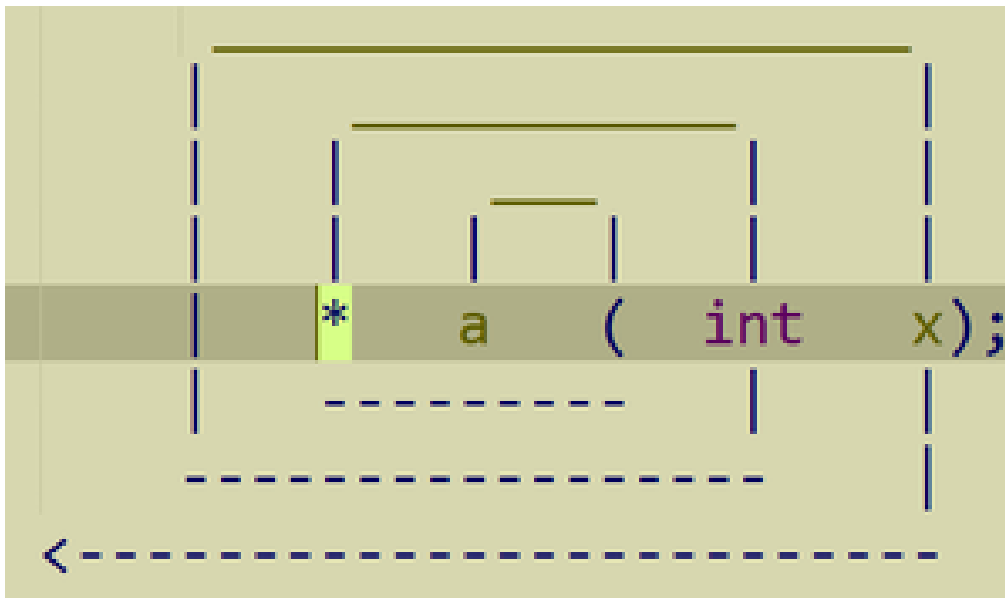
Step 6: Continue the spiral clockwise. One will encounter "int" which was already dealt with, so continue the spiral path.

Step 7: Replace "|" with "int". It can be said that "'a' is a function with the integer 'x' as an argument which returns a pointer to an integer".