

# QuincePAD(QPad)

Project Description

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## Synopsis

QuincePAD is a utility program(UP) that takes a specially-formatted plain text document into a short, concise text using the popular APIs of pastebin-like websites such as <http://pastebin.com>, <http://ideone.com> among others.

## Problem

A lot of people use Facebook groups, they ask questions, posts comments, help their friends and frenemies out on various programming problems. Unfortunately, Facebook does not (yet) have support for code indentation/formatting; so many of them just write the solution the only way they see fit: directly! A supposed-to-be elegant looking code become messed up that it is hardly readable.

## Solution

It would be nice to have a UP that takes a document(in plain text), transforms the text into a short, readable, meaningful and concise text while maintaining the original semantics of the text. PLUS some of my admin friends would be able to sleep now. Take for example, a user say:

I have the following code but its entering an infinite loop:

```
#include <...>
/* functions/namespaces/classes etc */
int main(int argc, char **argv)
{
    struct stack<Type> foo { elements };
    while ( !foo.empty() ){
        print(foo.top());
        /* foo.pop() */ Oops! I forgot to insert this
    }
    return EXIT_SUCESS;
}
Please help
```

after processing becomes

I have the following code but its entering an infinite loop: (<http://ideone.com/duiew7Tu>)  
Please help.

## DESIGN

QuincePAD chose its design philosophy from <http://cplusplus.com> by using its code format syntax and adding a minimal syntactic sugar. To designate the *code segment* from the rest of the text, the user uses the `[code] ... [/code]` tag. The ellipsis(...) in-between the two code tags is a representation of the code segment. By default, when no language is explicitly specified, QuincePAD uploads the code as a simple text, otherwise, the code is uploaded using the designated language(i.e `[code, lang="php", run=1, input="12 15"] ... [/code]`).

where *run* tells Qpad to run the program using *input* as an input mechanism(e.g. cin, scanf, etc) using "*php*" as the language to use...

The code tags can appear between a line(such that you may have "i have a problem `[code] foo...[/code]`) but it would not be necessary as it wouldn't make more sense uploading a-line code segment.

QuincePAD has two major components, the **core** and the **GUI**. Basically, the **GUI** is just the User Interface, nothing much to it. The **core** is the brain behind the program. How I wish to accomplish this task.

### The core

Right now, the core is sub-divided into four major components, namely,

- **the lexer** – this part of the core scans the text document, looks for the code tags, captures the corresponding open/close code tag and stores them in a container,
- **the not-so-parser** – this part of the core takes every element(token) in the container, tries to 'parse' the token and extracts the information associated with it and sends the result into the *SOAP API*,
- **the SOAP API** – the third part of the core that uploads this code to the pastebin website and returns the corresponding link,
- **the linker** – this so-called 'linker' rescans the text doc and replace the `[code] ... [/code]` by the *SOAP API* returned link.

The user can then copy/paste the text and use it wherever it is needed – Facebook, StackOverflow, Reddit, HackerNews etc.