# A Tiny Methodology for Student Projects

(SFD)

"I don't know where to start!"

You've been in class, you've learned at least the basics, and now it's time to do an independent project, and your brain freezes. How can you get started? How can you get organized?

Solutions to the general problem of how to set up, organize, and manage a project have a long history in programming. These solutions are called "methodologies". Of the making of methodologies there is no end, and to prove it, this note describes a new(-ish) methodology to help students get started and work through a project. This new(-ish) methodology is composed of only the finest components, stolen from a host of different existing methodologies, with links to some sources. Maybe.

Plagiarize,

Let no one else's work evade your eyes,

Remember why the good Lord made your eyes,

So don't shade your eyes,

Plagiarize, plagiarize, plagiarize...

But remember please always to call it "research".

"Lobachevsky" by Tom Lehrer

# Example Project

To demonstrate this methodology -- or actually, to have a real project to work on as I make this up -- I'm going to work through something comparable to a final masterpiece project as our students do them at RefactorU. The project is a social media fishing app that should eventually be able to be used either from the web, or as a mobile app on both IOS and Android devices.

The eventual app will be fairly complex, but we need a project that can be implemented by one person in one week to fit the "masterpiece" model. So we'll discuss how you can start with an idea, and not only figure out what it should eventually do, but also we need to identify then minimum viable product (usually called "the MVP") that will demonstrate the needed functions.

# Step One: the Elevator Pitch

An elevator pitch is a short concise statement of what you are building, and why people should care. There are many resources to help you to compose an elevator pitch ([this one](http://elevatorpitchessentials.com/essays/ElevatorPitch.html) is one I like, but Google is your friend). The basics are simple, though: an elevator pitch is a description aimed at an interested but uninformed audience, short enough to be delivered in an elevator ride -- basically 30 second or so, or one reasonably short paragraph.

Doing an elevator pitch, or some other kind of concise statement, at the start of a project is a trick I first used with IBM's WSSDM methodology. At Sun, we called them "one pagers", although like all bureaucratic processes it finally grew into a multipage document.

Why do it? Basically, to do two things: first, to focus what you plan to do onto one achievable goal; second, to limit what you're doing to something that can be done in the time available.

How to do it? The best way is to start out not trying to be concise. It's easier to cut words from a long discussion than to write something short immediately. So start out by brainstorming[[1]](#footnote-2) or free writing[[2]](#footnote-3) a statement, and work from there.

When you start to refine your elevator pitch, you want to refine it so that it's clear. A good guideline for this is to remember the acronym SMART.

A statement is SMART when it is:

* **SPECIFIC**:
* **MEAASURABLE**: you need to be able to observe progress as you go toward completing a task.
* **ACHIEVEABLE**: it's something that's actually possible to do. If your project requires Strong AI it's going to be hard to achieve.
* **REWARDING**: it has to have some observable benefit. "It's cool" can be enough for a personal project, but in most cases you're looking for "business value", something that achieves some business goal. For a RefactorU project, it's enough to just satisfy the project criteria.
* **TESTABLE**: There's a whole lot written about software testing and testability, but for our purposes, we're just looking for a procedure that unambiguously tells us either that the project was a success, or not.

So without further adieu -- and I'm sure you'll agree that we've had plenty of adieu already -- here's an elevator pitch for the app, which I'm creatively calling "Fisheries".

**Fisheries** is a social media application for fishermen, both hobbyists and professionals, that lets them manage their own fishing history, and potentially share that information via social media. Or not.

1. Don't know what brainstorming is? Look for the "Brainstorming" sidebar article. [↑](#footnote-ref-2)
2. Same sidebar. Freewriting is a way to brainstorm by yourself. [↑](#footnote-ref-3)