1. What is the primary reason why you won't get it right the first time?

The primary reason I won’t get it right the first time is the same reason that no one gets it right the first time. There isn’t one right solution. Tremblay and Pons said “A specific solution can be considered *good or* *bad,* not *true or false*.” [195] Interpreting right as true, you can’t have a right design, only a good or bad one. Budgen says, “in all design problems there are the following characteristics: no single ‘right’ solution; many factors and constraints to be balanced in choosing a solution; no one measure of ‘quality;’ and no particular process that can ensure that we can even identify an acceptable solution!” [209] Without a proper measure of quality, and without a single right solution, attempting to get it right the first time is a fruitless effort.

1. Is not getting the design right the first time a bad thing?

No. Failing to get the design “right” the first time is not a bad thing, despite what your employer may think. Design is an iterative process, and as you explore various solutions to your problem you will increase your understanding of the problem. This process also leads you to understand the trade-offs between various design approaches and you will be able to adapt your design to fit your new understanding of the problem. Without this iterative process you are left with a narrow view of what your software could be. If problems arise down the road while you are stuck in this narrow view you won’t understand the trade-offs of switching to another design, and are apt to make mistakes that would have been a lot easier to correct earlier on in the design process.

1. What is the primary thing you can do to reduce the time and effort necessary to get it right?

The primary thing you can do to reduce the time and effort necessary to get it right is to “fail often to succeed sooner.” [Deep dive] Don’t get stuck in one approach as you attempt to solve the problem. Early on, come up with a lot of possible solutions. Brainstorm, talk to people, prototype, and explore many different design options. Take a few steps down each path, fail, and learn from your failures. Each failure will help you get closer to your eventual successful design, and you will get there more quickly than if you had picked one route and the beginning and followed until you reached the dead-end sign.

1. What is the best way to know you have it right?

You know you have it “right” when you have produced “a workable (implementable) solution to a given problem” [Budgen 209] and it is “[fit] for purpose.” [Budgen 209] While measuring these qualities doesn’t always follow a straightforward process [Budgen 209] some hints that you are on the right track include: using common design patterns; analyzing your design for “functionality, reliability, usability, efficiency, maintainability, and portability; and using function-oriented and/or object-oriented measures to evaluate your design’s quality.” [Tremblay and Pons 199-200]