

Reducing Errors

There are many ways to reduce errors in your program a very basic one is reviewing your syntax before compiling to check for simple typographic errors in keywords. Another key step to reducing errors is making sure that you completely understand the problem; therefore, do not create an algorithm that accomplishes a different goal than the intended goal. A third example is to make sure you either use constructs you are familiar with or familiarize yourself with them before using them in a product.

Fixing Bugs

To fix a bug you can use tactics like incremental testing to narrow down where your bug is coming from. By using very specific unit tests you can figure out to a fairly high degree of certainty where the problem is within your algorithm. One of the more important things when fixing a bug is understanding what the problem is before trying to fix the problem, as having a weak understanding of a problem and trying to fix it normally leads to a band-aid solution or creating a bigger problem. Finally, making sure that you have found the source of the problem not a symptom created by some other larger issue is key as fixing a symptom may lead to problems further in your algorithm and more bugs.