**Errors when solving programming problems:**

* To jump at the problem **without much thinking.**
* To implement our own solution in an **unstructured way.**
* **To get stressed out** when things don’t work
* To be **too proud to research** solutions

**FIX**

* **Stay calm and slow down,** don’t just jump at a problem without a plan.
* Take a very **logical and rational approach** (programming is just logic, in the end…).

**4 STEPS TO SOLVE ANY PROBLEM**

1. Make sure you 100% understand the problem. **Ask the right questions** to get a clear picture of the problem.
2. **Divide and conquer:**  Break a big problem into smaller sub-problems.
3. Don’t be afraid to do as much **research** as you have to. (Google, stack overflow, MDN web docs moz://a)
4. For bigger problems, **write pseudo-code** before writing the actual code.

**THE DEBUGGING PROCESS**

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| --- | --- | --- | --- |
| **IDENTIFY:** becoming aware that there is a bug.  *-During development*  *-Testing software*  *-User reports during production*  *-Context: browsers, users, etc.* | **FIND:** isolating where exactly the bug is happening in code.  *-Developer console (simple code)*  *-Debugger (complex code)* | **FIX:** correct the bug  *-Replace wrong solution with new correct solution* | **PREVENT:** preventing it from happening again  *-Search for the same bug in similar code*  *-Writing tests using testing software* |