**Coding Standards**

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Face it, we all have standards. Whether it is for our friends, place of work, relationships, a home, or everyday tasks, there is a level of expectations set. So why should coding be any different? Coding standards exist throughout the corporate programming world and can vary from organization to organization. Adhering to coding standards is pivotal, whether the company is solely focused on software development or just part of the overall infrastructure.

Coding standards are rules that tell and show programmers how code should look (Khan, 2023). They help guide developers' actions and provide style guidelines to match one look, giving software a sleeker design. Different coding languages may call for different standards that are more fitting. By identifying business and development needs, coding standards can be customized to fit what works best while upholding essential standards that should always be included. The corporate programming world has different coding guidelines depending on the organization. However, some standards are generally applied to all software engineering practices. Some of those practices include limiting the amount of declared globals, and errors should return 0 or 1 to make debugging easier (GeeksforGeeks, 2019).

Coding standards are incredibly relevant to the software development lifecycle. Ensuring all code meets such standards may feel tedious or annoying, but improving code and the entire DevOps process is vital. Coding standards can apply to different parts of development. When working with local and global variables, constants, and functions, naming conventions should make sense and be understandable (GeeksforGeeks, 2019). When names are logically assigned, it is easier for others to find them when needed (GeeksforGeeks, 2019). Software code should include proper indentation to improve readability by properly spacing nested blocks and other elements (GeeksforGeeks, 2019). Some other general coding standards include "proper documentation in code, adding meaningful comments, properly handling errors, efficient use of data structures and algorithms, using version control, and including code testing" (Maatalla, 2023).

There are many reasons why we should apply coding standards that are credible and actionable. When developers release code for approval or review, it will be rejected if it does not meet the guidelines (GeeksforGeeks, 2019). By setting and meeting these guidelines, time is saved for developers and auditors. Including coding standards in development serves many purposes. Coding standards add a uniform appearance to code so that different developers write code that looks cohesive (GeeksforGeeks, 2019). Establishing coding standards also improves readability and maintainability, decreasing overall complexity (GeeksforGeeks, 2019). When developed code meets standards, it is easier to find issues or reuse code in other areas (GeeksforGeeks, 2019). These standards also improve efficiency and endorse more stable development processes (GeeksforGeeks, 2019). Any potential code changes will wait for a review before being implemented. The review process can be long, but when there are set ways of programming and reviews are coordinated, it improves the overall process. Those reviewing or auditing code can easily compare it to the standards to determine if it follows them. Coding standards are also helpful when tackling large tasks since duties can be separated during development (Khan, 2023). Coding standards decrease the likelihood of project failure, improve team collaboration, are cost-efficient since less time is spent reworking improperly formatted code, and enhance scalability (Khan, 2023).

The importance of executing coding standards in an organization cannot be overstated. Coding standards improve the application's or software's overall security by catching bugs or other potential security gaps (Khan, 2023). When code follows a format, it is easier to identify errors within it (Khan, 2023). These standards also allow any developer to work within a codebase since it is cleaner and easier to understand; they can follow along with it and match the style (Khan, 2023). Standards also make the development process more flexible since modules can be divided and assigned to different developers without fear of messing up their process (Khan, 2023).

The value of coding standards is tremendous. It improves the overall code performance, protecting it from vulnerabilities and making it easier for any developer to code under. Deciding on and implementing coding standards is an absolute staple in the DevOps process since it applies to development in monumental ways.

Here is a code formatting standard example that may be included in the coding standards for an organization (Patel, 2024):

"

# Non-standard formatting  
def example():  
 if True:  
 print("Hello, World!")  
  
# Standard formatting  
def example():  
 if True:  
 print("Hello, World!") "

**References**

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