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Definition: A programmer is someone who writes computer software by coding or programming.

-Duties of a programmer

The programmer plays a crucial technical role in software development projects, responsible for writing, testing and maintaining the source code that powers the application.

Interpret specification into actual code

A key duty is translating software specifications and requirements provided by project managers, clients or technical analysts into functioning code. This involves deciding on appropriate programming languages, architectures, data structures & algorithms. Creativity may be needed to solve problems within project constraints.

Testing and debugging of software

Thoroughly testing and debugging all code contributes heavily to product quality and user experience. Performing unit testing on individual code chunks, integrating the software pieces, and validating the full system through various testing techniques are standard. Documentation and inline comments also assist future maintenance.

Collaboration

There is usually significant collaboration with other programmers in case of large codebases, APIs and frameworks. Code reviews spread knowledge through the team while improving end solutions. Issue trackers are used to coordinate software additions, fixes and updates. Supporting technical infrastructure like build scripts and version control is also implemented.

Staying current

Staying up-to-date with new programming best practices, languages and frameworks via self-learning demonstrates value. Programming skill directly impacts workflow efficiency, problem diagnosis speed and technical debt. Delivering high quality code faster boosts overall team productivity in the race to release.

Summary

The programmer thus supports the foundation of software innovation through efficient coding, testing and troubleshooting skills applied within a collaborative environment to bring product requirements and specifications to functional reality, while striving for continuous individual growth through a passion for the craft. Their work products include source code files, components, apps and programs in forms executable by computer hardware.