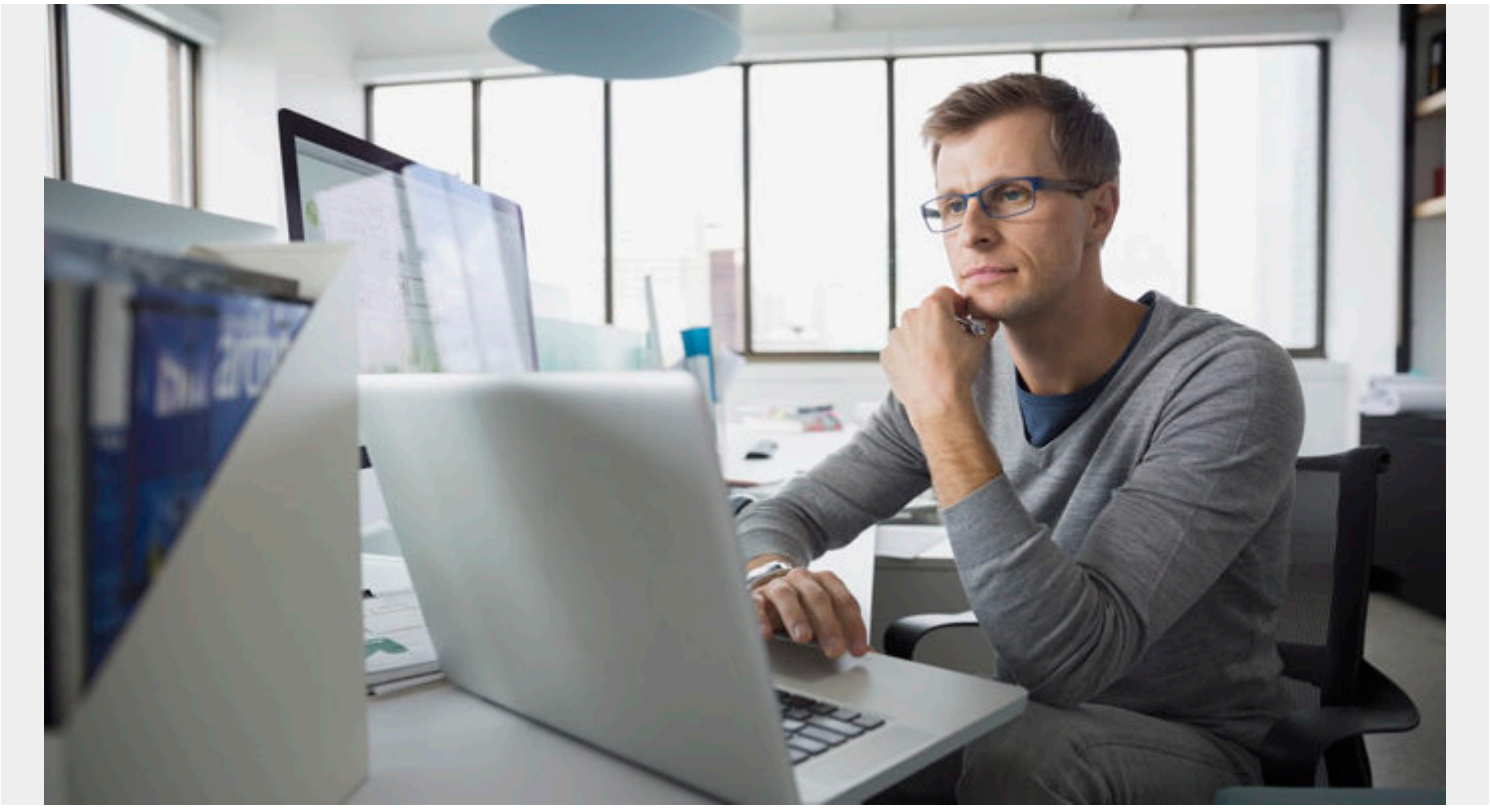
APPLICATION DEVELOPER: ROLES AND RESPONSIBILITIES TO BECOME A SUCCESSFUL DEVELOPER



With enterprise organizations feeling the pressure to deploy applications faster and more frequently, it's no surprise that demand for application developers is reaching an all-time high. But what exactly does an application developer do?

As the name suggests, an application developer creates and tests applications designed for electronic computing devices. He or she will typically specialize in a development area such as mobile phone applications, for example. The following article covers the field of application development, the roles and responsibilities as well as relevant industries, team structure, hard and soft skills required and more.

What is an application developer?

An application developer is a critical part of technical and/or project management teams responsible for ensuring user needs are met through the deployment and updates of software.

Application developers can be found in almost every industry sector, in any company interested in pushing new software and updates out to their end users on a routine basis. The application developer could be responsible for working with a team to deploy releases to internal or external clients.

These specialized developers typically will have one of the following designations on their team:

- Mobile App Developers
- Android Developers; or
- iOS Developers

These refer to the types of operating systems and devices application developers code for.

As specialists, application developers work on teams that typically include the following roles:

- Other software engineers
- Data scientists and analysts
- System analysts
- Graphic designers and UX specialists
- Web designers; and
- Project managers

In summary, the application developer is a specialized part of an integral team of software experts put together to design, create, deploy and update applications for any number of audiences that appeal to enterprise businesses.

What does an application developer do?

Application developers have a number of responsibilities that fall on their shoulders. These have to do with managing the application lifecycle, knowledge of certain principles in coding, support and collaboration efforts.

To learn more about each responsibility required for this role, here's a detailed look at the most common requirements asked of application developers:

Coding and Design

It stands to reason that a very basic tenant of application development is an in-depth knowledge of coding and application design principles. Depending on the specialization, application developers need to know the right programming language to code for the operating system they are designing for.

Typical programming languages include:

- Java / JavaScript
- C++
- Python; and
- PHP

However, for those tasked to design applications for a particular system, let's say Salesforce, they must be well-versed in the language specific to that platform, in this case, Apex.

Application Management

Among the most robust responsibilities of an application developer is application management. As the name implies, a soft skill that application developers must present is an organized ability to manage the application lifecycle, and people involved in the process, to ensure smooth deployment and post-deployment modifications.

Troubleshooting and debugging application

Troubleshooting is a term that defines the systematic way in which application developers must be able to identify, categorize, parse out and articulate problems that occur in applications. Troubleshooting takes place during the testing phase of the lifecycle and requires developers to collaborate with end-users at a high level to identify problems in the system.

Debugging should be thought of as a subset of troubleshooting which refers to the actual process of removing identified issues on a case-by-case basis. Both of these techniques are required of savvy developers.

Server engineering and admin responsibilities

An application developer for an enterprise organization may also be tasked with server engineering functions. This includes becoming familiar with the programming languages required to code database software and backend platform technology, networking servers, performing network tests, lofty experience with cloud servers, using cloud platforms like AWS and more.

In these instances, application developers may be required to not only code aspects of the server environment but admin platforms that are required for critical systems to function.

Application developer duties

Understanding the application deployment lifecycle

The application deployment lifecycle typically involves the following key stages: Initial Planning > Design > Development > Testing > Deployment > Support.

In each phase, an application developer is required to have specific knowledge and abilities to propel the phase into completion. These include activities around collaboration and project management. More specifically:

- Planning and Design - This stage requires specific input from both a project management and collaborative perspective. On the side of project management, the application developer must gather requirements that are based on the analysis of empirical data. For instance, the application developer should have access to end-user data that suggests what kind of issues the software sets out to solve. Armed with this information, they should have the analytical soft skills to deduce requirements. On the side of communication and collaboration is program design. This refers to building the architecture of the software and is generally spearheaded by the developer though he or she must incorporate input from other key stakeholders on the team.
- Development and Testing - This is where the fun begins! Based on the design requirements gathered in the previous step, the developers will begin the iterative steps of coding, testing and revising. As a leader in communication, the software developer must also work collaboratively with a panel of end-users to ensure quality assurance. Development and testing are the longest phases in the lifecycle.
- Deployment and Support - When the project is complete and tested, it will be deployed. At this point, the software developer has completed the major phases of the lifecycle, and the project management focus shifts to customer support. At the same time, the developer must

collaborate with other senior members of the IT department to assure asset management line items are being completed.

Monitoring, updates, and security

As mentioned above, an application developer's job doesn't end at deployment. Instead, once the application is rolled out, he or she must shift into a mode where they are prepared to monitor and release updates to the edition as needed. This is necessary for the application to run smoothly, and to reduce security risks.

Application developers must also understand security protocols that protect users from external threats, and stay on the cutting edge of the changing field of technology and cybersecurity. For instance, as more and more applications begin to explore the many uses of blockchain, application developers using will need to stay abreast of the many risks associated with this disruptive technology.

End-user support and training

As a critical part of the deployment cycle, application developers are required to manage all elements of training and support. This could mean collaborating with other team members to develop training videos, infographics or tutorials, conducting phone training and support, or live troubleshooting of issues.

This includes ensuring updates are pushed out to keep the programs running smoothly, and all security measures are met, as well as debugging issues as they arise.

Project management, collaboration, communication

All of the above-mentioned responsibilities, require an in-depth understanding and practical, foundational knowledge of project management, collaboration and communication. These skills, both hard and soft, are evident throughout the application lifecycle and continue to be relevant after deployment is complete.

Education and Career Path for Application Developers

At minimum, an introductory level application developer must have a Bachelor's Degree in Information Systems or a related field. From there, he or she can begin to acquire certifications to advance their career including. Examples of common certifications include the following:

- Amazon Web Services
- Cloudera (CCDH)
- Oracle (APEX)
- Puppet Labs
- Red Hat
- Salesforce.com
- Scrum Alliance; and
- Scrum.org

The starting salary for an application developer is around $88,000, worldwide. Someone starting out

as an Application Developer I can expect to move into paths like Application Developer II and III, Application Developer Manager, Java Developer Sr. or Senior Project Manager.

Attracting and Retaining Top Talent

In the United States, Application Developers earn a median salary upwards of $101,790, which is greater than the worldwide average. According to BLS data, this is an increase from $98,000 in 2015.

But aside from offering attractive compensation packages, application leaders must also focus on challenging developers, providing them with opportunities for growth. There are a few ways to create a highly engaged developer team as follows:

1. Foster a culture of innovation and project ownership - The latter is also known as intrapreneurship where a developer displays entrepreneurial creativity within the enterprise organization.
2. Keep teams small and agile - Smaller teams generally communicate better and it's easier to create clearly-defined roles to reduce confusion.
3. Create a merit-based reward system - It's time to do away with the predetermined advancement schedules (usually based on the number of years at the job) in favor of promoting based on performance.
4. Offer continuing education opportunities - Savvy developers know that they must continually upgrade their skill sets in order to remain marketable in a constantly evolving industry. Offering niche training as part of your benefits package is a great way to brand your company as a learning organization that believes in investing in its people.

Related reading

- What is a Citizen Developer
- Why Mainframe Developer is a Great Career Choice
- Java Developer Roles & Responsibilities
- Low-Code vs No-Code Explained
- Application Owner: Roles and Responsibilities