
Occupation-Specific Information - Web Developer

<https://www.onetonline.org/link/summary/15-1254.00>

Job-Description

Develop and implement websites, web applications, application databases, and interactive web interfaces. Evaluate code to ensure that it is properly structured, meets industry standards, and is compatible with browsers and devices. Optimize website performance, scalability, and server-side code and processes. May develop website infrastructure and integrate websites with other computer applications.

Sample of reported job titles: Technology Applications Engineer, Web Architect, Web Design Specialist, Web Designer, Web Developer, Webmaster

Tasks

- Write supporting code for Web applications or Web sites.
- Design, build, or maintain Web sites, using authoring or scripting languages, content creation tools, management tools, and digital media.
- Back up files from Web sites to local directories for instant recovery in case of problems.
- Select programming languages, design tools, or applications.
- Evaluate code to ensure that it is valid, is properly structured, meets industry standards, and is compatible with browsers, devices, or operating systems.
- Develop databases that support Web applications and Web sites.
- Perform Web site tests according to planned schedules, or after any Web site or product revision.
- Perform or direct Web site updates.
- Maintain understanding of current Web technologies or programming practices through continuing education, reading, or participation in professional conferences, workshops, or groups.
- Analyze user needs to determine technical requirements.

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- Respond to user email inquiries, or set up automated systems to send responses.
 - Renew domain name registrations.
 - Confer with management or development teams to prioritize needs, resolve conflicts, develop content criteria, or choose solutions.
 - Communicate with network personnel or Web site hosting agencies to address hardware or software issues affecting Web sites.
 - Collaborate with management or users to develop e-commerce strategies and to integrate these strategies with Web sites.
 - Document test plans, testing procedures, or test results.
 - Establish appropriate server directory trees.
 - Recommend and implement performance improvements.
 - Document technical factors such as server load, bandwidth, database performance, and browser and device types.
 - Develop or implement procedures for ongoing Web site revision.
 - Create Web models or prototypes that include physical, interface, logical, or data models.
 - Provide clear, detailed descriptions of Web site specifications, such as product features, activities, software, communication protocols, programming languages, and operating systems software and hardware.
 - Evaluate or recommend server hardware or software.
 - Monitor security system performance logs to identify problems and notify security specialists when problems occur.
 - Install and configure hypertext transfer protocol (HTTP) servers and associated operating systems.
 - Research, document, rate, or select alternatives for Web architecture or technologies.
 - Develop system interaction or sequence diagrams.
 - Design and implement Web site security measures, such as firewalls and message encryption.
 - Incorporate technical considerations into Web site design plans, such as budgets, equipment, performance requirements, and legal issues including accessibility and privacy.

Technology Skills

- Application server software – Docker Hot technology ; Red Hat OpenShift Hot technology ; Red Hat WildFly Hot technology ; Spring Boot Hot technology
- Business intelligence and data analysis software – IBM Cognos Impromptu Hot technology ; MicroStrategy Hot technology ; Oracle Business Intelligence Enterprise Edition Hot technology ; Qlik Tech QlikView Hot technology
- Cloud-based data access and sharing software – Dropbox; Google Drive Hot technology ; Microsoft SharePoint Hot technology ; Slack
- Cloud-based management software – Amazon Web Services AWS CloudFormation Hot technology ; IBM WebSphere Hot technology ; Splunk Enterprise Hot technology
- Communications server software – IBM Domino
- Computer based training software – Moodle
- Configuration management software – Chef; Perforce Helix software; Puppet Hot technology
- Content workflow software – Atlassian JIRA Hot technology ; Sitecore CMS
- Customer relationship management CRM software – Oracle Eloqua; Salesforce software Hot technology
- Data base management system software – Amazon DynamoDB Hot technology ; Apache Hive Hot technology ; Elasticsearch Hot technology ; MongoDB Hot technology
- Data base reporting software – Microsoft SQL Server Reporting Services SSRS; SAP Crystal Reports Hot technology
- Data base user interface and query software – Airtable; Blackboard software; Oracle JDBC Hot technology ; Transact-SQL Hot technology
- Data mining software – Google Analytics Hot technology
- Desktop communications software – Skype
- Desktop publishing software – Adobe Systems Adobe InDesign Hot technology ; Microsoft Publisher
- Development environment software – Apache Ant Hot technology ; Apache Kafka Hot technology ; Common business oriented language COBOL Hot technology ; Go Hot technology

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- Document management software – Adobe Systems Adobe Acrobat Hot technology
 - Electronic mail software – IBM Notes Hot technology
 - Enterprise application integration software – Atlassian Bamboo Hot technology ; Extensible markup language XML Hot technology ; Microsoft SQL Server Integration Services SSIS Hot technology ; Oracle Fusion Middleware Hot technology
 - Enterprise resource planning ERP software Hot technology – Microsoft Dynamics Hot technology ; NetSuite ERP Hot technology ; Oracle JD Edwards EnterpriseOne Hot technology ; SAP business and customer relations management software
 - Enterprise system management software – IBM Power Systems software
 - Expert system software – Ansible software Hot technology
 - File versioning software – Git Hot technology
 - Financial analysis software – Delphi Technology
 - Geographic information system – ESRI ArcGIS software Hot technology ; Geographic information system GIS software Hot technology
 - Graphical user interface development software – Salesforce Visualforce Hot technology
 - Graphics or photo imaging software – Adobe Systems Adobe Creative Cloud Hot technology ; JamBoard; SmugMug Flickr Hot technology ; Trimble SketchUp Pro Hot technology
 - Instant messaging software – Atlassian HipChat; Blink
 - Medical software – Epic Systems Hot technology
 - Metadata management software – CA Erwin Data Modeler
 - Network monitoring software – Nagios Hot technology ; Wireshark Hot technology
 - Object or component oriented development software – Advanced business application programming ABAP Hot technology ; Apache Spark Hot technology ; Objective C Hot technology ; Scala Hot technology
 - Object oriented data base management software – Hibernate ORM; PostgreSQL Hot technology
 - Office suite software – Microsoft Office Hot technology
 - Operating system software – Microsoft Windows Server Hot technology ; Oracle Solaris Hot technology ; Red Hat Enterprise Linux Hot technology ; UNIX Shell Hot technology

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- Portal server software – Apache HTTP Server Hot technology
 - Presentation software – Apple Keynote; Google Slides
 - Process mapping and design software – Microsoft Visio Hot technology
 - Program testing software – Hewlett Packard LoadRunner; JUnit Hot technology ; Selenium Hot technology ; Travis
 - Project management software – Confluence Hot technology ; Microsoft Project Hot technology
 - Requirements analysis and system architecture software – Unified modeling language UML Hot technology
 - Sales and marketing software – Google AdWords Hot technology ; HubSpot software Hot technology ; Marketo Marketing Automation Hot technology
 - Spreadsheet software – Microsoft Excel Hot technology
 - Storage networking software – Amazon Simple Storage Service S3 Hot technology
 - Transaction security and virus protection software – NortonLifeLock cybersecurity software
 - Transaction server software – Customer information control system CICS; Microsoft Internet Information Services (IIS)
 - Video conferencing software – Cisco Webex; Google Meet
 - Video creation and editing software – Adobe Systems Adobe After Effects Hot technology ; Flipgrid; Screencastify; YouTube Hot technology
 - Web page creation and editing software – Facebook Hot technology ; Google Sites; LinkedIn Hot technology ; Social media sites Hot technology
 - Web platform development software – Backbone.js Hot technology ; Microsoft ASP.NET Core MVC Hot technology ; React Hot technology ; Spring Framework Hot technology
 - Word processing software – 3M Post-it App; Evernote; Google Docs Hot technology

Detailed Work Activities

- Design integrated computer systems.
- Discuss design or technical features of products or services with technical personnel.

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- Implement security measures for computer or information systems.
 - Test computer system operations to ensure proper functioning.
 - Write computer programming code.
 - Analyze security of systems, network, or data.
 - Create databases to store electronic data.
 - Design software applications.
 - Develop computer or information security policies or procedures.
 - Develop procedures for data management.
 - Evaluate new technologies or methods.
 - Evaluate utility of software or hardware technologies.
 - Install computer software.
 - Maintain computer equipment or software.