

DACUM Research Chart for Web Developer

DACUM Panel

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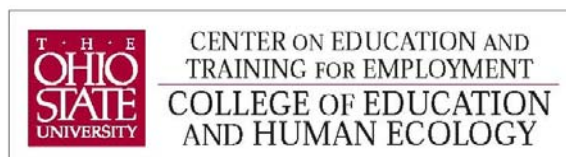
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DACUM Research Chart for Web Developer

Duties		← Tasks				
A	Identify Web Application Requirements	A-1 Gather preliminary application requirements	A-2 Review application requirements with stakeholders	A-3 Clarify requirements with stakeholders (e.g., wire frame, use cases)		A-4 Negotiate application requirements with stakeholders (e.g., feature content)
		A-11 Determine application infrastructure requirements	A-12 Identify non-functional application requirements	A-13 Identify security issues	A-14 Conduct risk analysis	A-15 Calculate time estimates
B	Design Web Applications	B-1 Create high-level design document(s)	B-2 Design object model(s)	B-3 Design database(s)	B-4 Design application infrastructure	B-5 Conduct functional research (e.g., task analysis, job shadowing)
		B-13 Secure design sign-off (e.g., go/no-go)				
C	Develop Web Applications	C-1 Maintain development tools (e.g., licensure, upgrade)	C-2 Write unit test cases	C-3 Write application code	C-4 Develop software build scripts	C-5 Conduct code reviews
D	Implement Web Applications	D-1 Produce installation plan	D-2 Build application software for QA environment	D-3 Install application for QA environment	D-4 Verify application required (e.g., acceptance testing)	D-5 Correct software & documentation defects
E	Support Web Applications	E-1 Review supported application(s)	E-2 Maintain documentation for system/application	E-3 Update support infrastructure procedures (e.g., operational, disaster recovery, change management)		E-4 Manage application changes (e.g., defects, enhancements)
		E-12 Redeploy application	E-13 Respond to security issues (e.g., viruses, hackers)	E-14 Maintain application operating environment (e.g., hardware & software)		E-15 Support user documentation maintenance
F	Manage Stakeholder Relationships	F-1 Respond to stakeholder inquiries (e.g., email, telephone)	F-2 Troubleshoot stakeholder inquiries/concerns (e.g., help desk)	F-3 Create stakeholder focus groups (e.g., ideation, new applications, new features)		F-4 Facilitate stakeholder focus groups
G	Perform Administrative Activities	G-1 Manage organizational communications flow (e.g., email, USPS, telephone)	G-2 Participate in HR activities (e.g., training, insurance, payroll)	G-3 Complete forms & reports (e.g., time, status, budget)	G-4 Conduct presentations for stakeholders (e.g., marketing, PR)	
H	Maintain Professional Competency	H-1 Create professional development plan	H-2 Read professional journals/books (e.g., online)	H-3 Participate in training	H-4 Earn professional designations/certifications	H-5 Participate in professional organizations

*Although the DACUM panelists perform the tasks of Web Developer, not all panelists perform every task, and not necessarily in the linear order of this chart.

A-5 Document stakeholder meeting results	A-6 Write high-level project plan	A-7 Secure user sign-off	A-8 Develop project budget	A-9 Secure preliminary project sign-off (e.g., go/no-go)	A-10 Write detailed application requirements (e.g., problem domain research)	
A-16 Identify human resources for project	A-17 Develop project plan (e.g., including project dependencies)		A-18 Secure project sign-off (e.g., go/no-go)			
B-6 Gather web content (e.g., data, text, graphics)	B-7 Design GUI	B-8 Create detailed design document(s)	B-9 Develop test plans (e.g., test cases)	B-10 Conduct design reviews	B-11 Select application support tools (e.g., test case generator)	B-12 Develop prototype(s)
C-6 Perform unit test(s)	C-7 Control software versions	C-8 Conduct usability testing	C-9 Write user documentation	C-10 Perform integration testing	C-11 Create documentation for system/application	C-12 Secure coding sign-off (e.g., go/no-go)
D-6 Secure approval for production installation (e.g., go/no-go)	D-7 Make network & security changes	D-8 Prepare software for production installation	D-9 Install software for production	D-10 Document operational procedures	D-11 Train stakeholders on procedures (e.g., monitoring, operational, change management)	
E-5 Record application changes (e.g., defects, enhancements)	E-6 Develop application performance metrics	E-7 Monitor application performance	E-8 Identify source of application defect(s)	E-9 Correct application defect(s)	E-10 Check-in application changes	E-11 Rebuild application
F-5 Participate in stakeholder focus groups	F-6 Provide formal & informal stakeholder training (e.g., SME)	F-7 Participate in stakeholder events (e.g., lunch with vendors, retreats)		F-8 Perform community service		
G-5 Respond to Request for Proposals	G-6 Provide input to grants & proposals	G-7 Prepare performance reviews (e.g., self & colleagues)	G-8 Participate in audit(s) (e.g., ISO 9000)	G-9 Perform housekeeping activities (e.g., workspace, work station)	G-10 Participate in staff interviews	
H-6 Present at conferences/seminars	H-7 Attend conferences/seminars	H-8 Teach classes (e.g., web-related technologies)	H-9 Mentor colleagues	H-10 Participate in technical forums & networking groups		

General Knowledge and Skills

Industry trends
Support tools (e.g., debuggers)
Management procedures
Coding standards
Accessibility standards & regulations
Extreme programming (XP)
Pairing programming
Interpersonal skills
Diplomacy skills
Time management skills
Communication skills (e.g., oral, written, & presentation)
Client/server – web technologies (e.g., HTML, PHP, ASP, XHTML)
User Interface (UI) designer
Project management skills
Platform proficiency
Negotiation skills
Troubleshooting skills

Tools, Equipment, Supplies and Materials

General office supplies
Software development tools
Software debugging tools
Stock photography (flash applications, Flickr, clip art, Shutterfly, custom fonts)
Project tracking software (e.g., Microsoft Project, Open Office)
Graphic tools (e.g., Photoshop)
Problem management tools

Acronyms

GUI	General User Interface
XHTML	Extensible Hypertext Markup Language
IT	Information Technology
PHP	Hypertext Preprocessor
PR	Public Relations
QA	Quality Assurance
SME	Subject Matter Expert

Worker Behaviors

Punctuality
Manner
Courteous
Respectful
Proactive
Independent worker
Self starter
Honest
Team player
Detail oriented
Creative
Politically & culturally sensitive
Flexible

Future Trends and Concerns

Greater budget oversight & accountability
Changing technology & the speed of change
Skilled worker shortage
Outsourcing IT
Platform integration and/or change
Multicultural & globalization of technology
Security
Communication technologies (e.g., wireless)
Open Source
Virtualization
Social networking