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**National Competency Standards**

**For**

**Web Developer**

## Introduction

The National Competency Standards are written specifications of skill and knowledge competencies required in a particular trade. The competency standards are developed in collaboration with United Nations Industrial Development Organization (UNIDO), GIZ and National Vocational & Technical Training Commission (NAVTTTC).

Industry experts from the relevant industries from different geographical locations across Pakistan were consulted during the development process of these competency standards to ensure input and ownership of all the stakeholders. NAVTTTC approves these competency standards on the recommendation of Industry Advisory Group (IAG) for the Gemstone & Jewelry Sector.

The National Competency Standards could be used as a referral document for the development of curricula to be used by training institutions.

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## **STRUCTURE OF COMPETENCY STANDARDS**

Competency Standards are performance specifications that identify the knowledge and competencies an individual needs to succeed in the workplace. A competency standard has the following elements:

### **Competency Unit**

A competency unit is a statement which points to an outcome that employers will value and is observable and assessable. The competency unit is derived during the process of Occupational Analysis and is called 'Task Statement' in a DACUM Chart.

### **Overview**

An overview is a description of the competency standard. It briefly describes the purpose and linkage of the competency unit with a job role.

### **Performance Criteria**

Performance criteria statements set the standard of performance of a task in a job role. It describes 'how well' a task or competency unit is to be performed. It should be observable and written in a measurable term. It is one of the basic criteria for conducting assessment of the performance of a tradesman.

### **Knowledge and Understanding**

Supporting knowledge and understanding statements include the essential knowledge and understanding, covering facts, principles, procedures, processes and methods. These statements cover the basic knowledge and understanding that is required to master a competency unit in an occupation.

### **Tools & Equipment**

All the related tools, equipment and machinery that are required to perform a particular competency unit or task are listed under this heading.

## COMPETENCY MAP

### A. Prepare Frontend / Interface

<b>A1.</b> Prepare Resources	<b>A2.</b> Prepare Mock-ups	<b>A3.</b> Perform Design approval	<b>A4.</b> Perform Mock-up Conversion	<b>A5.</b> Perform UI Enhancements (J Query, Javascript, Forms, HTMLs)	
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### B. Prepare Backend / Databases

<b>B1.</b> Prepare Architecture	<b>B2.</b> Perform Web / DB server installation	<b>B3.</b> Create Database	<b>B4.</b> Perform Coding	<b>B5.</b> Perform Data base Optimization	
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### C. Perform Deployment

<b>C1.</b> Perform web hosting	<b>C2.</b> Perform Content management system/ application installation	<b>C3.</b> Perform content upload	<b>C4.</b> Perform Search Engine optimization	<b>C5.</b> Perform Security Measure	<b>C6.</b> Perform Testing
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### D. Perform Maintenance

<b>D1.</b> Perform updates	<b>D2.</b> Perform upgrades	<b>D3.</b> Perform Bug fixing	<b>D4.</b> Perform Enhancement/Modification		
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### F. Perform Verbal / Written Communication

<b>F1.</b> Communicate with Managers	<b>F2.</b> Communicate with peers	<b>F3.</b> Communicate with clients			
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## 1. Unit Title: Prepare Frontend / Interface

Competency Unit	Overview	Performance Criteria	Knowledge & Understanding	Tools & Equipment
A1. Prepare Resources	This task includes arrangement of the machines/ PCs and it requires software and/or hardware.	<p><i>You must be able to:</i></p> <p>P1. Ensure latest technologies required for development.</p> <p>P2. Ensure availability of system specifications i.e. hardware, RAM, hard drive, processor.</p> <p>P3. Ensuring the availability of required software/ licenses.</p> <p>P4. Ensuring that the development environment is ready.</p> <p>P5. Ensuring appropriate physical environment for development.</p>	<p><i>You must know and understand:</i></p> <p>K1. Understanding and knowledge of required software (Adobe Photoshop, Dreamweaver etc)</p> <p>K2. Understanding and knowledge of system operations (platforms, operating systems etc).</p> <p>K3. Understanding and knowledge of latest technologies required for web development.</p> <p>K4. Install the required platform and software and setup required hardware</p>	<ul style="list-style-type: none"> <li>• PC (standard)</li> <li>• Web server</li> <li>• Licensed software. (Corel Draw, Photoshop)</li> <li>• Internet</li> <li>• (OS) Microsoft Windows.</li> </ul>
A2. Prepare	User Interface design that will	<i>You must be able to:</i>	<i>You must know and</i>	Hardware:

Mock-ups	<p>serve two purposes</p> <ul style="list-style-type: none"> <li>To help the developers understand frontend requirements.</li> <li>To let the client know how exactly will the end product look like.</li> </ul>	<p>The developer will be able to</p> <p>P1. Correctly interpret the client's User Interface requirements.</p> <p>P2. Reflects Aesthetics and color theory as per customer trade dress.</p> <p>P3. Provide well defined information control flow to the client/end user.</p> <p>P4. Provide room for future enhancements/modifications for website/application maintenance.</p> <p>P5. Clearly provide UI features from developer's perspective.</p>	<p><i>understand:</i></p> <p>K1. Use Graphic Designing Tools( Adobe Photoshop, Coral Draw)</p> <p>K2. Understand Color theory</p> <p>K3. Understand User Interface Designs</p> <p>K4. Understanding of customer requirements</p> <p>K5. Understand End user behavior.</p>	<ul style="list-style-type: none"> <li>PC (standard)</li> </ul> <p>Software:</p> <ul style="list-style-type: none"> <li>Operating system i.e. Windows (XP, Series)</li> <li>Designing (Adobe Photoshop, Corel Draw)</li> </ul>
A3. Perform Design Approval	<p>This includes approval of the Mock-ups from the client. All the changes and modification requested by the</p>	<p><i>You must be able to:</i></p> <p>P1. Ensuring the proper presentation of the design mockups and documentation</p>	<p><i>You must know and understand:</i></p> <p>K1. Knowledge of graphic designing</p> <p>K2. understanding of end</p>	<ul style="list-style-type: none"> <li>Graphic designing tool i.e. Photoshop</li> <li>Web browser/Image viewer</li> </ul>

	<p>client are incorporated into the mockup. Mockup is finalized for the next phase, which is conversion of the mockup to User Interface/ Frontend.</p>	<p>P2. Ensuring the compliance of the design with the client requirements.</p> <p>P3. Ensure the room for enhancements as desired by the client.</p> <p>P4. Ensuring the multiple design options for the client.</p> <p>P5. Translating the feedback of the client into the final design.</p>	<p>user/client requirements.</p> <p>K3. Requirements collection and verification.</p> <p>K4. Use the designing software to make necessary changes to the mock-up on discussion with the client</p>	
A4. Perform Mock-up conversion	<p>Once the mockup is approved, it is then converted to the design. The design is then implemented and the required User Interface is developed.</p>	<p><i>You must be able to:</i></p> <p>P1. Ensure precise and accurate slicing of mockup.</p> <p>P2. Ensure the necessary coding required for conversion.</p> <p>P3. Ensure that the converted design is compatible across different browsers and platforms.</p>	<p><i>You must know and understand:</i></p> <p>K1. Understanding of graphic designing tool i.e. Adobe Photoshop.</p> <p>K2. Good knowledge of CSS, HTML and JQuery.</p> <p>K3. Knowledge of design patterns.</p> <p>K4. Understanding of</p>	<ul style="list-style-type: none"> <li>• Graphic designs tool i.e. Photoshop</li> <li>• Editor i.e. Dream weaver</li> <li>• Web browser and web server.</li> </ul>

		<p>P4. Ensure that all elements are functional.</p> <p>P5. Ensure that the code is w3c validated.</p>	<p>different platforms in terms of the look and feel of the frontend.</p>	
<p>A5. Perform UI Enhancements (jQuery, Javascript, Forms, HTMLs)</p>	<p>After the mockup conversion to the preliminary design, certain enhancements are made in terms of colors, form fields, checks and a number of other improvements in terms of look and feel</p>	<p><i>You must be able to:</i></p> <p>P1. Ensure that the UI adheres to the actual requirements</p> <p>P2. Ensure that the information control flow is smooth</p> <p>P3. Ensure compliance of the User Interface to the basic security standards.</p> <p>P4. Ensure that all the forms are error free and there is no unusual behavior.</p> <p>P5. Ensure that the User interface is compliant to the basic web standard, and is based on market trends.</p>	<p><i>You must know and understand:</i></p> <p>K1. Use of editors/ coding tool i.e. Dream weaver.</p> <p>K2. Programming language, skill and the ability to write code</p> <p>K3. Knowledge of design patterns.</p> <p>K4. Knowledge of different platforms, such as iOS and Linux.</p>	<ul style="list-style-type: none"> <li>• Editor i.e. Dream weaver</li> <li>• Graphic design tool i.e. Adobe Photoshop</li> <li>• Web server</li> </ul>



## 2. Unit Title: Prepare Backend / Databases

Competency Unit	Overview	Performance Criteria	Knowledge and Understanding	Tools & Equipment
B1. Prepare Architecture	The system design is architecture underlying the flow of information and control. All system components and their relationships are identified.	<p><i>You must be able to:</i></p> <p>P1. Ensure the architecture accurately defines all system entities</p> <p>P2. Ensure the architecture is modular to allow system reliability and scaling.</p> <p>P3. Ensure the design and architecture is properly documented.</p> <p>P4. Ensure the design is based on set industry standards and approaches.</p> <p>P5. Ensure the architecture does not have duplication.</p>	<p><i>You must know and understand:</i></p> <p>K1. Understanding about modeling of DFD's and ERD's</p> <p>K2. Knowledge and understanding of UML.</p> <p>K3. Knowledge and understanding of data bases.</p> <p>K4. Knowledge and understanding of data base relationship (uni, bi, tri)</p>	<ul style="list-style-type: none"> <li>• Internet</li> <li>• UML</li> <li>• Microsoft Visio</li> </ul>

B2. Perform Web/DB server installation	This includes preparation of the server for the development environment which helps the developer to do the actual development.	<p><i>You must be able to:</i></p> <p>P1. Ensure the installation of required web server.</p> <p>P2. Ensure the installation of required database.</p> <p>P3. Ensure the connectivity of application with database.</p> <p>P4. Ensure that the web server and database are up and running.</p> <p>P5. Ensure the security of the web server and database server is taken care of.</p>	<p><i>You must know and understand:</i></p> <p>K1. Understanding of various web servers and data base servers ( i.e. Apache, XAMP server, IIS server, MySQL etc. )</p> <p>K2. Install and configure web server and database servers.</p> <p>K3. Understanding about the connectivity and accessibility of the web server and database server.</p>	<ul style="list-style-type: none"> <li>• Web server</li> <li>• Internet</li> <li>• Licensed software</li> </ul>
B3. Create Database	Database, being the core part of the website/ application is created in the DBMS	<p><i>You must be able to:</i></p> <p>P1. Ensure proper relationships are defined based on the entities involved.</p> <p>P2. Ensure compliance of</p>	<p><i>You must know and understand:</i></p> <p>K1. Understanding of the database system.</p> <p>K2. Understanding</p>	<ul style="list-style-type: none"> <li>• Web server</li> <li>• DBMS and Development Environment.</li> <li>• Web browser</li> <li>• ERWIN</li> </ul>

	<p>according to the requirements. The database created will be based on the Entity Relationship Diagram, clearly describing the entities and their relationships.</p>	<p>the database with the actual requirement of the backend system based on the client requirement.</p> <p>P3. Ensure that the database created is secure.</p> <p>P4. Ensure that the database covers all the aspects/parameters of every entity involved.</p> <p>P5. The database created has the required capacity for all types of data involved.</p>	<p>of the requirements and identifying relationships.</p> <p>K3. Understanding of the DBMS tools i.e. Oracle, SQL</p> <p>K4. Knowledge of database connectivity.</p> <p>K5. Use DBMS systems e.g. Oracle, MySQL etc</p>	
B4. Perform coding	<p>Actual coding of the web application / website is done in this phase. This includes the data base/ backend connectivity with the</p>	<p><i>You must be able to:</i></p> <p>P1. Ensure the frontend connectivity with the backend.</p> <p>P2. Ensure that the code is properly documented.</p> <p>P3. Ensure that the code is bug/error free.</p>	<p><i>You must know and understand:</i></p> <p>K1. Knowledge of web programming languages (PHP, Java etc)</p> <p>K2. Knowledge of scripting languages.</p> <p>K3. Understanding</p>	<ul style="list-style-type: none"> <li>• IDE and Editor i.e. Dream viewer</li> <li>• Web browser</li> <li>• Web server</li> </ul>

	frontend of the website	<p>P4. Ensure that the code is executing efficiently and not consuming excessive resources.</p> <p>P5. Ensure the code is performing the required functionality.</p>	of different IDEs and editors of Dream weaver.	
B5. Perform Database Optimization	<p>This includes performance enhancements of the data base by fine tuning different parameters including query optimization. Performance optimization of the data base is important for it to result in better user experience.</p>	<p><i>You must be able to:</i></p> <p>P1. Ensure that the database is based on the actual requirement.</p> <p>P2. Confirm that the database covers all the entities and the correct relationship.</p> <p>P3. Ensure that the database created adheres to the basic technicalities including error free data entry and retrieval as well as connectivity to the frontend.</p> <p>P4. Ensure that all the queries are optimized and that the loading time is</p>	<p><i>You must know and understand:</i></p> <p>K1. Knowledge of data base concepts.</p> <p>K2. Good understanding of DBMS.</p> <p>K3. Ability to use algorithm to optimize queries</p> <p>K4. Understanding of testing tools i.e. stress-testing tools.</p>	<ul style="list-style-type: none"> <li>• DBMS i.e. Oracle</li> <li>• Web browser and web servers.</li> <li>• Testing tools. IDE and Editor i.e. Dream weaver.</li> </ul>

		normal.  P5. Ensure that the database is optimized in terms of security and there are no vulnerabilities.		
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### 3. Unit Title: Perform Deployment

Competency unit	Overview	Performance Criteria	Knowledge and Understanding	Tools & Equipment
C1. Perform Web Hosting	This task includes doing market research and comparison of different webhosting packages and domain home reservation services. Selecting the best	<i>You must be able to:</i>  P1. Ensure the maximum up time (i.e. 99.99) of the server.  P2. Ensure the best specification for application of the server.  P3. Ensure the link and	<i>You must know and understand:</i>  K1.knowledge of webhosting and domain names.  K2. Use market research and internet search skills.	<ul style="list-style-type: none"> <li>• FTP client</li> <li>• Webhosting manager/ control panel</li> </ul>

	webhosting packages and domain registration service.	bandwidth of service provider. P4. Ensuring the security of the web server. P5. Ensures customer support around the clock.	K3. FTP clients, DNS, IP addresses knowledge.	
C2. Perform Content Management	In order to deploy the staging system onto the development system to make live the application. In this area, a developer has to install and prepare the development system.	<i>You must be able to:</i> P1. Ensuring the availability of the hardware for development (Live App) P2. Ensure the availability of appropriate OS required for live application. P3. Ensure that the appropriate licensed software is available. P4. Ensure that all the compatibility issues	<i>You must know and understand:</i> K1. Understand the difference between staging and development system. K2. Understanding of how to prepare a production system. K3. Install all the required software on the production system. K4. Understanding	<ul style="list-style-type: none"> <li>• Internet</li> <li>• SSH</li> <li>• Remote desktop connection</li> <li>• Software</li> <li>• Operating System (Ubuntu, cent OS, Microsoft window server 2012)</li> <li>• Appropriate CMS</li> <li>• Licensed software</li> </ul>

		<p>are resolved.</p> <p>P5. Verify that the system support the staging application and behave like a promising system.</p>	<p>of how to secure production system.</p> <p>K5. Provide live access of the production system.</p>	
C3. Perform Content upload	<p>After the design and programming is complete, the website/application is populated with necessary content for users to interact with system.</p>	<p><i>You must be able to:</i></p> <p>P1. Ensure content is properly placed.</p> <p>P2. Ensure content is properly formatted.</p> <p>P3. Ensure contents are properly organized.</p> <p>P4. Ensure contents are properly accessible by end user.</p> <p>P5. Ensure contents are well documented for future enhancement and migration</p>	<p><i>You must know and understand:</i></p> <p>K1. Knowledge and understanding of content uploading</p> <p>K2. Knowledge and understanding to properly set permission on uploaded content to be accessible by specific users.</p> <p>K3. Knowledge of common CMS's</p> <p>K4. Use CMS to upload actual content to the up</p>	<ul style="list-style-type: none"> <li>• Internet</li> <li>• FTF</li> <li>• SFTP</li> <li>• Web browsers</li> <li>• Control panel</li> </ul>

		P6. Ensure security of content uploading and its measures.	and running website	
C4. Perform Search Engine Optimization	Prepare the SEO plan and identify the key areas for the particular website in terms of search engine. This will include both on-site and off-site search engine optimization, including any specific requirements from the client end.	<p><i>You must be able to:</i></p> <p>P1. Perform Improved search engine ranking for major search engines.</p> <p>P2. Ensure Increase in website traffic.</p> <p>P3. Ensure Increased revenue and customer base.</p> <p>P4. ensure Improved compliance for web standards.</p> <p>P5. Ensure enhanced presence on different social media platforms including Facebook, Twitter, LinkedIn, Flickr.</p>	<p><i>You must know and understand:</i></p> <p>K1. Knowledge of different SEO techniques.</p> <p>K2. Knowledge of eMarketing and social media platform.</p> <p>K3. Knowledge of web analytics and web advertisements i.e. Google AdSense</p> <p>K4. Understanding of on-site SEO techniques.</p> <p>K5. Understanding of off-site SEO techniques.</p> <p>K6. Use social</p>	<ul style="list-style-type: none"> <li>• Programming languages (i.e. PHP, Java)</li> <li>• Web servers ( Tomcat, Apache, IIS)</li> </ul>

			media tools/platforms including eMarketing tools.	
C5. Perform Security Measure	Security measures are taken to ensure that proper security is intact. This will ensure that the web application / website is secure from all dimensions and that there is no vulnerability left.	<p><i>You must be able to:</i></p> <p>P1. Ensure that the web application is running up.</p> <p>P2. Ensuring that the website/web server is showing normal behavior.</p> <p>P3. Ensure compliance to the web security standards.</p> <p>P4. Ensuring loophole free penetrations testing</p>	<p><i>You must know and understand:</i></p> <p>K1. Knowledge of information and understanding of network security.</p> <p>K2. Understanding of basic penetration tests.</p> <p>K3. Use basic testing and security tools.</p>	<ul style="list-style-type: none"> <li>• Web server</li> <li>• Web browser</li> <li>• Internet</li> <li>• Security scanning tools i.e. w3af</li> <li>• Firewall</li> <li>• Server side security modules/packages</li> </ul>
C6. Perform Testing	Overall testing of the website/ web application developed. This will be comprehensive training including user requirement	<p><i>You must be able to:</i></p> <p>P1. Ensure the web application is performing all functionality as</p>	<p><i>You must know and understand:</i></p> <p>K1. Knowledge of different testing techniques i.e. Penetration</p>	<ul style="list-style-type: none"> <li>• Web server</li> <li>• Web browser</li> <li>• SAHI</li> </ul>

	<p>conformance, unit tests, vulnerability and data checks. Testing will actually ensure of the deployment of the website/application successful.</p>	<p>desired.</p> <p>P2. Ensure the application is bug free.</p> <p>P3. Ensure the application is efficiently performing all tests.</p> <p>P4. Ensure the application is free of all security vulnerabilities.</p> <p>P5. Ensure the application is reliable and gives consistent results under different environments.</p>	<p>testing, Stress testing.</p> <p>K2. Understanding of information/data security.</p> <p>K3. Penetration and stress testing techniques, first hand.</p> <p>K4. Understanding of performance benchmarks</p>	<ul style="list-style-type: none"> <li>• Test case</li> </ul>
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**4. Unit Title: Perform Maintenance**

Competency Unit	Overview	Performance Criteria	Knowledge and Understanding	Tools & Equipment
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<p>D1. Perform Updates</p>	<p>Understand the deployment interface and following the market trends to implement all the updates as and when needed</p>	<p><i>You must be able to:</i></p> <p>P1. Install new updates to the application i.e. Adding new patches to the deployed version of the application.</p> <p>P2. Test all the functionality and verifying on updates</p> <p>P3. Ensure a stable version update of the application, operating system, security updates.</p> <p>P4. Ensure the stable, secure and light version of the web server and its security measure.</p> <p>P5. Implement the security updates on</p>	<p><i>You must know and understand:</i></p> <p>K1. Knowledge of application deployment</p> <p>K2. Knowledge of application level security</p> <p>K3. Knowledge of server side updates</p> <p>K4. Knowledge and understanding of the flow of application.</p> <p>K5. Install new updates and testing their functionality</p>	<ul style="list-style-type: none"> <li>• PC (standard)</li> <li>• License firewall on standard PC</li> <li>• FTP client i.e. FileZilla</li> <li>• Secured Socket Shell (SSH) client (putty)</li> <li>• Dream weaver.</li> </ul>
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		the server required for application.		
D2. Perform Upgrades	Any requirement initiated by the client for the currently deployed system needs to be accommodated. This requirement should not be a part of the initial requirements, for the developed system.	<p><i>You must be able to:</i></p> <p>P1. Ensure the 'upgrade' fulfills the given requirements.</p> <p>P2. Ensure the task/upgrade is performed in the described time frame.</p> <p>P3. Ensure the 'upgrade' should seamlessly integrate with the current system.</p> <p>P4. Ensure Well defined dependency checks among all modules during upgrades.</p> <p>P5. Ensure upgrade does not negatively</p>	<p><i>You must know and understand:</i></p> <p>K1. use tools and technology used for development/deployment.</p> <p>K2. Understanding of upgrade, its requirements and dependencies and effects on other components which are part of the system.</p>	<ul style="list-style-type: none"> <li>• PC (standard)</li> <li>• IDE (Integrated Development Environment)</li> <li>• Internet Access</li> <li>• Development Environment</li> <li>• System</li> </ul>

		affect computing and defined benchmarks.		
D3. Perform Bug fixing	This includes fixing all the bugs that are found after deployment. This will include bugs related to the UI frontend as well as the backend. Moreover, any vulnerabilities in terms of security will also be fixed.	<p><i>You must be able to:</i></p> <p>P1. Clearly shows the frontend bugs fixed</p> <p>P2. Clearly shows the backend bugs fixed</p> <p>P3. Clearly interpreting the end users requirement related to bugs.</p> <p>P4. Clearly interpret the DB, data, and network related bugs.</p> <p>P5. Provide application/website readiness for use</p>	<p><i>You must know and understand:</i></p> <p>K1. Knowledge of the UI and design patterns related to bugs.</p> <p>K2. Knowledge of the backend DB bugs</p> <p>K3. Knowledge of the web/info security.</p> <p>K4. DB security and optimization</p> <p>K5. Network/Information security of application layer security.</p>	<p>Hardware:</p> <ul style="list-style-type: none"> <li>• PC (standard)</li> </ul> <p>Software:</p> <ul style="list-style-type: none"> <li>• Operating system i.e Windows (XP, Series)</li> <li>• Programming language (java, CSS, HTML, Php, Javascript, Dotnet, JQuery)</li> <li>• Web servers (IIS, Apache, Tomcat)</li> <li>• Databases (Oracle, MySQL)</li> <li>• Designing (Adobe Photoshop, Corel Draw)</li> <li>• FTP client (FileZilla, FTP Manager)</li> </ul>

		after the bugs fixed.		
D4. Perform Enhancement / Modification	It includes the post deployment support and modification of the deployed application. All the future modification and enhancement to the code and data base will be supported by this task.	<p><i>You must be able to:</i></p> <p>P1. Ensure the understanding of customer requirement.</p> <p>P2. Ensure the flow of design according to the customer requirement.</p> <p>P3. Ensure all loop holes are considered to be closed in enhancement.</p> <p>P4. Ensure the enhancement be on a staging system.</p> <p>P5. Ensure the deployment of enhanced and modified</p>	<p><i>You must know and understand:</i></p> <p>K1. Understanding the state of the Art and technology for enhancement and modification.</p> <p>K2. Understanding and knowledge of the programming language used for the application.</p>	<ul style="list-style-type: none"> <li>• Internet</li> <li>• IDE</li> <li>• Licensed software</li> <li>• Staging environment.</li> </ul>

		application from staging system to production system ( server )		
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**5. Unit Title: Perform Verbal / Written Communication**

Competency unit	Overview	Performance Criteria	Knowledge and Understanding	Tools & Equipment
E1. Communicate with customers/clients	This unit of competency is designed to build good relationship with	<p><i>You must be able to:</i></p> <p>P1. Make sure the client is up to date to the system features</p> <p>P2. Ensure the</p>	<p><i>You must know and understand:</i></p> <p>K1. Good relationship and communication</p>	<ol style="list-style-type: none"> <li>1. Data of customers</li> <li>2. Mobile</li> <li>3. Computer with office/editors of word, word pad</li> <li>4. Notepad/Recorder</li> <li>5. Emails</li> </ol>

	customers.	customer is communicated any changes in the website/application P3. Ensure that no request from client is pending P5. Ensure that the team knows about the market trends	skills K2. Good report writing skills	
E2. Communicate with peers/Team members	This unit of competency is designed to effectively communicate with team members and other personnel that can help in improving work quality and quantity.	<i>You must be able to:</i> P1. Ensure that all team members/ peers are in line with the requirements. P2. Ensure that clear directions are there for the peers to follow. P4. Check that a proper mechanism is in place for all peers to	<i>You must know and understand:</i> K1. Assigned task K2. Management skills K3. Leadership qualities K4. The ability to monitor and evaluate the team members. K5. The ability to	<ol style="list-style-type: none"> <li>1. Notice board</li> <li>2. Schedule</li> <li>3. Web portal</li> <li>4. Computers</li> <li>5. MS office,</li> <li>6. Telephone</li> <li>7. Emails</li> </ol>

		<p>be motivated in order for them to be efficient.</p> <p>P5. Ensure that the quality of work life is comfortable and suitable for the peers</p> <p>P6. Ensure that all the team members are being assessed and evaluated.</p>	<p>train and develop a team.</p>	
E3. Communicate with Managers.	<p>This unit of competency deals with following instructions of the seniors to be able to effectively and efficiently execute all the tasks.</p>	<p><i>You must be able to:</i></p> <p>P1. Ensure that there is Standard Operating procedure for communication with the seniors.</p> <p>P2. Ensure that all instructions from seniors are followed.</p> <p>P3. Ensure that there</p>	<p><i>You must know and understand:</i></p> <p>K1. Good communication skills.</p> <p>K2. The ability to take notes efficiently</p> <p>K3. The ability to use communicative</p>	<ol style="list-style-type: none"> <li>1. Telephone</li> <li>2. Mobile</li> <li>3. Computers</li> <li>4. Emails</li> <li>5. Reports</li> <li>6. Web portals</li> <li>7. MS office</li> </ol>

		<p>is a proper mechanism in place for execution of the instructions coming from the seniors.</p> <p>P4. Ensure that all the emergencies and bugs/ updates have been communicated.</p>	<p>tools such as messages, email, phone and conferencing.</p>	
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