

A. TECHNICAL SPECIFICATIONS

No	Item	Description	Quantity	Reference Picture
1	<p>One year fully active license for framework software enabling the creation of desktop applications in Java Swing technology to operate the ASYCUDA system. The framework software should allow the creation of advanced secure Java applications to handle electronic documents, their validations, their workflow and status chart, their digital signature, and storage.</p> <p>the software should provide a solid platform for customs management, acing the essentials while giving developers the freedom to build a system that suits their organization and empowers developers to build and maintain complex software applications and high-performance document management systems. The system should offer an advanced workflow engine and the possibility to define easy-to-use user interfaces.</p>	<p>The software Must be written with Java programming language and uses a great variety of Java technologies to provide the flexibility and security that the customers need. The main Java technologies used for building the Platform must be:</p> <ul style="list-style-type: none"> • JDBC – Java Database Connectivity provides access to various types of databases. • RMI – Remote Method Invocation, provides client-server communication interface. • Xerces – a collection of libraries for working with XML. • JNDI – Java Naming and Directory Interface provides services that application developers can use or/and replace them with their custom created services. • Java Mail API – provides a framework making the software able to communicate with external mail systems. • JCE – Java Cryptography Extension provides implementation for data encryption and decryption, and certificate management in software . • JAAS – Java Authentication and Authorization Service provides more simple and easier user authentication management. • Swing X – provides the graphical user interface. • JMX – Java Management Extensions technology provides tools for managing and monitoring system objects, threads and services. <p>• The digital signature support must allow the document history to be tracked from creation to archiving. Every signed document contains detailed information about which user and when he has used the document and what kind of operations have been</p>	1	N/A

		<p>performed on that document by that user. The digital signature secures that information and the information on the document itself. It guarantees that the data on the document and the identity of the users working with it cannot be forged.</p> <ul style="list-style-type: none"> • The software must allow application developers to program huge e-documents with hundreds of entry/display fields, as it is frequent in e-government applications, with excellent operability. This is obtained through a reduced memory footprint compared to a standard JFC implementation. As a consequence, the use of the software must impact the overall response time and operability of the system, considerably improving the display of large e-documents and increasing their user-friendliness. <p>The software must be designed for handling exclusively WYSIWYG (What You See Is What You Get) “flat” multi-page documents that imitate paper documents where data entry and display fields are arranged in a sequential manner on each document page.</p> <ul style="list-style-type: none"> • The software must be able to deal with various file types like paper document scans (in PDF format, for example), presentations, short videos, etc. The files can be uploaded to the server which stores them in a dedicated database and can be downloaded via the Client interface when needed. <p>And should make it possible to include multimedia fields in an e-document, The software must allow controls to manage a multimedia file:</p> <p>New – Add a file. Save – Save a file. Delete – Delete a file. Upload (Download) – Upload a file to the database server.</p>		
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		<p>Download – Download a file from the database server. Pause – Pause a file transfer. Resume – Resume a file transfer. Stop – Stop a file transfer. View – View a file with the default associated program.</p> <ul style="list-style-type: none"> • XML format must be fully supported by the software and offers ways to export an existing instance of an e-document to XML format or to import an XML file into a new e-document. Supporting minimum two types of translating an e-document from/to an XML file: one is predefined by the system (kernel import/export) and another can be implemented by the developer of the application. The kernel import/export will import or export all data elements of a given document, while the developer-specified import/export will only affect specified data elements. • The software must ensure that end-users never lose any work in progress when communication breaks. The system must include a technology that enhances the Java Remote Method Invocation. The below deliverables must be considered: <ul style="list-style-type: none"> - It copes with network communication failures between servers and clients, which are frequent in many regions of the world. addressing RMI shortcomings in live industrial environments. - provide a practical solution to operational environments where the use of firewalls, proxies, and routers renders standard RMI implementations impracticable as such. - paves the way towards the dynamic upgrade of server application software with no interruption of service for clients. 		
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		<p>- opening the possibility for clients to use simultaneous various proprietary secure communication protocols The Mailbox is an internal, system-dedicated application, which means that users can easily communicate with each other and exchange e-documents and files within the system. It includes facilities such as the possibility to send e-documents used within the system, as well as files from the computer's hard drive. The user can also receive e-documents as mail attachments, perform various operations with these documents and then (re)send the modified version.</p> <p>•Mailbox interface</p> <p>The Mailbox is an internal, system-dedicated application, which means that users can easily communicate with each other and exchange e-documents and files within the system. It includes facilities such as the possibility to send e-documents used within the system, as well as files from the computer's hard drive. The user can also receive e-documents as mail attachments, perform various operations with these documents and then (re)send the modified versi</p> <p>External Mail</p> <p>The software must use the Iraqi Commission of Customs business mail server in order to extend the built-in Mailbox functionality with the help of the External Mail module:</p> <p>When someone needs to access a certain e-document but has no access to the software at the moment. That person can ask a logged-in user to send that e-document as an attachment to the external business mail account. This way that person can access the e-document by simply checking his/her business mail account.</p> <p>When someone needs to be notified about certain statuses of a document. This way there is no need for that person to be permanently logged into</p>		
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		<p>the software for just waiting for information about operations, related to that document. The respective operation or rule would automatically send a notification via the external mail server when the special document status or other changes occur.</p> <p>When sending/receiving a document scan or other media as an attachment to/from an external mail user within the organization.</p> <p>The main idea of the External Mail system is not being completely “external” like sending mail to a public mail server like Gmail or Yahoo, for example, but just extending the functionality of the built-in mail system in order that the users in an organization will be able to exchange information more easily, but the information to still stay confidential and securely kept within that organization at the same time.</p> <ul style="list-style-type: none"> • JMX standard Java technology that allows the monitoring and management of Java resources and applications. This technology also supports RMI, allowing remote control and monitoring. <p>Any remote JMX Client can connect to the JMX Server (if the connection settings are correctly set) and can control and monitor the Manageable Java applications or resources.</p> <p>The JMX Server allows remote monitoring and control over some features of the Software Server.</p> <p>JMX Server Connection, The monitored resources are:</p> <ul style="list-style-type: none"> - AppServer; - ConnectionPool; - ConnectionManager; - DatabaseSource; - LoggedClients; - Clients; - ClientsLoginRestrictions; - ClientStatistics; 		
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	<ul style="list-style-type: none"> - Profiler; - Log; - ThreadWatcher; - DumpServer; - GCFileManager. <ul style="list-style-type: none"> • The software should provide solutions to all problems that can rise when restructuring digital data storage and its management. Such major changes are often caused by structural changes in the organization or by optimization in the production process. the solution should merge the data from several servers into one on a database level. It merges all data regarding users, documents, internal mail, and history. and provides migration of documents (into CGF, emails, etc.) from one Document Object Model (DOM) into another DOM. <p>The solution should support the migration of existing custom-implemented multimedia documents into EMS documents.</p>		
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B. WARRANTY & DOCUMENTS: N/A

C. GENERAL REMARKS AND SPECIAL CONDITION

Required Service	Service Duration	Comments
Providing of Framework software enabling the creation of desktop applications in Java Swing technology	One-year activation licenses	As described in the technical specifications
Installation and commissioning of the software		Must be included, and delivered to the General commission of customs, Iraq. Baghdad, ASYCUDA program serveries
Servers (incl. production, Backup, UAT)	One-year activation licenses	Must be included
An unlimited number of users included.	One-year activation licenses	Must be included
Unlimited developer activations and activations of Simplified server	One-year activation licenses	Must be included
Access to Online training and certifications In-person training and certifications	One-year activation licenses	Must be included
On-site support	One-year activation licenses	Need to be explained in detail in the financial and technical offer

Remote support		Need to be explained in detail in the financial and technical offer
Custom system development		Need to be explained in detail in the financial and technical offer