




Microsoft SharePoint – Document Management System

Author	Ugender P, Sreeveni CH
Reviewer	P. Vasudeva Kiran
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1.0	18-Feb-2010	Sreeveni CH	Kiran	Initial Document

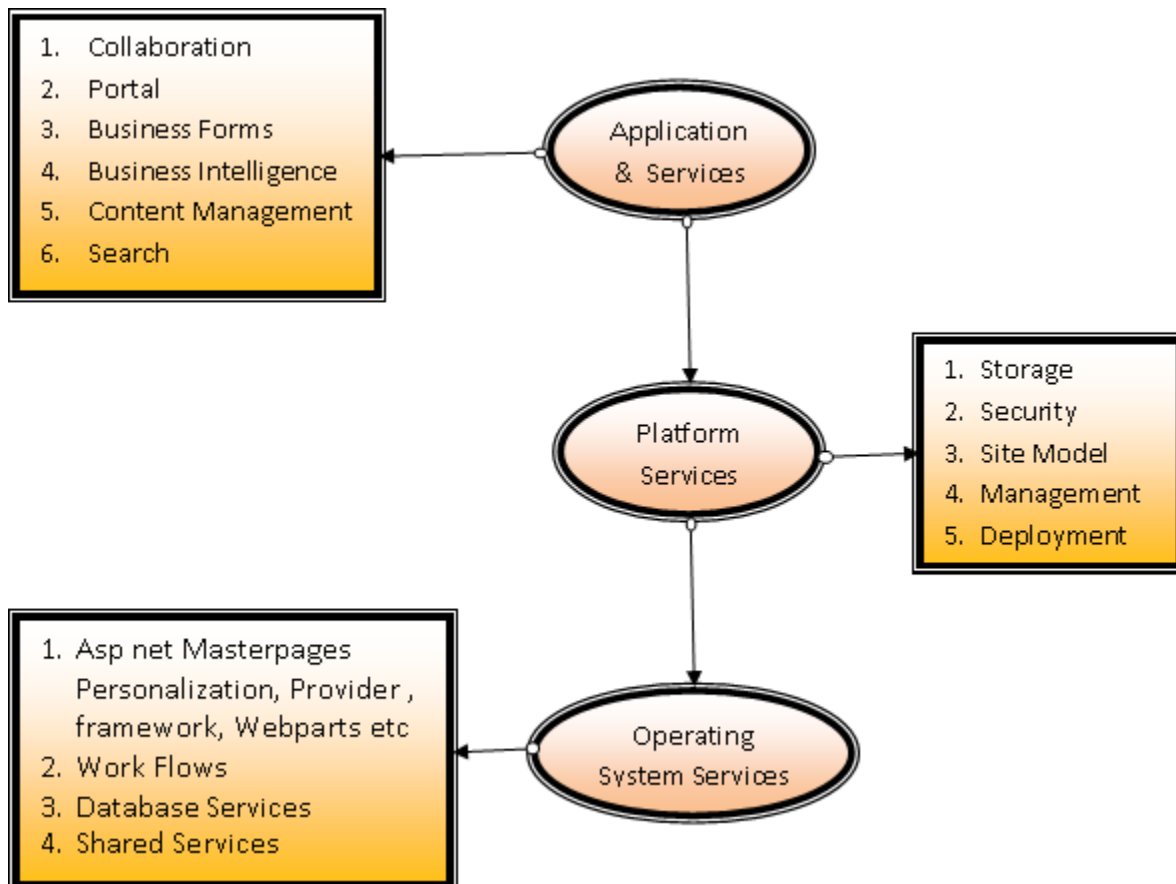
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1. Introduction

Microsoft's Office SharePoint Server 2007 (MOSS), is Microsoft's first integrated server platform that aims to provide web content management, enterprise content services, and enterprise search, as well as shared business processes and business intelligence to the small/medium enterprise. SharePoint is built on ASP.NET and SQL Server, which requires a Windows server. The base platform is called Windows SharePoint Services (**WSS**). Microsoft Office SharePoint Server 2007 (MOSS) is a commercial product which includes additional features like personal Web sites, templates and Web parts, business document workflow, browser-based content authoring, and Enterprise search.

Logical Architecture



I. Application and Services

Collaboration:

This component lets one part of organization to interact easily with other part of organization in secured way. Component provides mechanism for sharing of documents, information, and knowledge across organization. Following are the features of Collaboration component

- Document , tasks and calendars
- Blogs and Wikis
- E-Mail Integration
- Project Management
- Outlook Integration
- Offline documents and lists

Portal:

The portal components of Office SharePoint Server 2007 include features that are especially useful for designing, deploying, and managing enterprise intranet portals, corporate Internet Web sites, and divisional portal sites. The portal components make it easier to connect to people within the organization who have the right skills, knowledge, and project experience. Following are the features of Portal component in SharePoint Server 2007

- Enterprise Portal Template
- Site Directory
- My Site
- Social Networking
- Privacy Control

Business Forms:

This facilitates the implementation of forms based business processes from design to publication and user access, this all by mode of Web browser or Microsoft Office InfoPath as client application. Following are the features of Business Forms component in SharePoint Server 2007

- Web forms based front ends
- Line-of-business actions
- Pluggable Single Sign-On(SSO)

Business Intelligence:

This component allows organizations to provide business intelligence to all its employees, allowing them to share, reuse and manage the business data to have a better use out of it. SharePoint Server 2007 provides web based access to Excel spreadsheets, programmatic reuse of critical line-of-business data, and easy development of Web-based BI dashboards through this component.

- Server-Based Excel spreadsheets and data visualization
- Report Center

- BI WebParts
- Key Performance Indicators(KPI's) and dashboards

Content Management:

As the name says this component is about managing Content. One of the big issue or reason of time overhead in organization of all domains is managing documents in better and easier way. This component targets this issue and provides us better way to manage content that includes documents, email messages, video, instant messages, web pages etc. Following are the features of Content Management component

- Integrated document Management
- Records management
- Web Content management with policies and workflow

Search:

Its search solution for organizations that want to increase productivity and reduce information overload by providing their employees, partners, and customers the ability to find relevant content in a wide range of repositories and formats. With actionable search results that respect security permissions, Office SharePoint Server 2007 lets users go beyond documents and across repositories to unlock information, find people, and locate expertise in the enterprise. In Office SharePoint Server 2007, search results are delivered quickly and relevance is tuned for enterprise and line-of-business data. Following are the features of Search component:

- Enterprise Scalability
- Contextual relevance
- People and business data search

II. Platform Services**Storage:**

Storage services offer Metadata and context to the raw data which is stored in the database. Following services comprises as Storage Services

- Metadata
- Versioning
- Backup
- Recycle Bin

Security:

Security Services in SharePoint 2007 can be grouped as following:

- Pluggable Authentication
- Rights and Roles
- Folder/Item Level Security

Site Model:

As the name says, these services provide a model which provides a consistent layout, template to SharePoint sites that's too without changing anything in code. Following comprises as Management Services of SharePoint

- Templates
- Rendering
- Navigation

Management:

These are the services which provide consistent management experience either on administration level or at user level. This helps users/administrator to manage SharePoint server 2007 easily. Following comprises as Management Services of SharePoint

- Admin UX
- Delegation
- Provisioning
- Monitoring

Deployment:

Deploy the customized sites in portal to meet the final requirement

III. Operating System Services

These are the lowest level of architecture. These services manage the devices (both logical and physical) which comprises of physical architecture of the environment. These include the drivers and Administrator Tools that can be used to manage the network, peripheral and platform hardware. To Sum up the services on Operating System Level are included in this part of architecture Services which comprises under this are:

- Masterpages** : Provides Consistent Layouts throughout the Site.
Webparts : This is custom control assembly that uses xml data comprised description file which describes an instance of webpart.
ASP.NET 2.0 : This is development platform.
Personalization : With proper access and permission a user can drag and drop webparts on to pages and have it targeted to particular audience.

Provider Framework: SharePoint is based on .net framework 3.0

2. Client

Frontier Technologies, Inc. pioneers in providing varied Solutions like IT Solutions, Business Solutions and Resource. Their Business verticals include

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- Customer Relationship Management Solutions
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- Email Solutions
- EMR Solutions
- IT Assessment and Planning Services
- Mobility Solutions – Blackberry
- Phone System Solutions
- Print Management Solutions
- Staffing and Outsourcing Services
- Video Conferencing Solutions
- We, Application and Database Development

Frontier Technologies, Inc. delivers proactive maintenance services through flat-rate IT Support Service. Designed to reduce your costs, increase your profits and mitigate your business risks, we partner with you as your Virtual CIO and IT Department, allowing you to focus on running your business, not your technology.

Intrusion, hacking and electronic theft attempts against businesses of all types and sizes are increasing exponentially, and our network security services cost-effectively protect and maintain the security of your network, assets and data against external attack, providing you peace of mind.

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3. Problem

Beginning in the 1980s, a number of vendors began developing systems to manage paper-based documents. These systems managed paper documents, which included not only printed and published documents, but also photos, prints, etc.

Later, a second style of system was developed, to manage electronic documents, i.e., all those documents, or files, created on computers, and often stored on local user file systems. The earliest electronic document management (EDM) systems were either developed to manage proprietary file types, or a limited number of file formats. Many of these systems were later referred to as document imaging systems, because the main capabilities were capture, storage, indexing and retrieval of image file formats. These systems enabled an organization to capture faxes and forms, save copies of the documents as images, and store the image files in the repository for security and quick retrieval (retrieval was possible because the system handled the extraction of the text from the document as it was captured, and the text indexer provided text retrieval capabilities).

EDM systems evolved to where the system was able to manage any type of file format that could be stored on the network. The applications grew to encompass electronic documents, collaboration tools, security, and auditing capabilities.

To provide an integrated environment for managing and controlling the access of all shared documents of an enterprise online and facilitate /make the authorized users work collaboratively. Also to safe guard all document from unauthorized users. Document libraries can be created from the client-side SharePoint application, by navigating to your organization's SharePoint page

4. Solution

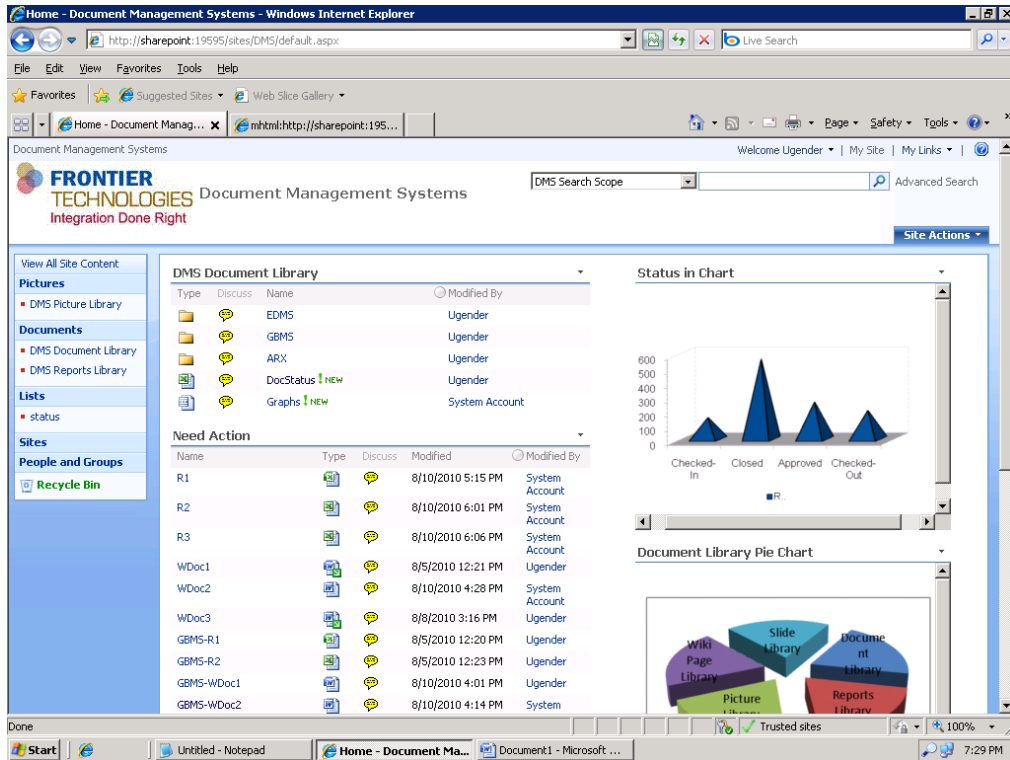
Document Management System would be a complete solution to provide a common platform to exhibit and manage the organization documents and serve as common network of controlled Users

Document libraries are collections of files that you can share with team members. To create a library of common documents for a project, team members will use their Web browsers to locate/find the files, view /read them, Update Modify files, Publish and re-publish the updated / edited files, Delete files. Approved users can check out and edit the files and check in after completion of changes/updating.

Using SharePoint server we build a Shared Documents Library with following features.

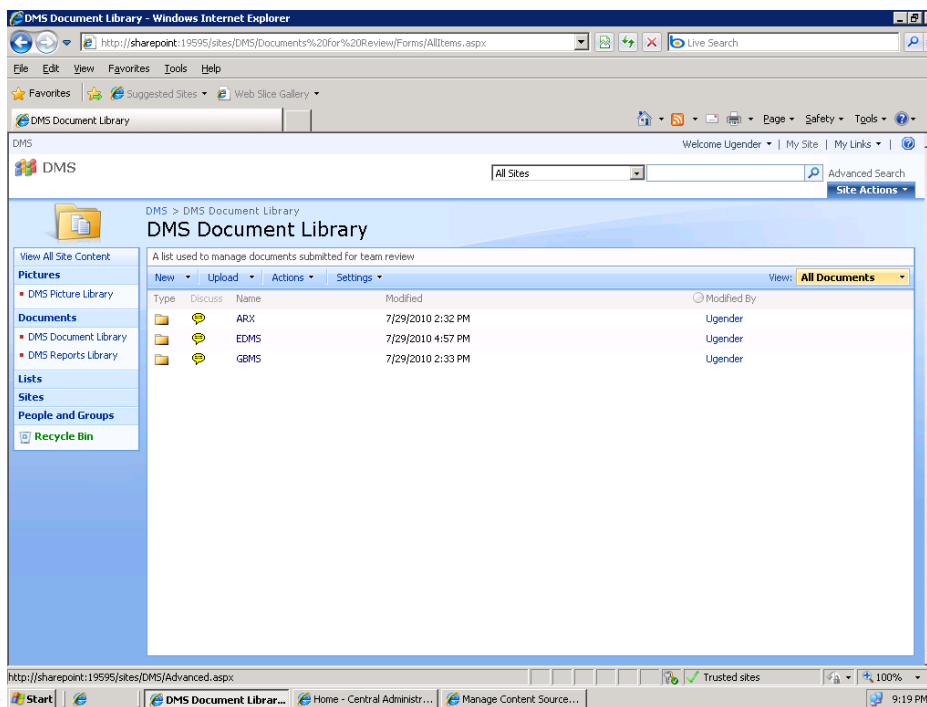
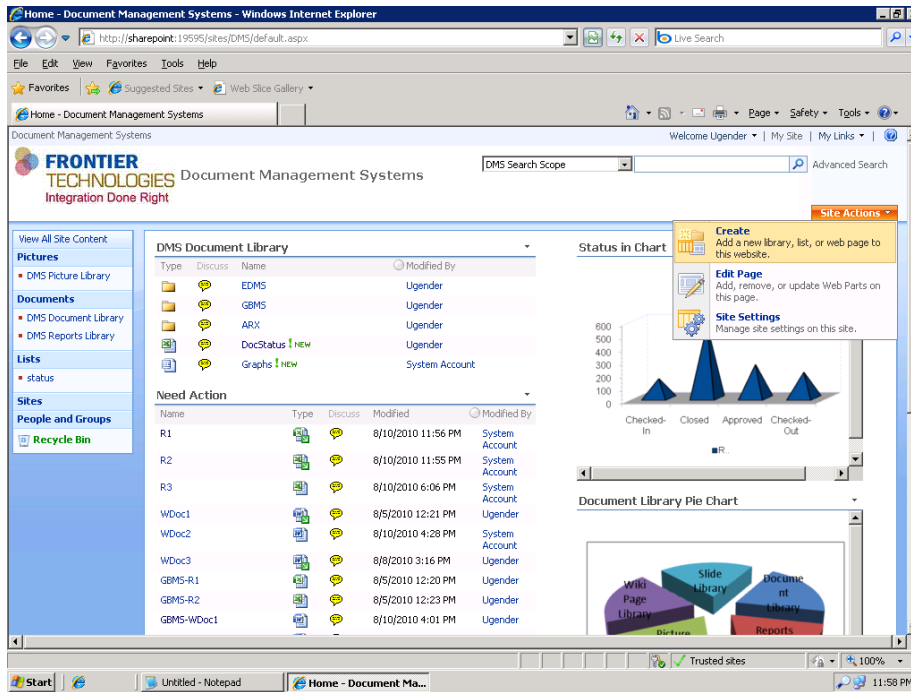
- Create a Client Wise document library
- Create Project Wise folders and navigate between them
- Add files to a document library
- Check out, edit, and check in files.
- Delete documents and Project Wise folders
- Maintain Version History of the Files
- Delete Old Versions of files (if needed- only Administrator of site can avail this option)
- Set Approvals

- Publish Documents to view
- Download Files Option
- Site Content Search Option



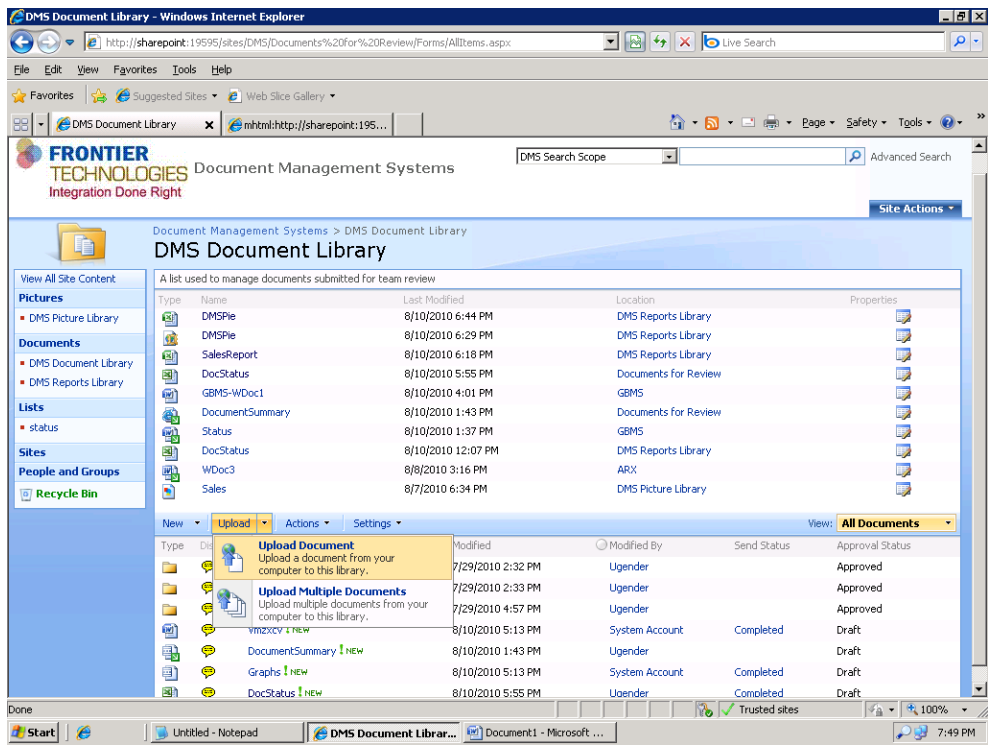
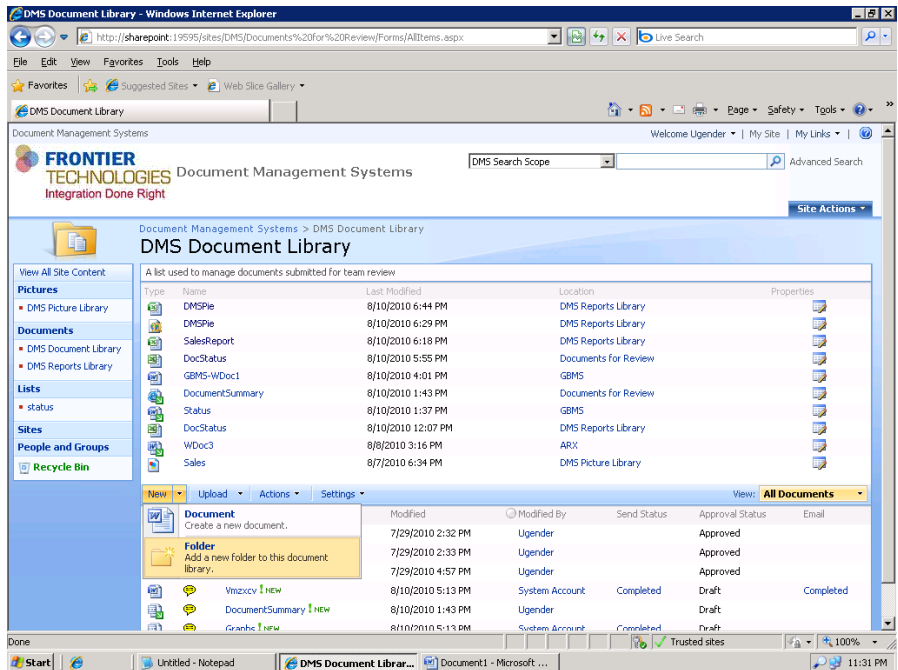
Client Wise Document Library:

We can create a Client Wise document Library / folder, which can be at the top of the hierarchy in Document Library. Now, within which we would create Project wise folders for unique identification of Client wise projects.



Adding Files to the Document Library:

We can provide an option to upload an existing file, or create a new file of defined template type. We can even provide an option to upload multiple files / group of files to a specific folder. We can also restrict the type of document to be added to the specified Document Library / folder. So that we can differentiate between the Shared Reports and Shared Document files



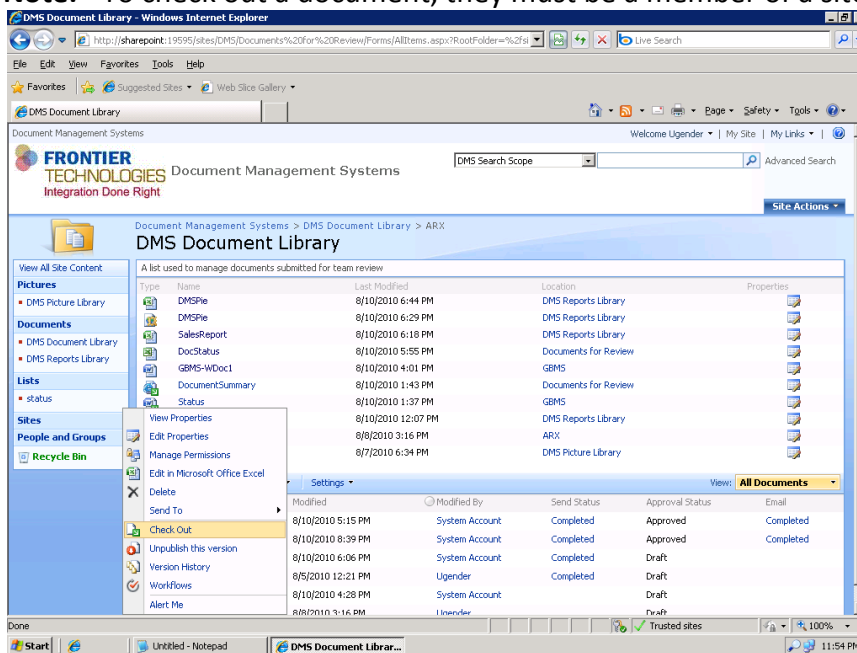
Document Check-in and Check-out

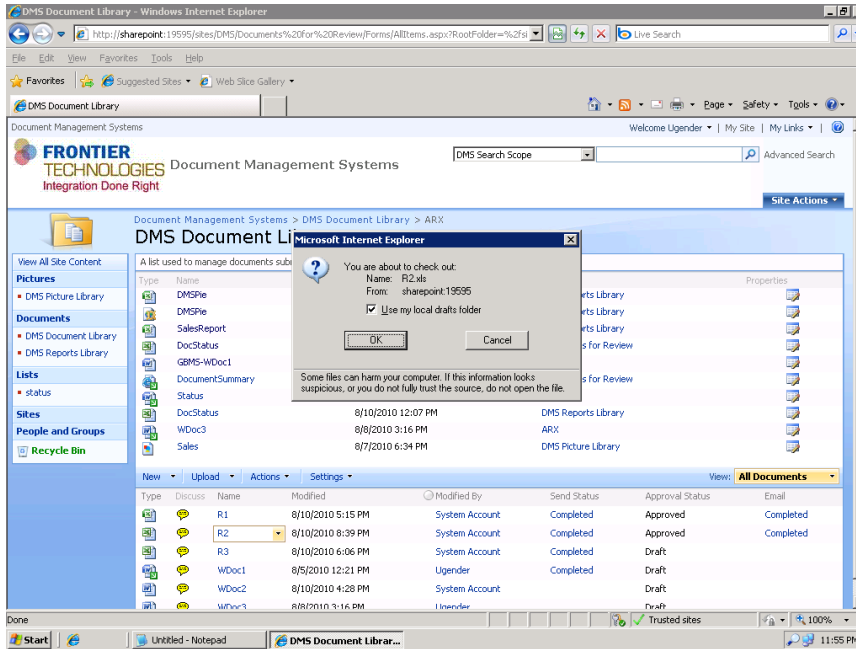
Most traditional document sharing methods use e-mail or file shares for documents that have multiple authors or editors. The problem with these methods is that they can quickly become confusing. Identifying the latest version of a document is difficult, and

multiple users may edit a document at the same time, resulting in conflicting versions. Trying to track changes can lead to confusion and lost productivity, especially if a document must be rolled back to an earlier version. To prevent these problems, we would provide a method for tracking the version history of a document. For this we need to follow the below steps

1. First, check out the document to be worked that is stored in our document library. When we do this, other users cannot make changes to the document. This helps prevent the confusion that can occur when multiple users make simultaneous changes to the same document.
2. After finish working on the document, we can check in the document so other users can work on it.

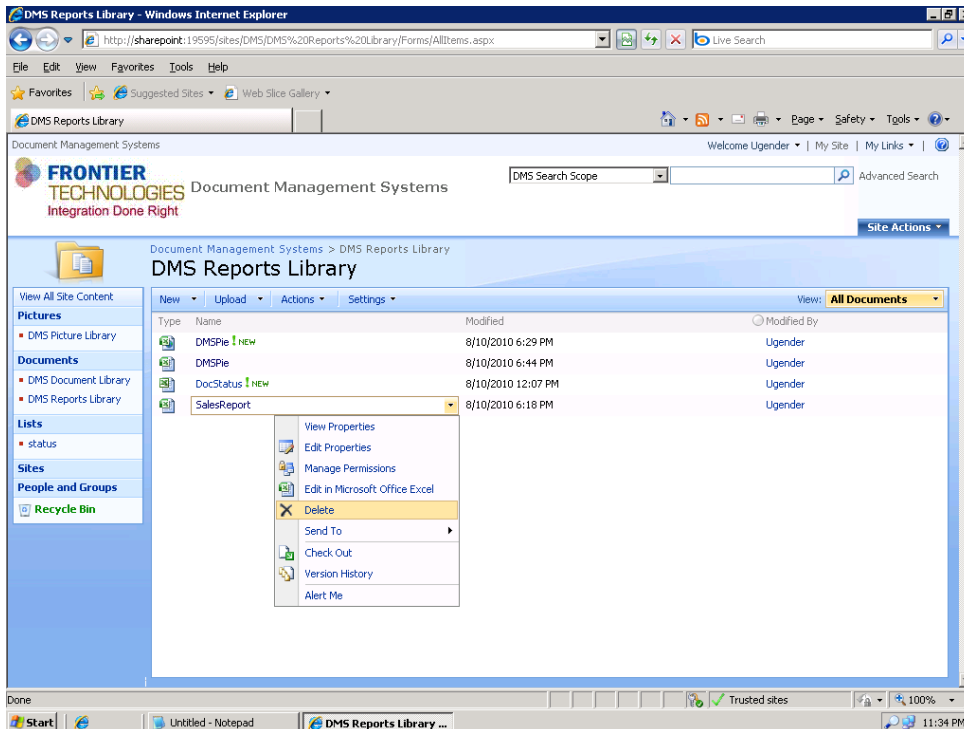
Note: - To check out a document, they must be a member of a site group





Delete Documents / Folders and Files:

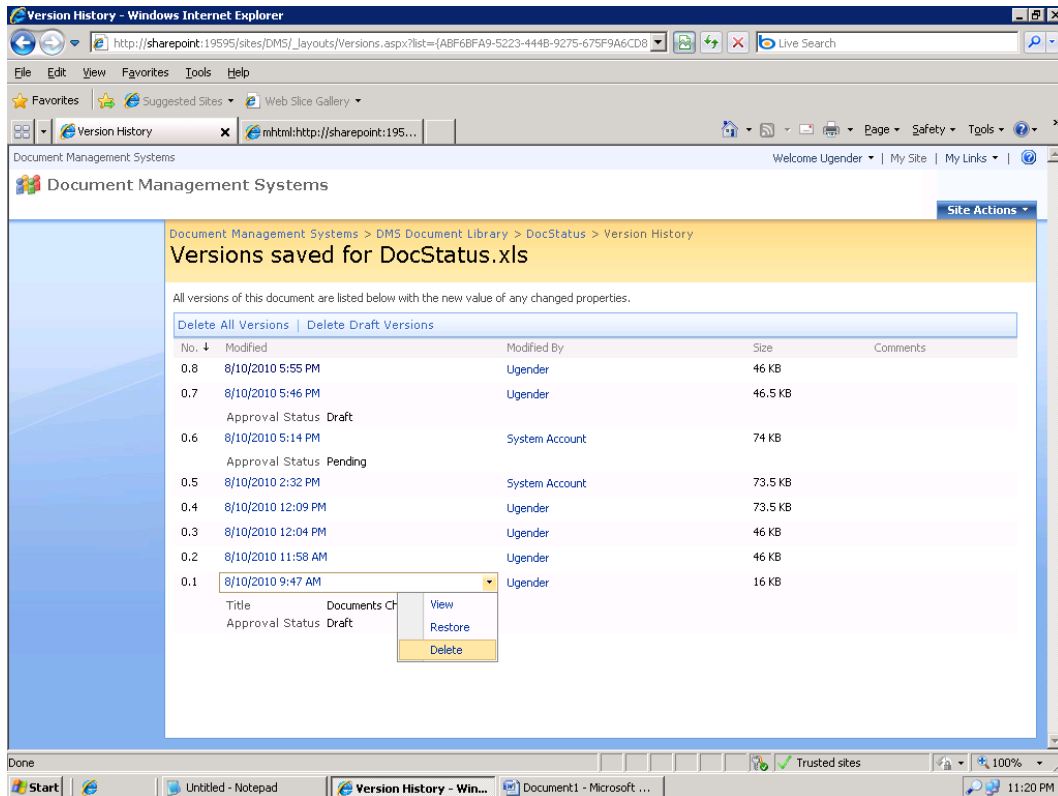
All the authorized users and user groups would be provided with an option of disabling or enabling a file or folder and also completely delete a file or folder.

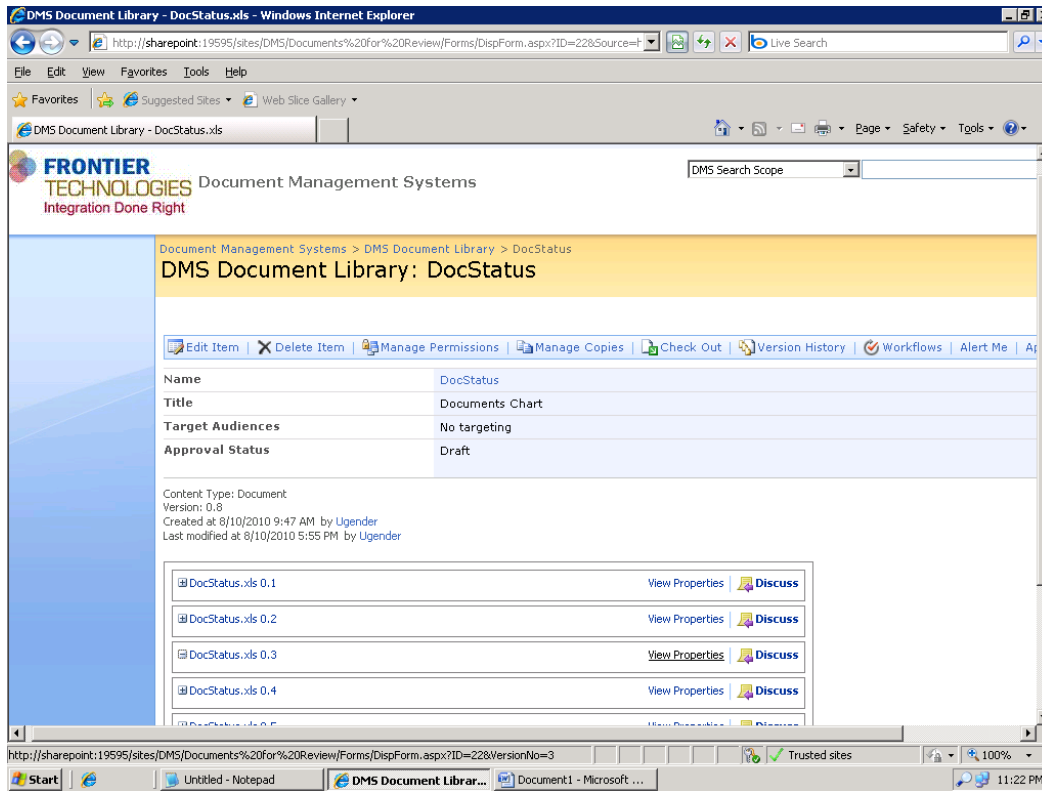


Version Tracking

We can also handle version tracking for documents stored on a SharePoint site. We can maintain copies of previous versions of each document so that we can go back and view the changes that were made to a document at any time. This is particularly useful if for any reason we want to roll back a document to a previous version or if to retrieve data that was deleted from an earlier version of a document. This Version tracking helps us in team track and manage the document creation and editing process quickly and efficiently.

Note: - Only Authorized users would manage this option.





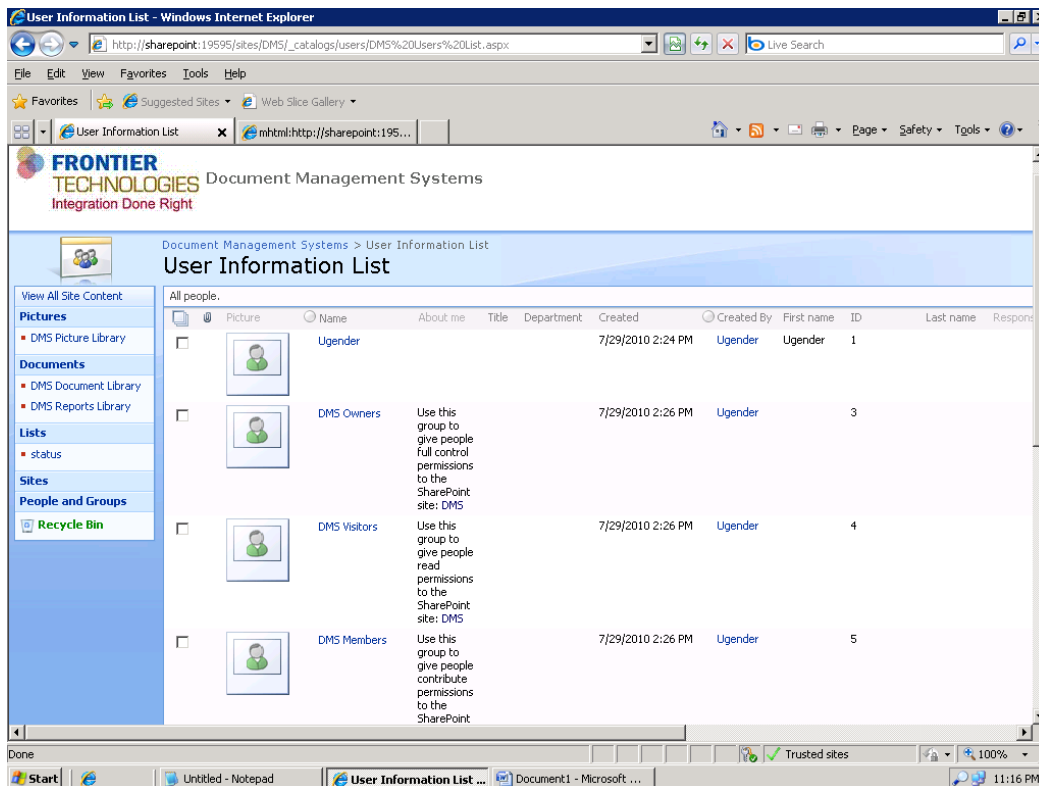
Set Approvals or Maintain Security:

Document security is vital in many document management applications. Compliance requirements for certain documents can be quite complex depending on the type of documents

To maintain the user governance and security within the site, as an initial measure of site security, we would provide with **LOGIN Page** to protect the unintended users to open / view the site content. In addition we can also assign users to a group and grant them with specific access rights. We can differentiate users as

1. **Visitors** :- Those who can login to site and can just view the files in the folders, for which they are authorized / have rights to access
2. **Members** :- Those who all are the basic contributors, who can view, add and update files with Check-out and check-in options, in a specified Shared Document Library
3. **Administrators** :- Those who have full control on the site to manage site like
 - a. Add/create, Provide access rights / permissions, Delete of Client wise Document Library / Folders and files etc.,

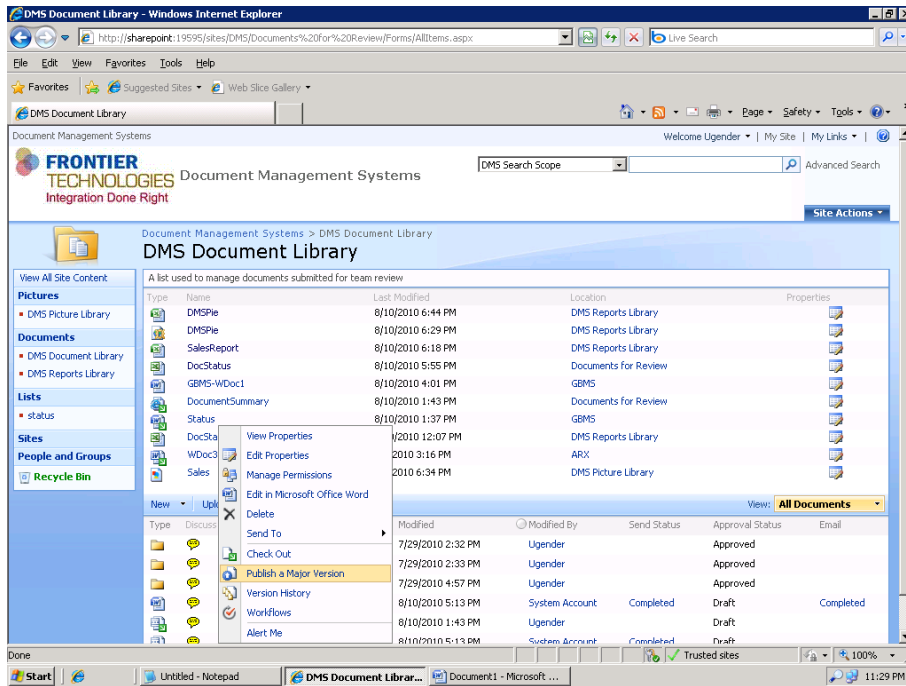
- b. Manage Site Content
- c. Manage site User accounts
- d. Manage Look and feel
- e. Maintain User Details in a centralized Data Base
- f. Maintain Site content (Documents / files and reports) in Server Location
- g. Maintain Versioning



Publish Documents to view:

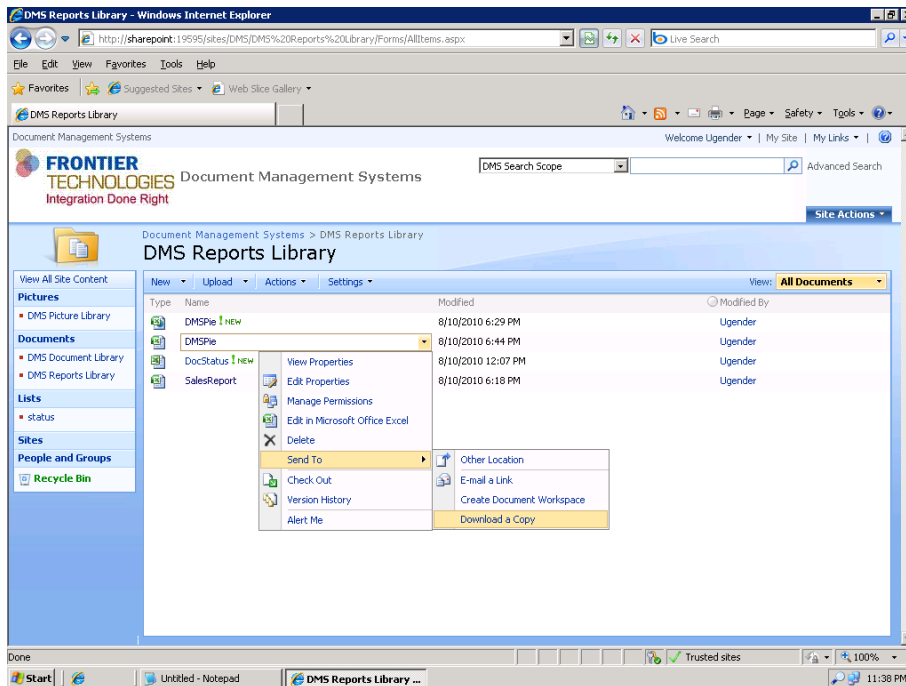
Publishing a document is sometimes tedious and involves the procedures of proof reading or peer reading or public reviewing, authorizing, printing and approving etc. Those steps ensure prudence and logic thinking. Any careless handling may result in the inaccuracy of the document and therefore mislead or upset its users and readers. In law regulated industries, some of the procedures have to be completed as evidenced by their corresponding signatures and the date(s) on which the document was signed

We also monitored and controlled the process of publishing a document by providing access rights to specified users to publish new documents to view



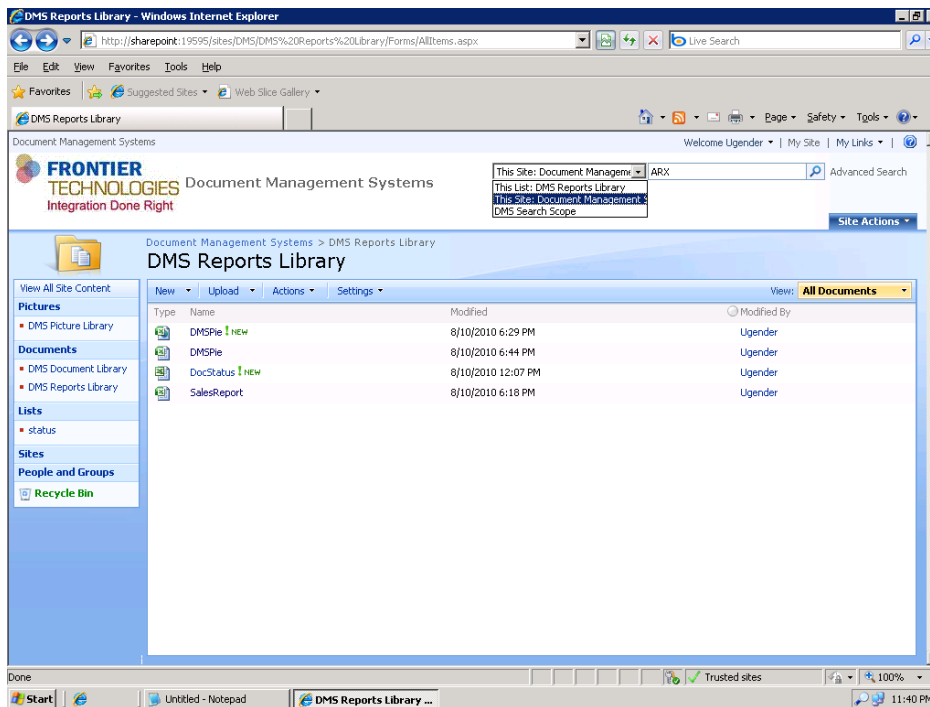
Download Files Option:

We can provide an option to download specific files which are approved by the owner of the files, i.e. those who published these files (if required) or can be controlled by the Administrator User of the site



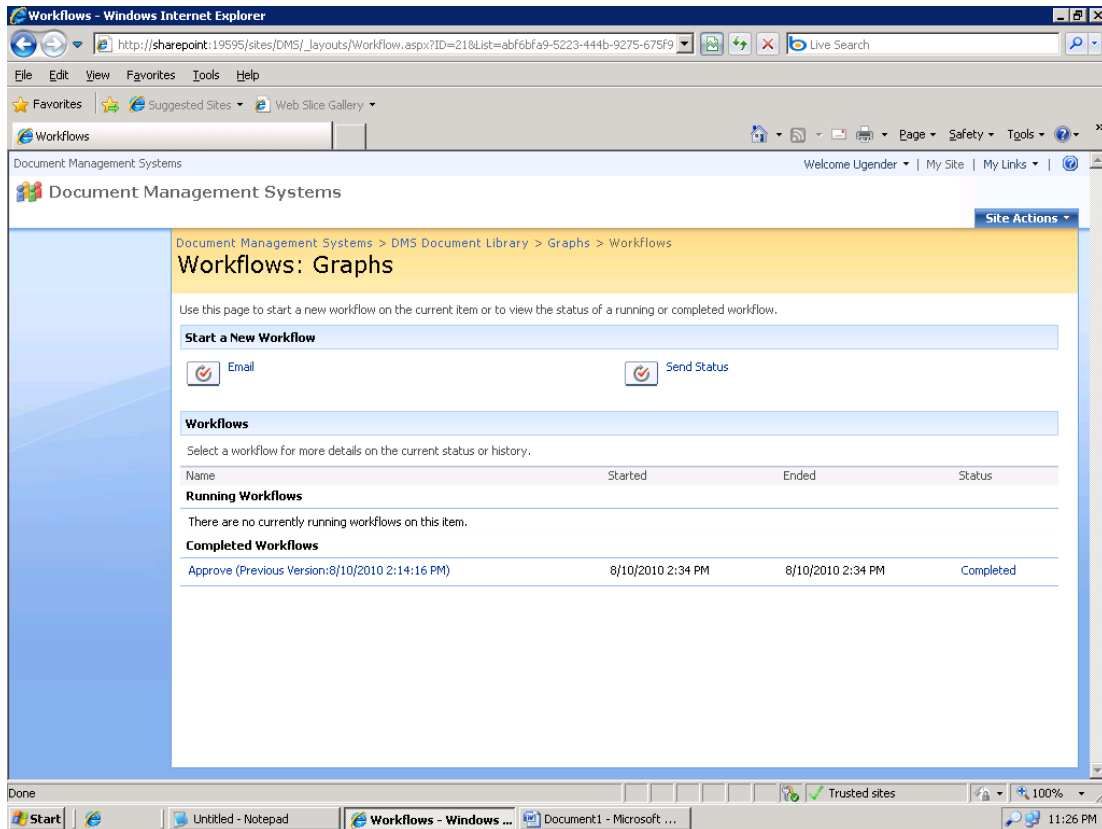
Site Search Options:

Included Advanced Site Content Search by using the recognized Key words. Also finds documents and folders using template attributes or full text search. Documents can be searched using various attributes and document content



Workflows:

Workflow is a complex problem and some document management systems have a built-in workflow module. There are different types of workflow. Usage depends on the environment the electronic document management system (EDMS) is applied to. Manual workflow requires a user to view the document and decide who to send it to. Rules-based workflow allows an administrator to create a rule that dictates the flow of the document through an organization: for instance, an invoice passes through an approval process and then is routed to the accounts payable department. Dynamic rules allow for branches to be created in a workflow process. A simple example would be to enter an invoice amount and if the amount is lower than a certain set amount, it follows different routes through the organization. Advanced workflow mechanisms can manipulate content or signal external processes while these rules are in effect.



Customized Web Parts:

We included webparts for display of statistical reports and its graphical view are customized in such a way to view an updated linked data all the time

- Provide building blocks to modular web pages
- Component software applied to UI
- Reusable across many sites and portals
- Users add WebParts to Pages at Runtime
- So users can customize the site.

Authorized users can add Built-in Web Parts to organizational or divisional portals from Web Part galleries, without the need for any web development experience. These web Parts can be developed in Asp.Net . IT departments and Users can personalize and customize the portal experience by modifying shared web part and we can lock any web part or zone.