MMDCS401 - DEVELOPING DOCUMENT CONTENT AND STRUCTURE

Credits: 3   Hours: 30

Sector: ICT & Sub-sector: Multimedia

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1.1 Develop the content meaning and information structure.

Document Structure

Before setting out to write a complex document, it is necessary to design and develop the *structure* of the document. It is not a good idea to just start writing a document until you have some idea of how it will be structured.

The structure of a document may be defined as the nature and extent (**how large)** of the *different sections*, and the *order* in which these sections appear.

The order of sections is important. The information that you present to your reader should follow a *logical sequence*.

The effective developing document presents the following sections: **introduction, development, conclusion, references, and appendices.**

- **Developing ideas into information by an intuitive (***to understand sth without considering the facts***), easy to use navigation system that provides different ways of searching for information**.

Information architecture is a systematic method of identifying, organizing, and managing information for a particular need. This online course is particularly interested in information architecture as it relates to website design and development.

By "visualizing information architecture" we mean recognizing the elements that go into an effective information environment and how they all work together to create an engaging website. Rather than just seeing "pages on a screen," an insightful information architect sees the "big picture" of how the information is organized and labelled for easy user access.

Let's explore **four principles of information architecture** with the systems of a website. Explore the following areas on this page.

- **Organization Systems**
- **Labelling Systems**
- **Navigation Systems**
- **Search Systems**

Organizational Systems

Information organization and access is a timeless (***continuing for ever***) problem and primary task in the field and information science. As we see more and more people publishing and organizing their own information, the challenges in organizing this information has become even more prominent **(well known)**. Below are some common concerns (involve):

Ambiguity - classification systems are built upon language and language is ambiguous - when we use words as labels we run the risk that users will miss the specific meaning.

Heterogeneity - refers to a collection of librarianship objects composed of unrelated or unlike parts - web sites are heterogeneous. This makes it difficult to impose any single structured organizational system.

Organization Structures

Before you begin developing your own projects, you need to be able to recognize information architecture when you see it. While some websites are collections of webpages that have been thrown into the same folder, others are carefully organized information libraries ready to be accessed.

Information architecture is the process of carefully planning and implementing information-rich materials. The organization structure plays an intangible role in the design of web sites. Structure defines the way users navigate through the site. Major web site organizational structures include: the hierarchy (top-down), the database-oriented model (bottom-up), and hypertext.

The Hierarchy: A Top-Down Approach

This approach is the foundation for most information architectures. Often viewed visually as hierarchies, family trees, life charts (kingdoms and classes and species), and books (chapters and sections) are examples. Users can quickly and easily adapt to information organized via hierarchy.

"Location-specific" websites often use the top-down approach. Designers start by thinking about their organization (i.e., school, library, museum, business) and considering all the information that people need. Some questions users may ask:

- Where am I?
- How do I find out about...?
- What's going on at...?
- What's available on this site?
- How can I communicate with?
- How do I get back to the main page?

Labeling Systems
Beside the overall organization of the website, labeling (*a paper that is attached to sth and gives information about it*) is another key concern for the information architect. The goal of labeling is to communicate information efficiently. They should also educate the user about new concepts (ideas) and provide explanations when necessary.

Navigation Systems

Just as your home needs doors and windows to gain entry, your website needs quality navigation.

When a user interacts with your website, they are navigating. Regardless of whether people will be browsing the website or using a search tool, planning is critical. The navigation elements such as buttons, directories, and indexes must all be focused on helping the users fulfil their information needs. .

Search Systems

When users enter your site they may simply wish to browse information. If they have a specific needs, the user may wish to conduct a key word search. Your website must be ready to accommodate each of these options.

Browsing

Browsing involves users following paths through the site to explore specific content objects. These users may not be looking for something specific. Their information needs may be less defined than a person who uses a formal search tool.

Indexes

An index is a non-hierarchically organized resource that directs users to content objects that share a particular attribute. For example, groupings might be alphabetical or chronological.

Indexing can be performed manually or automatically. We do the indexing ourselves by assigning key words related to each topic.

Metadata system: information that describes other information in order to help you understand well.

Collecting, analysing information **in the content meaning**

Collecting data means: putting your design for collecting information into operation. The different ways to collect data: **interviews, surveys, experiment** and **testing**.

If you are conducting observations, for example, you define what you are observing and arrange them into right time so actually observe what you need.

Recording and analysing data may take different forms depending on the kind of information you are collecting. During collecting data you enter **narrative numbers, charts, tables and other mathematical operation using a computer.**

Analysing of data: involves examining it in way that reveals the relationship, pattern. There are two kind of data you are working with:

Quantitative of data: refers to information that is collected as numbers and are analysed mathematically.

Qualitative data: refers to information that is collected as description, opinions, etc.

Example: the performance of student is either **strong** or **weakness**

Developing information consistent and logical labelling system

Once you gather or start manipulating data and files, they can quickly become disorganised. To save a time and prevent errors, you should name and structure files and folders will allow you to add context to your data so that you can understand it in the short, medium and long term.

Some guidance to follow:

To organise your files avoid duplication: **to do something again** The following tips should help you to develop such system:

1. Use folder: group files within folders, so information on a particular topic is   located in one place

2. Name folder appropriately: Name folder after the area of work. This avoids confusion in shared at workplace if a member of staff leaves and makes the files to navigate for new people joining the workplace.

3. Try to keep your document folder: the files you are actively working on and keep the more files you no longer working on to different location such as external hard drives.
4. Back up: Make sure that your files whether they are on local drive or backed up.

Types of embroidery tools

Embroidery: is the activity of decorating cloth or things with pattern or picture.

Types of embroidery tools:

- **Needles**: a piece of steel that use for sewing pointed at one end.
- **Dress marker's scissors**: these scissors are rather large and are used to cut paper and other items around the home.
- **Stiletto:** a small knife with a narrow pointed blade
- **Bodkin:** a thick needle with no pointed.
- **Etc.**

Embroidery equipment:

- Upper chain stitch handle operated embroidery machine.
- Computerizing embroidery machine.
- Button hole sewing machine.
- Bar tack sewing machine.

1.2 Identify and group information according to the job brief

Source of information

There are three main categories of source of information:

- **Primary document:** includes literary text, letters, speeches and historical documents such as birth certificate.
- **Secondary document:** they are usually written with reference to primary document and attempt to provide an interpretation (**explanation**). It is a story that has been reported after the event.
- **Tertiary document:** they are indexes, directories (reference books= dictionary), bibliography and other categorised collection of information.
- **Using software to develop document content structure.**

To develop document content structure, the following software can be used: Microsoft word.

- **Organizing activities by planning the content structure**

Keep planning and organising work activities simple in order maximize effectiveness, for this requires these activities: **Determine the specific tasks, Prioritize Tasks, Set timetables and Remove distractions.**

Determine the specific tasks: Presented tasks.

Prioritize tasks: Among the available daily activities, select and apply the urgent one.

Set timetables: design a timetable to guide you how you are going to work for each hour.

Remove distractions: many distractions appear at the workplace such as cell phone, text message, social media, etc. So, the above distractions may interrupt to accomplish your tasks.

- **Developing information structures for mark-up, web pages**

The web page: is a document commonly written in **HTML** (Hypertext Mark-up Language) that is accessible through the internet. A web page is accessed by entering a URL address and may contain text, graphics and hyperlinks to other web pages and files.

Mark-up: refers to the sequence of characters or other symbols that you insert in a text so that word processing files to indicate how the file should look when it is printed.

1.3: Determine the target audience requirements and expectations according to the briefs

- **Developing meta- languages for multiple audiences.**

Metalanguage is language about language and in the English course you are expected to understand some these words for this section the course and the context section.

Some words you might find useful to have in your vocabulary for this task are listed below:

Characterisation: the skill of a writer in creating a realistic or effective sounding character.

Dialogue: conversion between characters in a story.

Hyperbole: exaggeration for effect.

Idiom: A group of words whose meaning is different from the meanings of the individual words

Example of idiom: -"Get off my back"means Stop bothering me: to interrupt somebody

-**"**You hit the nail on the head" means you are exactly right.

Irony: a figure of speech in which the meaning is the opposite of what is spoken.

Mood: the overall feeling of the piece.

Pejorative: a word whose meaning might normally be associated with a negative sense.

Prologue: a short speech or introduction before the main story begins.

Prejudice: usually based on someone race, gender, clothes, etc.

Applying the clues on information to help on audience's target efficiently.

In fact, the whole goal of all marketing is to get the right message to the right person at the right time. As the marketers we also make sure that we can do this at the best price possible.

Here are five steps that will help you better identify who your audience is and how you can best connect with them.

Step 1: Acknowledge that you have a specific target audience.

It is important to understand that your products and services have a target audience that can be defined. As a marketer, your primary goal is to find ways to identify who these people are so that you can create marketing campaigns that speak to them directly.

Step2: determine what criteria you intend to identify the consumers you most wish to reach

  But your audience is unique to your brand (products), so you are going to identify the factors that can be used to create a better connection between their needs and what your company offers.

Step3: Identify what your customers and prospects (the possibility that sth happens**) want most from you**.

By seeing your brand through new eyes, you can also look for potential weaknesses area of potential misuse. Taking this step better allows you to create marketing messages and campaign that fully address possible brand.

Step4: identify the best channels to use to communicate with these people.

What is the best way to reach your target audience?
Start by think about how your target audience get information. What channels do they use?

Television? Radio? Newspapers? Webpages? Online search campaigns? You make sure that your target consumers are learning about the world around them that your messages are part of that information stream.

Step5: Measure campaign (operation**) results to determine if you actually did reach the right people.**

Depending on the types of marketing channel you use, the feedback you will receive can tell you something well or wrong.

LU 2: Plan content structure

▪ **Developing navigational structure.**

A navigation is to planning a website. A navigation flowchart organizes how you are going to guide visitors through your materials.

Example of navigation structure:

| How you create your own Website |
| Website design Layout |
| Create webpage design |

| Website for business |

| Planning software |
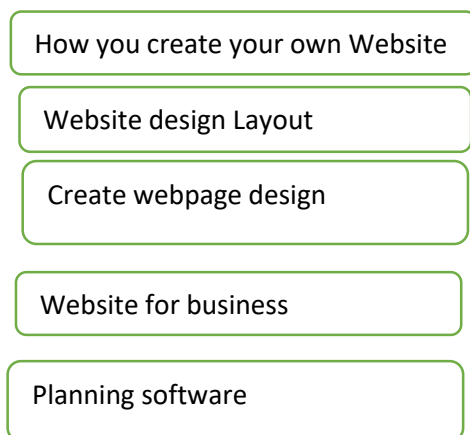
Your navigation flow will reflect those priorities, the materials you want most accessible available from the first line of menu options, with other materials accessible through submenus links within pages.

2.1 Arrangement of information in related topics and a logical sequence

- **Preparing an outline**

An outline is simply a framework for presenting the main and supporting ideas for a particular topic or subject. It can help you to develop a logical, coherent structure for your paper.

Here are five steps to a strong outline:

1. Choose your topic and establish your purpose

Having an objective in mind will help you set guideline and limitations on what is appropriate content for your essay.   What do you want them to understand about your topic? What do you want your readers to learn from reading your paper?

2. Create a List of Main Ideas

The goal of this step is to come up with a list of essential ideas that you are planning to present in your essay.

3. Organise your main ideas

The goal of this step is to rearrange the list of ideas that you come up in step2, putting them in an order that will make sense to you and the readers.

4. Flush out your main points

Your goal in this step is to expand upon your original ideas so that your reader has a better understanding of each point. You add more details to each concept by including examples: quotes, facts, theories, etc.

5. Review and adjust

Writing is a repetitive process, and all good writers continue to review and revise their essay until they feel it is the best it can possibly be.

- **Building information in a content management system**

A **content management system** (**CMS**) manages the creation and modification of <u>digital content</u>. It typically supports multiple users in a <u>collaborative environment</u>.[4]

CMS features vary widely. Most CMSs include Web-based publishing, format management, history editing and version control, indexing, search, and retrieval. By their nature, content management systems support the separation of content and presentation.

A web content management system (WCM or WCMS) is a CMS designed to support the management of the content of Web pages. Most popular CMSs are also WCMSs. Web content includes text and embedded graphics, photos, video, audio, maps, and program code (e.g., for applications) that displays content or interacts with the user.

Such a content management system (CMS) typically has two major components:

- A content management application (CMA) is the front-end user interface that allows a user, even with limited expertise, to add, modify, and remove content from a website without the intervention of a webmaster.
- A content delivery application (CDA) compiles that information and updates the website.

Digital asset management systems are another type of CMS. They manage content with clearly defined author or ownership, such as documents, movies, pictures, phone numbers, and scientific data. Companies also use CMSs to store, control, revise, and publish documentation.

Based on market share statistics, the most popular content management system is WordPress, used by over 28% of all websites on the internet, and by 59% of all websites using a known content management system, followed by Joomla and Drupal.

- **Arrangement of the items within a topic in a logical sequence**

    Sentences in a paragraph should follow some type of organization that helps them flow in a logical order. While there is no one organization that will work for every paragraph, there are some organizations that will work for many.

    Developing points and ordering information in a certain way can help keep the reader centered on the focus of the paragraph. It can also help the writer create a paragraph with a clear purpose that is easy for readers to follow.

    One example of logical order is to arrange the sentence in chronological order to show a sequence of events or the passing of

time. Another is to arrange sentences in order of importance. This can be done by either moving from the most important point to the least important point or going the opposite way, from the least important to the most important. Another common organization is to move from a general point, getting more specific as the paragraph moves along or to move from specific to general. No matter what order is chosen, maintaining the pattern is important to keep the paragraph clear.

Logical order can also apply to flow of paragraphs within an entire document. Like the organization of a paragraph, the organization of a document should consistent

- **Establishing a single principle of division**

Establish a single principle of division and use that principle to divide the subject matter into major topics.

First, establish a principle of division. Consider the one or more audiences that the regulations address. For example, if you are addressing a problem about cats, you would organize the material differently, depending on the audience you are addressing.

EXAMPLES:

- Veterinarians: What illness does the cat have?
- Cat breeders: What breed is the cat?
- Owners of lost cats: What color is the cat?
- Statisticians: How many cats were lost in the Washington Metropolitan area in 19__?

After establishing the basic principle of division based on the audience addressed, you should organize the subject matter of the document by major topics. In many cases, the major topics are apparent and may influence you to change your principle of division.

3. **Arrange the items within a topic in a logical sequence**. Once you have established your classifications, you must arrange them in a sequence that is helpful to the audience you are addressing.

Here are some suggestions to help you arrange the information in your regulations:

- Place general provisions before specific provisions.
- Place more important provisions before less important provisions.
- Place more frequently used provisions before less frequently used provisions.
- Place permanent provisions before temporary provisions.

- Place administrative provisions (such as effective date provisions) and penalty provisions at the end.

- **Division the subject into major topics.**

It is often recommended to write about topics that you know. This happens to be one of the first advices for someone about to start a classification essay.

After having chosen the topic, you need to spend plenty of time in order to think about the potential categories that this topic can accommodate. Ideally, you need to come up with at least three or four categories within the topic in order to make the essay interesting and useful to readers. If not, it is time to search for a new subject and begin the process all over again.

Here are the top points to keep in mind:

- Identify subjects that are of interest to you or subjects on which you have previous experience
- Strike off the subjects that do not provide an interesting angle to write about
- Identify subjects that are capable of being categorised into multiple ways
- Spend time to come up with all potential categories for that subject

Example a topic:

1. Readers

People love to read books and each have their reason to do so. Going into this aspect provides a great idea for the classification essay topic. Moreover, it can be moulded into different aspects by focusing on different hobbies.

2. Music

There are different genres of music with each having an interesting information and a background. Yet, most people tend to listen only to a specific type of music. At times, this exclusivity extends to a specific activity requiring a specific type of music. This provides an interesting topic for the essay.

2.2 Simulate the generation of new coherent documents based on the original content

- **Identification of document's foundation for designing a database**
- **Characterizing the data-oriented approach to information content**
- **Application of illustrations to enhance understanding.**

  - **Develop the hierarchy of information with data into the hierarchy sequence**

- **Building information in a content management system**

A **content management system** (**CMS**)

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A web content management system (WCM or WCMS) is a CMS designed to support the management of the content of Web pages. Most popular CMSs are also WCMSs. Web content includes text and embedded **graphics, photos, video, audio, maps, and program code** that displays content or interacts with the user.

Such a content management system (CMS) typically has two major components:

- **A content management application** (CMA) is the front-end user interface that allows a user to **add, modify**, and **remove** content from a website without the intervention of a webmaster.
- **A content delivery application** (CDA) compiles (collects) that information and updates the website.

Digital asset management systems are another type of CMS. They manage content with clearly defined author, such as **documents, movies, pictures, phone numbers**, and **scientific data.** Companies also use CMSs to **store, control, revise**, and publish documentation.

☐ **Establishing a single principle of division**
Drafting Legal Documents, Arrangement
Arrangement

1. **Prepare an outline**.
   Before you start to draft a set of regulations, prepare an outline to organize the subject matter of the regulations. The amount of effort that you put into this startup phase of a drafting project has great impact on the usefulness of the final product.

2. Establish a single principle of division and use that principle to divide the subject matter into major topics.

First, establish a principle of division. Consider the one or more audiences that the regulations address. For example, if you are addressing a problem about cats, you would organize the material differently, depending on the audience you are addressing. (Talking)

EXAMPLES:

- Veterinarians: What illness does the cat have?
- Cat breeders: What breed (type, kind) is the cat?
- Statisticians: How many cats were lost in the Washington Metropolitan area in 19__?

After establishing the basic principle of division based on the audience addressed, you should organize the subject matter of the document by major topics.

3. **Arrange the items within a topic in a logical sequence**. Once you have established your classifications, you must arrange them in a sequence that is helpful to the audience you are addressing.

Here are some suggestions to help you arrange the information in your regulations:

- Place **general provisions (**requirement**)** before **specific provisions**.
- Place **more important provisions** before **less important provisions**.
- Place **more frequently (**often**) used provisions** before **less frequently used provisions**.
- Place **permanent provisions** before **temporary provisions**.

2.2 Simulate the generation of new coherent documents based on the original content

- **Identification of document's foundation for designing a database**

students.

Software development projects are an indispensable constituent of computer science courses. They offer the prospects (**being successful**) for students to apply theoretical material and to expand (**increase, develop**) valuable knowledge in an environment typical of the workplace (workshop, workstation, office, etc.). In particular, we provide a software template (**model**) for software engineering projects through which quality of students' software project can be improved. The software template been designed can find out various errors committed by the students while developing their software projects in any of the following areas – **database, designing, reports, testing**, and **so on**. We consider our template will be a useful tool in identifying errors in student's software project and to eliminate these errors and hence improving the quality.

- **Characterizing the data-oriented approach to information content**

Big data standard system is a collection of data standards in order to deal with problems faced with the integration operation and communication efficiency in the process of Big data application, **involving the scope, content, type** and **formulated way of this standards**.

The growing popularity (**being liked**) of internet of things application brings new challenges to the wireless communication community. Numerous (**many**) smart devices and sensors (**instruments**) within (Internet of Things) **IoT** will generate a massive amount of short data packets. Future wireless transmission system need to support the reliable transmission of such small data with an extremely high energy efficiency.

- **Application of illustrations to enhance understanding.**

One of the more useful ways of approaching instructional illustrations is by examining their function. We will examine how illustrations can attract **attention, aid retention, enhance understanding.**

For example, showing a photo with beautiful cloud image at the opening of a presentation on climatology does more to attract attention than explain the content.

Drawing a diagram illustrating a processes in the formation of a particular content will help explain these processes for increasing understanding.

2. 3. Develop the hierarchy of information with data into the hierarchy sequence

▪ **The visualization of hierarchies sequences approach**

Hierarchies are frequently applied to help dealing with large and complex data, it help us in structuring large information and in solving problems that are too complex to cope with.

➢ **Information hierarchies**: it is the arrangement of elements or content on page/screen in such a way that it reveals an order of importance (either ascending or descending).

➢ **Timelines**: is a display of a list of events in chronological order. It is a graphic design showing a long bar labelled with date paralleling it and usually contemporaneous event.

➢ **Thumbnails**: are reduced-sized version of pictures or video, used to help in recognising and organizing them, serving the same role for images as a normal text index for words

▪ **Identification of different components of the information domain**

Data structure: in computer science, a data structure is a data organization, management and storage format that enables efficiency access and modification.

Data processing: is the collection and manipulation of items of data to produce a meaningful information

Process modeling: is a description of a process at the type level.

Purpose: establish rules, guidelines and behaviour patterns which if followed, would lead to the desired process performance.

LU.3: Develop information architecture

3.1. Prepare an information hierarchy catering for the physical storage of the files

▪ **Performing file system fragmentation**

The mobile devices such as smart phones, tablets have become the necessities of everyday life. Due to a long time of usage, mobile devices will start experiencing sluggish (slow) response.

To overcome to this issue, we apply defragmentation which means to organise the files on the computer device so that information relating to each file is stored in the same area so that the computer device works faster.

✓ **Filename**: a name given to a computer file in order to identify it.

✓ **Directories**: a book containing a lists of information, usually in alphabetical order. Example: Dictionary, people's telephone numbers.

- ✓ **Metadata**: information that describes other information in order to help you understand it well
  - ▪ **Identification of   file system types.**

Tape File System: is a file system that allow files stored on magnetic tape to access in a similar to those removable flash drives.

Network file system: is server application that lets a computer user **view, store** and **update** files on a remote computer.

Special-purpose file system: is a system used in collection of files and directories stored on a given drive such as floppy drive, hard drive.

3.2. Prepare search and retrieval mechanisms for content discovery
- ▪ **Designing HAC (hierarchy and content)file system**

In computing, a file system controls how data is stored and retrieved (to get back data). Without a file system, information placed in a storage medium would be confuse the user where it stops and the next begins.

There are many different kind of the files system, each one has its own structure and logic, properties of speed, flexibility, security, size and more.

- ▪ **Accessing remote file and query systems**
  When the user have to access remote data they would move the data files to some kind distributed file system and access this data as if it were local to the machine.

- ▪ **Personalization of information access and knowledge-based content**

The amount of information available online is increasing exponentially (**many times**). While this information is valuable resource, its sheer volume limits its value. These application all need to gather and exploit some information about individual in order to be effective.   The user can use such engine like Mozilla Firefox, internet explorer, to access information.

- ▪ **Development of a search and retrieval framework, supporting media searching**

The internet search engine is a software that is designed to carry out web search for a particular information. The information may be a mix of a **web pages, images, videos, infographics, articles, research papers** and **other type of files**.

3.3 Design an information hierarchy catering for navigation and access between files
- **Introduction of information hierarchy**

Raw data: is data that has not been processed for use

Information understanding: is a psychological process related to physical object, such person, situation, or message whereby one is able to think about it and use concept to deal adequately that object. Understanding is between the knower and an object of understanding.

Knowledge: is awareness or understanding of someone or something such as facts, information, skills which is acquired through experience or education by learning or perceiving.

Accessibility of files: any time you are preparing an electronic document that will be posted online or distributed via e-mail.

LU.4: Design information layout
4.1: Develop templates for textuai and graphic elements to facilitate consistent and visual design
- **Elements and principles of design**

Properties integration with Office

In the Microsoft Office system, when a user edits a document from a SharePoint Server document management server, a Document Information Panel is shown at the top of the document. The Document Information Panel displays an editable form of the document's properties on the server.

When you configure a content type, you can start InfoPath, which generates a default property form that is based on the properties of the content type. The default form includes the same **controls, layout**, and **schema** that InfoPath would use if no custom form were defined. For example, you can add your company logo, fonts, and color scheme to a form; connect it to a custom data source; add conditional logic; and design form features that are available to users based on their roles.

Along with editing properties in the Document Information Panel, authors who use Word can insert properties that are defined on the server into their documents. For example, if the document properties include a project manager name, this name can be inserted into the title page, the footer, or anywhere else the name is used in the document. If a new project manager is assigned to a project, the Project Manager property can be updated on the document management server. This updated project manager name will be

reflected in every instance of this property that was inserted into a document.

Using metadata with content types

Metadata is information about a document that is used to categorize and classify your content. Metadata can provide contextual (**relative**) information about your document by associating it with **an author, subject, audience, language**, and **so on**.

Metadata added at the site collection level can be associated with content types. By using metadata with content types, all later content types can inherit some or all the metadata from the parent content type at the site collection level.

Column templates

Each item of metadata that is associated with a content type is a column, which is a location in a list to store information. Lists are often displayed graphically as columns of information. However, depending on the view associated with the list, the columns can appear in other forms, such as days in a calendar display. In forms associated with a list or library, columns are displayed as fields.

You can define columns for use in multiple content types. To do this, create them in a Column Templates gallery. There is a Column Templates gallery in each site in a site collection. As with content types, columns defined in the Column Templates gallery of a site are available in that site and in all sites below it.

- **Applying Information management policies to associate with items of its type**

Create and apply information management policies

Information management policies enable you to control who can access your organizational information, what they can do with it, and how long to retain (**hold**) it. As an administrator, you can set up a policy to control how to track documents, who has access to documents, and how long to retain documents.

Each policy can establish a set of rules for a specific type of content. Each rule in a policy is a policy feature.

- **Identification of Document templates**

You can use an identification card template to identify students and employees.

You can use them to increase the security of your institution too. ID templates also help add an element of professionalism to your working environment.

Different institutions and organizations may launch ID programs. On an ID card template, you would usually include a **photo, the person's name,** and **other relevant data**. Such a card also serves as a document.

It's an identification document which serves as proof of someone's identity. In some countries, people receive "formal" documents to prove their identity. The other countries allow the usage of "informal' documents to verify their identity.

Most countries accept passports as proof of a person's identity. In some countries, the people need to have a type of identity card or badge available at all times. When a person is in a foreign country, he must have his passport with him all the time.

Either that or any other kind of identification document would suffice. An identity card template links a person to all the information about him. All this information is typically stored in a database.

The information in the database is usually all the basic information about a person. This includes the complete name, date of birth, age, address, gender, and more. If the ID has a photo, it's a lot easier to link the document to the person holding it.

Example of identification document template

Employee ID Cards

Press Reporter ID Cards

LU.5: Test the document

5.1: Develop a suite of prototypes for all document levels
  - **The processing the steps of prototypes in document**
    The role of prototypes:
    Display or Show the new product
    Test an idea to see if it really works.

    Test the design to see if it passes certain requirements.

    Use it to evaluate where improvements are necessary.

    Get customer feedback

    Definition:

    Prototype: is the first design of something from which other forms are copied or developed.

Steps in Creating a Functional Prototype
1. Transition from Paper to Software Design

The Importance of Paper Design

Resisting this temptation will save you time and wasted effort in the long run. The time you invest in paper design pays big dividends later and helps you avoid many common difficulties in the design process.

 Paper design does not mean writing out your detailed design for your prototype on paper with a pen or pencil.

 Paper design is creating a plan before doing any software coding or hardware design. Some of the benefits of paper design include **getting ideas out of your head**.

Define Your Requirements

The first step is to clearly **define your goals** by making a list of user requirements. These requirements should be as specific as possible.

Research is crucial at this early stage to be sure you can meet your outlined requirements. Is your design feasible? Will it realistically be able to meet your requirements? Make sure that you distinguish between **needs** and **wants** for your design. As an innovator, you may be attracted to add advanced but not completely necessary features to your prototype. **Know your objectives** and stick to them.

2. Prototype a User Interface

Often the best time to prototype a user interface (UI) is as you transition your paper design to software. Prototyping a UI helps you think through design architecture and application requirements as you make this transition. The more complex your prototype, the more valuable a UI prototype becomes in building support and gathering feedback for your design. Finally, it creates the big picture that prototype designers can rally around in designing features and adding functionality to the prototype. These UI prototyping advantages can save you money, decrease development time, and ultimately result in a better product.
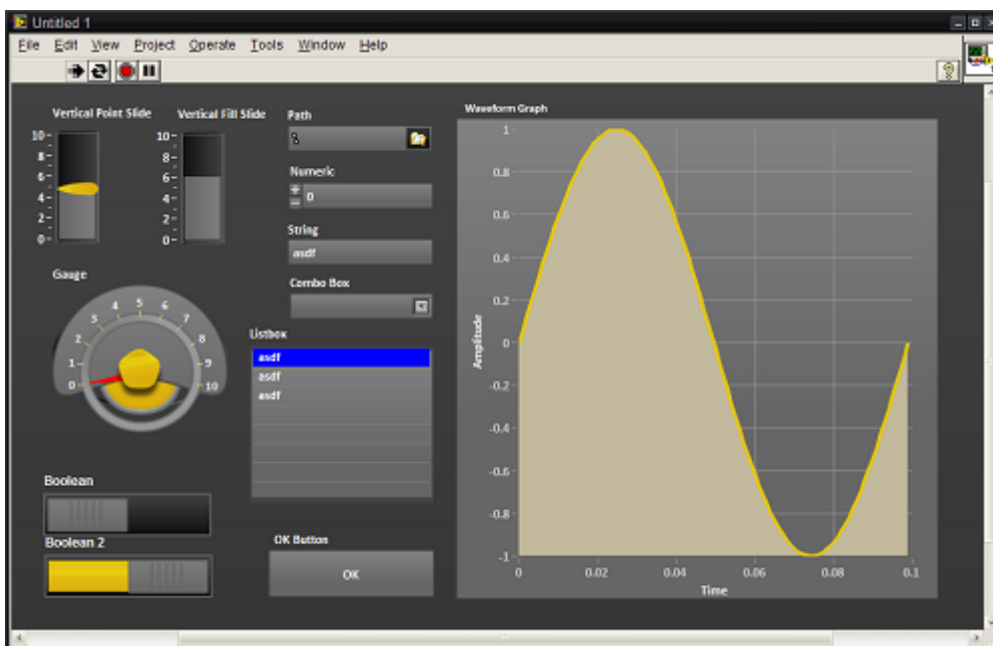
Figure 2. UI Designed in LabVIEW (Obtain the code from the UI Interest Group.)

LabVIEW has a built-in front panel, which makes it an ideal tool for quickly developing a highly customizable UI. LabVIEW helps you easily add functionality as you churn through the design and prototyping cycle, which minimizes rework while you iterate on your design. With LabVIEW, you can quickly prototype your UI, modify it throughout the prototyping process, and even deploy it in a finished product.

8. Conclusion

Prototyping is a crucial part of the embedded design process. The ability to demonstrate a functioning idea to investors, customers, and management is a great way to get your idea into someone's budget.

- **Identification of basic requirements**

Vertical and horizontal prototypes
Horizontal Prototypes

Horizontal prototypes are most often used during the early stages of analysis. They give a broad view of the application including sample screens, menus, buttons, pop-ups and sample reports that reflect the current requirements.

They are helpful for understanding the range of abilities across a system and how feature sets will be brought together. They are useful for presenting ideas to stakeholders, facilitating requirements discussions, and gaining buy-in on requirements and design decisions.

Vertical prototype

Vertical prototypes are more technical in nature, connect to databases with real data, interface with existing sub-systems, and reflect the nearly-exact functioning of key features. They are most appropriate when complex features of a system are poorly-understood and are useful in demonstrating that a requirement or set of requirements is technically feasible.

The possible types of prototypes include:

 Concept prototype,   Vertical prototype,

Functional storyboard.   Feasibility prototype,

 Horizontal prototype,

A chart illustrates typical purposes for each kind of prototype.

Type of Prototype	Typical Purpose	General Characteristics	When to Use
Concept Prototype	Analyse system approaches	High-level, overall vision	Concept Definition Stage
Feasibility Prototype	Determine feasibility of various solutions	Proof of concept for specific issues	Concept Definition Stage
Horizontal Prototype	Clarify scope and requirements	Demonstrates outer layer of human interface only, such as windows, menus, and screens	Function Definition Stage
Vertical Prototype	Refine database design, test key components early	Demonstrates a working, though incomplete, system for key functions	Later portion of Function Definition Stage
Functional Storyboarding	Determine useable sequences for presenting information	Demonstrates the typical order in which information is presented	Function Definition Stage

- **Advantages and disadvantages of prototyping**

Advantages of Prototyping Model

1) When prototype is shown to the user, he gets a 'feel' of the functionality of the software and he can suggest changes and modifications.
2) This type of approach of developing the software is used for non-IT-literate people.

3) It reduces risk of failure.

4) Time required to complete the project reduced.

Disadvantages of Prototyping Model:

1) Prototyping is usually done at the cost of the developer. So it should be done using minimal resources.

2) It is a slow process.

3) Too much involvement of client, is not always preferred by the developer.

4) Too many changes can disturb the rhythm of the development team.

 ▪ **Best projects to use prototyping**
It has been found that prototyping is very effective in the analysis and design of on-line
systems, especially for transaction processing, where the use of screen dialogs is much
more in evidence.
The greater the interaction between the computer and the user, the greater the benefit is that can be obtained from building a quick system and letting the user play with it.
Systems with little user interaction, such as batch processing that mostly do calculations, benefit little from prototyping.
Sometimes, the coding needed to perform the system functions may be too intensive and the potential gains that prototyping could provide are too small.

Prototyping is especially good for designing good human-computer interfaces.
 "One of the most productive uses of rapid prototyping to date has been as a tool for iterative user requirements engineering and human-computer interface design Tools.

4th generation programming languages like Visual Basic are frequently used since they are cheap, well known and relatively easy and fast to use.
Also they enable you to run the prototype and use basic database functionality.

 ▪ **Methods of prototyping**
Let us look at some common methods of prototyping that you can use.

Sketches and Diagrams
Sketching is one of the earliest forms of prototyping you can use. It requires very little effort and does not necessarily rely (**depend**) on artistic levels of

drawing skill to prove useful, and within lies its value. Use sketches to illustrate your ideas and launch them into the real world. Sketch simple illustrations of your concepts so that they don't exist only in your mind, hence allowing you to share these with your team-mates for further discussion.

Paper Interfaces

Digital products like **mobile apps**, **websites**, and **web services**, as well as other screen-based products often require you to create a range of prototyping methods in the run up to the final design and development. Paper interfaces are near at the early stages of prototyping for digital products. You can create paper interfaces by sketching them out, or by drawing and cutting out usable parts of a user interface such as a text field.

Storyboards

Telling stories is an excellent way of guiding people through a user experience. Storyboarding, a technique derived from the film industry, is something you can use for early prototyping to allow yourself to visualize (**imagine**) how users would experience a problem or product. When you draw storyboards, try to imagine the *complete* user experience (**skills**), and then capture it in a series of images or sketches.

Role-Playing

Role-playing, or experiential prototyping, is a method that allows your design team to explore scenarios (**situation**) within the system you are targeting *physically.* We can make the best use of role-playing in capturing and expressing the users' emotional experience of using a product or service.

You can also use it to gain an empathic (**ability to understand the person's feeling**) understanding of your users — through simulating what they are experiencing. You can also remember the experience more vividly (**very bright**) when you physically experience it, rather than draw it out in a storyboard, for instance.

Wizard of Oz Prototypes

Wizard of Oz prototypes are prototypes with faked (**not real**) functions for instance, interactivity that comes from a human rather than an algorithm or software code, with users believing The most common example of Wizard of Oz prototypes is a prototype of a digital system, where the user is "tricked"(**sth confuse person**) into thinking the system responses.

User-Driven Prototypes

A user-driven prototype is unlike any other prototyping method previously mentioned. Instead of building a prototype to test on users, you will instead get *the user* to create something, and from the process learn more about the user. When you ask the user to design a solution, rather than provide feedback on a prototype, you can learn about the assumptions and desires that the user possesses. The purpose of a user-driven prototype is not to use the solutions that the users have generated; instead, it is to use their designs to understand their thinking.

Dynamic systems development

Dynamic Systems Development Methodology is a methodological analysis used by information system professionals to develop software's projects which is originated from Rapid Application Development Methodology.

Stapleton (1997) states that "DSDM describes **project management, estimating**, **prototyping**, **time boxing**, **configuration management**, **testing**, **quality assurance**, **roles** and **responsibilities** (of both users and IT staff), **team structures**, **tool environments**, **risk management, building for maintainability**, **reuse** and **purchaser relationships** – all in RAD environment."

The above methodology is applied to the Yojimbo Supplies Ltd in order to produce the customer-order system which covers the **customer details**, **order details** and **stock control details**. At present only the part of the company operations is computerized and the remaining is still done by the paper work ever since the company has started.

After carrying out the brief analysis, the proposed system must be implemented with a centralized database over a local area network. The person involved are **Project Manager**, **Programmers**, **System analyst** and **facilitator**. Below describes the project plan that involves phases, stages and tasks of DSDM in context with the case-study.

- **4th generation programming languages (Visual Basic and ColdFusion)**

Fourth generation programming language (4GL) is a programming language that attempt to get closer than 3GLs to human language form a thinking and conceptualization.

It is designed to reduce the time, effort, and cost of software development.

The main domain of 4GL are: database query, data manipulation, analysis and reporting, mathematical optimization, etc.

- **Requirements Engineering Environment**

In system engineering and software engineering requirement analysis comprise those tasks that go into determining the needs to meet for a new product or project.

The requirement analysis is critical to the success or failure of the software project. The requirements should be documented, measurable, testable, related to identified business needs.

5.2: Test for functioning and intuitive use of the navigational features for all levels

- **Methodology of testing**

Software Testing methodology is a testing type used to certify that the application under test meet client expectations.

Testing methodology include functional and non-functional testing. Example: unit testing, integration testing, system testing, performance testing etc.

Each testing methodology has a defined test objective, test strategy and deliverables.

- **Choose a high level test plan**

Eight steps to create a test plan:

Step 1. Analyse the product: Get information about the product.

Step 2. Develop the test strategy: Determine testing **effort** and **costs**

Step 3. Define the test objectives: Show your target based on software features like: **functionality,** and **performance.**

Step 4. Define the test criteria: Determine the rules on which the test procedure can be based

Step 5. Resource planning: it means employees and equipment to be used for the project.

Step 6. Plan test environment: Consists of the real business, its users and its location

Step 7. Schedule & Estimation: Set the time allocation for work per employee in project.

Step 8. Determine test Deliverables: Is a list of all the documents tools and other components that has to be maintained in support of the testing effort.

5.3. Is not found in program

5.4: Test visual design and layout at all levels on design principles
- **Sense of Visual arts design**

The visual arts are art forms such as **drawing, painting, sculpture, printmaking, design, crafts, photography, video, filmmaking, architecture**, etc.

- ➢ **Drawing:** means making an image using the variate of tools and techniques like: **pencils, pen, ink, charcoals, markers**, etc.
- ➢ **Painting:** is the practice of applying pigment suspended to a surface of thing such as **paper, banner, clothes**, etc.
- ➢ **Photography**: is the process of making picture by means of the action of light. The process is done thought electronic device known as Camera.
- ➢ **Architecture:** is the process and the product of planning, designing and constructing buildings or any other structure. Example: houses, bridges, etc.
- ➢ **Filmmaking:** is the process of making a motion-picture through scriptwriting, shooting and recording, animation, editing, sound and music work and finally distribution to an audiences.
- ➢ **Sculpture**: is three dimensional artwork created by combining hard or plastic material, sound, or text or light, stone (either rocks or marble), metal, glass or wood.

THE END OF THE MODULE!!!!!!!

REVISION EXERSES FOR DEVELOPING DOCUMENT CONTENT AND STRUCTURE

I. Answer by using FALSE or TRUE on the following statement

Q1. It is necessary to design and develop the structure of the document before setting out to write it**.**

Q2. The effective developing document presents the following elements: Introduction, development, and reference only.

Q3. The information that you present to your reader should follow a logical sequence.

Q4. Navigation system is the one of information architecture where the user interacts with the website on the internet.

Q5. Quantitative of data refers to an information that are collected as description (words).

II.MULTIPLE CHOICE QUESTIONS (Choose the correct answer)

Q1. The following advice is not needed during information organisation

a) Using a folder   b) Downloading a song   c) Back up

Q2. The following is an embroidery tools except:

a) Needles   b) Dress Marker's Scissors   c) Stove

Q3. Keeping planning and organising the work activities depend on:

a) Determine the specific task   b) Facebook charting   c) Set a timetable   d) **a** and **c** are correct

Q4) One of the following steps can create the connection between marketer and the audience

a) To recognize (to know) your audience   b) To buy a beer for them
c) To protect them from accident

d) To increase the price of service

Q5. Searching information on the internet is: a) Primary data

b) Secondary data   c) Tertiary data

III. OPEN QUESTIONS

Q6. Describe three categories of information.

Q7. What are duties/ activities required for planning document structure?

Q8. Match the following terms with their meaning

Irony   the overall feeling of the piece.

Mood   a figure of speech in which the meaning is the opposite of what is spoken.

Pejorative   a short speech or introduction before the main story begins.

Prologue   a word whose meaning might normally be associated with a negative sense.

Prejudice: A group of words whose meaning is different from the meanings   of the individual words

Idiom   usually based on someone race, gender, clothes

Q9. List down five steps that will help you better identify who your audience is and how you can best connect with them.

Q10. Explain five steps can help you to develop a logical, coherent structure for your paper.

Q11. a. What is prototype?

Q12. Enumerate four advantages of prototype

Q13. Explain the Methods of prototyping

Q14. Outline Visual arts design you studied in the classroom.