

# Computerisation of Education Using Multimedia

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Submitted in partial fulfilment of the requirements for the  
Degree of Bachelor of Engineering in Computer Science  
and Engineering of Bharathiar University, Coimbatore

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**Certificate**

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**Computerisation of Education Using Multimedia**

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Computer Science and Engineering branch of the Bharathiyar University  
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*[Handwritten Signature]*

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**Guide**

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**Head of the Department**

Certified that the candidate was examined by us in the project work Viva  
- Voce Examination held on ..... and the University  
register number was.....

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## SYNOPSIS

The project "**MULTIMEDIA SCIENCE TEACHER**" was developed using **VISUAL BASIC** as the front end and **MS ACCESS** as the database engine. In this project, we address ourselves to the full spectrum of the role played by the school teacher in teaching aspects.

The issues in the development are explicitly exposed to the developers in the introduction section. The overview section consists of the details involved in the development of our **MULTIMEDIA SCIENCE TEACHER**. The system was successfully developed satisfying all the requirements and there is much scope for the future development and enhancement. This is an user friendly software which is highly interactive with the users. This allows the user to have a better way of learning than the traditional way.

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## WHAT IS MULTIMEDIA ?

In the simplest and broadest sense, multimedia is nothing more than the combination of several media or methods of communication. The combinations might be graphics and sound, or text and animation. You are blitzed by all types of multimedia events every day. To grab your attention in a world filled with information, every media in existence is being employed. Here are just a few things that employ multiple media (multimedia) to grab your attention.

- Magazine inserts now come with jazzy text, snappy colors, popup pictures, and scented paper as part of the ad.
- Trade show displays are now larger than life with motion picture quality videos and stereo sound. At a recent trade show for the computer industry one vendor had roller bladers performing high above the crowd.
- Establishments vying for consumer entertainment dollars have added glitzy and flashier displays to attract attention. Nowhere is this more evident than in Las Vegas. Casinos try to grab the attention of those walking on the Las Vegas strip with everything from flaming volcanoes to fighting pirate ships.

- Consumer products now light up and talk to us as each manufacture competes to add features. Your bread-making machine may have flashing displays to signal each stage of its bread-making process and an audible alarm to let you know when it is finished. Answering machines now tell you how many calls you have received and the date and time of each. Your car may even tell you to buckle-up if you forget to buckle your seat belt.

As we have been exposed to more media forms in every day activities, we have grown to expect more from our computers. Since technology allows graphics, audios, animation, and video to be digitized as text has been, it is easier to integrate all of these media into one presentation.

## MULTIMEDIA AS THE LATEST COMPUTER BUZZWORD

When used to refer to computers, multimedia still means the integration of many media. Specifically, text, video, sound, graphics and animation are brought together through the computer. Although some of these media have been used with computers for quite some time, integrating them is relatively new. New operating systems, the ability to digitize all types of input, and authoring programs to combine all of these media have made this possible. The recently lowered costs for the required hardware and software products have made multimedia available to large numbers of people. Just as desktop publishing revolutionized the presentation of text produced with a desktop computer, multimedia will revolutionize the presentation of all types of information with the computer. So many users have adopted desktop publisher techniques that those who have not cannot produce documents with the same impact. Today, a memo or flyer created with a Courier font on a dot-matrix printer cannot command the same attention as the same document created with appropriate fonts and graphics on a laser printer. To gain the benefits multimedia offers, you must understand something of what this technology is about and what it offers.

## **THE BASIC COMPONENTS**

As you look at a multimedia product you may not think about the individual components since a well conceived and produced multimedia presentation integrates them so well. If you look at a product like a computer game or Disney's Aladdin movie, you probably experience the parts as a whole. Animation, sound, and video combine to give a sense of unity. Each media is used where appropriate and supports the others.

In many computer\_based multimedia presentations, your ability to access information randomly within the presentation will also mean that two different users may see different parts of the product. Although you may feel comfortable with the individual media components, you will want to learn more about the possibilities for text, graphics, audio, video, and animation and their integration.

## **HARDWARE**

Hardware components of multimedia have been available for years. The Macintosh computers were one of the first systems with multimedia capabilities to achieve any level of popularity. Even with the hardware available, few people owned systems capable of multimedia because of the cost of computers such as CD-ROM drives.

Systems capable of supporting multimedia finally hit the mainstream at the end of 1993. Tumbling prices for CD-ROM drives, sound boards, and speakers made it possible to offer multimedia capabilities in systems that were affordable to many home buyers.

If you already have a system, you may be able to upgrade it to support multimedia. You will want to look at what is needed to upgrade your system and determine whether you will get the performance you are looking for before making an additional investment in your computer.

## **MULTIMEDIA SOFTWARE**

Special software programs known as authoring systems allow you to create your own multimedia products. You can also use multimedia features in many popular programs such as word processors, databases, and spreadsheets.

## **MULTIMEDIA PROJECTS**

Technology now makes it possible to create a CD-ROM disc from your home or office. This makes it possible to create a state-of-the-art presentation for a trade show or sales conference.

Only you can decide if you have the expertise to develop effective multimedia products and want to commit the time and money needed to do so. You will want to know a little about the expertise involved and what your options are as you look outside suppliers. Until recently there were a limited number of computers with multimedia capabilities. Now that kits are available to upgrade existing systems at a low price and the costs of new multimedia-equipped systems have fallen, more and more multimedia products will enter the marketplace.

- Educational programs for all pages.
- Entertainment and recreational products for areas such as travel, flight simulation, and other games.
- Business products, including marketing and retail sales presentations.
- Encyclopedias, dictionaries, and other references.

## AUDIO COMPONENTS

The sound or audio component of a multimedia presentation can capture of someone who is not even looking at the screen. Sound in the form of music allows some communication with individuals who speak a different language. Music can be festive or melancholy. Used throughout a presentation, it can affect the mood of the viewer. In Hollywood's productions, sound is chosen carefully to intensify the action on the screen. As an example, in suspenseful settings the music often builds to a crescendo as the police close in on a bank robber or other criminal. Love scenes are accompanied by more idyllic melodies. Even where music is not used, the sound of a human voice can soften a technical presentation and make it seem more inviting.

If you are creating your own multimedia presentation, you will want a variety of sound clips that you can use in the proper places to support and enhance the message delivered on the screen. Both PC and Macintosh multimedia systems will support the playing and creation of sound files. Before examining the different types of sound files, you will want to learn a few basics from acoustics, the study of sound, as well as various options for storing sound information in files.

## **WHAT IS SOUND?**

Sound is a form of energy that travels in waves from the source. It has several different measurements that allow you to distinguish one sound from another. Sound volume is measured in decibels (db). A normal human conversation will be in the range of 60 to 75 db while a whisper might only be 15 or 20 db.

Pitch is another important characteristic of sound. Pitch is the number of vibrations per second, and is referred to as the frequency of the sound. If your hearing is normal, you can hear sounds with frequencies from 20 to 20,000 Hz. Frequencies are measured in hertz.

## **RECORDING SOUND IN A FILE**

Sounds move out from their source as a waveform. The waveform can be sampled to obtain information that can be stored in a digital format. The actual process of digitizing sound can be handled by a sound card in your computer. This sound is picked by an attached microphone, tape deck, or other audio source plugged into your sound card's input jack. Once digitized, this information can be stored in a file for later replay.

When you want to replay the sound, the sound card processes the digital file and creates an analog sound file that can be played on attached speakers. Using the

samples in the digital file, the playback is as close as possible to the original with the quality affected by the sampling rate and speakers. Higher sampling rates will create files of better quality but they will use more hard disk space.

In the next lesson you will learn about recording sound in a MIDI file. MIDI offers a standard coding structure for a file format. This recording method allows you to have the same sounds created by different instruments as you change the code for the instrument that will handle the playback.

If you have a CD-ROM drive in your system, it can probably also handle CD-Audio. You can use it to play music CDs that you will be able to hear on your system's speakers.

## **EDITING SOUND FILES**

You can obtain both Macintosh\_ and Windows\_ compatible software that will handle the editing of waveform audio files. You can alter recorded sounds with these programs and add special effects such as echo, fade, or reverse. You can try the altered sounds from within the editing program, but you will want to do final test from within the program where you plan to use it. This will allow you to simulate the user's experience as he or she works with your application.

## **ADVANTAGES AND DISADVANTAGES OF WAV FILES**

Digital files can be created with a high enough sampling rate to provide good quality playback. They can also be used to record voice data. They can produce comparable sounds even when the recording and playback hardware differ. There are a few problems with using digital audio files that have caused users to look for another solution:

- Files are large and require a large amount of RAM.
- Files use large amounts of hard disk space.
- Files cannot be edited to add sounds of instruments that are not in the recording.

## **GRAPHICS**

Graphics refers to images saved in a file that you can use on a computer. For example, both a piece of clipart provided with a drawing package or a photograph that has been scanned and stored in a bitmap format are graphics. Graphics cannot be represented as characters and are static rather than dynamic like video.

There are two basic storage formats for graphics images: bitmap and vector. Although you may not be able to tell which format an image is saved in by looking, understanding the differences between them will help you select the right format where possible.

## **BITMAP GRAPHICS**

Bitmap images consist of a series of dots or pixels. Bitmap images are sometimes called raster images. The bits of data associated with each pixel specify both color and intensity. Bitmap images can vary in resolution. A bitmap image is the format created by a scanner and most paint programs. It is the storage method of choice for a photographic image or an image that has a lot of detail. Each pixel in the image can vary from the one next to it not only in color but also in intensity. The clarity of the scanned image versus the original may appear identical or vary considerably. A dithering process is used to convert the millions of colors that might be found in a photograph to a grayscale or 256\_color image. The factors affecting the outcome are the selection

of colors in the original versus the color options in the palette used for the stored image. If you store a scanned photograph after dithering using a palette of the 256 colors closest to those in the original photograph, the image will be almost identical to that original photograph. However, storing the same image using a 16\_color palette would produce poor results.

Bitmap images provide a clear image as long as the resolution with which they are stored matches the one at which they are printed or displayed. As you attempt to enlarge a bitmap image, you begin to get a jagged look to the image as pixels are separated from each other. Displaying the image smaller may seem to be OK, but a reduction can also cause a distortion as some of the pixels are dropped.

## VIDEO

Interest in digital video is growing rapidly. It is flashy in a presentation, attracting interest because of its movement and real\_world emphasis. The other important factor in its current popularity is the more affordable alternative for creating video that has become available in the last few months. It is now possible to add good\_quality video to your productions with an investment of less than \$500 if you already own a Camcorder.

## VIDEO SIGNALS

The television video that you are very familiar with is based on an analog technology. In the United States this is based on the NTSC standard. In Europe the standards are quite different and European VCRs follow the SECAM or PAL standards. This makes it impossible to play a video made in the United States on a European VCR unless you have one of the more recent VCR models that can play tapes in all three standards. The three standards for television video differ in their frame rates and number of scan lines. The NTSC format uses 525 horizontal scan lines. These lines are drawn by a beam every 1/30th of a second with odd and even lines interlaced. The PAL format draws 625 lines with a frame rate of 1/50th of a second. SECAM is used less widely with most of its base in France. It is 625\_line display, but its approach is quite different from the other two options.

## DIGITAL SIGNALS

Until the late 1990s when High Definition Television brings about the merger of television and computer-based video, there will be dramatic differences in the two media. The video displayed on a computer screen must be digitized from its original analog signal to be displayed. Also, computer monitors scan fewer lines than NTSC, SECAM or PAL technologies, with a limit of 480 lines. Moreover, there is no interleaving of odd and even lines, but a focus on a top\_to\_bottom approach. Colors on a computer screen may also vary because of the computer's RGB split to achieve precise colors.

Digitizing an analog signal has been both time consuming and storage intensive until recently. Devices such as Intel's Smart Video Recorder can capture data from your video recorder to your hard disk and handle compression at the same time. This type of new product can cut storage space by over two-thirds and will record 1 minute of footage onto your disk in a little more than a minute. This may not seem unusual but older hardware options required as much as 30 minutes to convert 1 minute of captured footage. The new Intel Smart Video Recorder is also capable of capturing your data without compression if you want to edit it before compression.

Full\_screen and full\_motion video require a playback speed of 30MB of data a second. With full motion in demand and machines unable to support this speed, the only solution has been to reduce the size of the image to less than full screen.

## **POPULAR FORMATS FOR DIGITAL VIDEO**

Depending whether you have a Macintosh or PC, you will want video digitizing boards that support either the QuickTime format or Microsoft's Video for windows. QuickTime is an extension to the system for the Macintosh. It allows the system to interface with your digitizing card and VCR. It also handles the needed compression and decompression capability for hard disks or CD\_ROM drives.

The various compression options supported vary in their compression rate, the quality, which is affected by whether or not unimportant data can be dropped or whether it all must be maintained and the speed with which compression and decompression is handled.

Microsoft's Video for Windows has provided a standard for video on multimedia PCs. It defines a way to store its a new file format, AVI, for your hard disk. This format supports the interleaving of audio and video information on a CD\_ROM disk, making it possible to achieve synchronized audio and video components. VidCAP is a utility program provided with Microsoft's Video for Windows. Once your video capture board is installed, you can connect your

camcorder and start VidCAP for an easy\_to\_use inter face. Once captured, you can edit the material or Other AVI files with VidEDIT, another utility provided by Microsoft. VidEDIT allows you to change the frame rate for slow motion or speedup and also allows you to make changes to the color palette.

## **PROBLEMS TO OVERCOME**

Adequate disk storage space and transfer rates are the biggest problems to overcome. As processors become faster and disk storage more abundant, these problems will resolve themselves but they currently put a damper on what can be done with video technology.

Capturing a single second of full motion video will require that you store 30 frames of information on each pixel in a 640\*360 grid. This requires 33MB. Since you probably want more than a second of video, you can see why uncompressed data would require more disk space than you have available. Also, some boards will not capture and compress at the same time, requiring a lengthy conversion procedure after capture as well.

If you need a low\_budget solution on a PC that will not support full\_motion video, You might consider a frame grabber board such as Creative Lab's Video Blaster. Since it can capture a single frame from a video clip, seek times and available disk space are not a big issue.

## **ANIMATION**

### **HOW ANIMATION TRICKS THE HUMAN EYE**

As our eyes focus on an object, it remains in our vision for a brief instant. Animated objects will seem to move fluidly if the objects change slightly and the new images are changed quickly enough. You can experience the choppiness that results from frames that change too slowly if you use a flip book of drawings.

Moving your thumb over the pages slowly will produce a jerky movement. At a faster rate the objects on the pages seemingly come alive before your eyes.

### **WHAT COMPUTER PROGRAMS CAN OFFER**

Computer tools can assist with the creation of animation by eliminating much of the labor involved. Each of the many tools that are available use of different approach. Some allow you to focus more on making changes to individual frames than others. As expected, all have completely different menu systems, making transition from one program to another initially frustrating. A few of the terms you might encounter with the programs are:

- Cast member or actor-->An object that will move between animation frames.
- Keyframes --> A frame in the sequence where you can define the location of cast members.
- Tracing --> The process of creating the next frame from the existing frame.
- Tweening -->The creation of intermediate position for cast members between keyframes.
- Rendering --> The addition of color to frames.
- Path --> Position change of a cast member of the screen.

## **MINIMUM PC CONFIGURATION**

### **PROFILE OF A USER SYSTEM**

You don't need as much processing power for a user system that displays multimedia projects rather than creates them. Below are listed the minimum requirements for a user-oriented multimedia system. However, you may be able to get by with a little less for some features, as long as your software allows it.

- Single or double-speed CD-ROM drive
- 4-MB RAM and a 120-MB hard drive
- 8-bit sound card and speakers
- 386DX processor with a 25-Mhz clock
- Microphone
- MPC level II compatibility
- Windows 3.1 or os/2 2.1 operating system
- 13-inch SVGA monitor

## **PROFILE OF DEVELOPER'S SYSTEM**

If you plan to develop multimedia products, your system should meet the minimum standards listed below. Other capabilities and extra equipment will depend on the type of project you plan to create.

- 8-MB RAM and a 300-MB hard drive
- 486 processor with a 33-Mhz clock
- 16-bit sound card and amplified speakers.
- Triple speed CD-ROM drive
- Windows 3.1 or OS/2 2.1 operating systems
- 14-inch SVGA monitor and video ram
- 512k secondary cache memory

## **NEED FOR THE SYSTEM**

Computers often provide the ideal learning environment. Their infinite patience, positive reinforcement and their ability to tailor themselves to the learning pace of each user can maximize learning for many peoples.

The capabilities added with multimedia's sound , video and animation can add fun to the learning process. The interest level of products on some pretty humdrum subjects far exceeds that of text book on the same subject.

## **PROPOSED SYSTEM**

The proposed multimedia system computerizes all the activities of teaching profession. Besides teaching the system is designed in an user interactive manner.

## **OBJECTIVES OF THE SYSTEM**

- To provide the user with an event driven user interactive system.
- To reduce the manual dependency and to increase the interest in the subject.
- To standardize the level of learning.

## **IMPLEMENTATION**

### **STAGES OF PROJECT DEVELOPMENT**

Although the resource needed for the development of multimedia product differ from those needed for typical system development, the stages of both the projects are one and the same.

### **DATABASE DESIGN FOR MULTIMEDIA SCIENCE TEACHER**

The database used in the project is **School.mdb**. The above database consists of the following:

#### **Tables**

- Science
- Object
- Question1
- Question2
- Picture Maste
- Animation Master
- Video Master

## Queries

- Qrygeneral
- Qryquest1
- Qryquest2

The design of the above database is explained below

### **THE OVERALL DESIGN -FROM CONCEPT TO REALITY**

All software developers and end users face similar problems. The first set of problems you encounter is with gathering requirements. The end user is typically your client, your co-worker or you. It is important to understand the overall needs of the system before you begin to zero in on the details.

The **MULTIMEDIA SCIENCE TEACHER** serves students for having complete knowledge of the subject. Basically, **Multimedia science teacher** needs to automate several tasks :

- Browsing through the lessons.
- Showing the corresponding pictures, videos and animation.
- Asking all types of questions about the information in the database.

The design process is an iterative procedure.(ie), as each new step is finished, all the previous steps must again be looked at to make sure that nothing in the basic design has changed.

## **DATA DESIGN**

Now that you've decided what you want for output, it's time to think about how you will get the data into the system for any ad hoc queries. The next step in the design phase is to take an inventory of all the data that you need to accomplish the output. It is carried out by separating the data items into some logical arrangement. Later, you will have to group these data items into logical table structures(ie) Normalisation and then map them on to data-entry screens.

### **Advantages of Normalisation**

1. Task of maintaining data integrity is simplified.
2. Storage space requirements utilised efficiently.

3. Reduce the database structure to its simplest form.
4. Identify all data that is dependent on other data.

Normalisation involves attaining the first, second, third and fourth normal forms. Before the normal forms were obtained the primary keys for the relations are determined. Taking into account the properties of normalisation, none of the relations in the **Multimedia Science Teacher** violates the fourth normal.

## TABLE DESIGN AND RELATIONSHIPS

After you complete the data design, the next step is the final organisation of the data in tables. The final tables are viz. **Science**, **Object**, **Picture**, **Animation**, **Video**, **Questions**.

Table **Science** consists of the general text. **picture** has the various picture files available. **Animation** consists of various animation files. **Video** has the various video files. **object** has the key values for pictures, animation and video files for corresponding **Science** records.

## Setting Relations

Tables are related to each other so that information in one table is accessible to another. In systems that are designed with ACCESS you usually have several tables

all related to one another. Relations are established by having fields in both tables that share a common value. The field names in both tables need not be the same; only the values have to match. For example, the id of the **Science** table is related to the id2 of the **Object** table. This setup saves you from having to store the data in two places.

### **Field Design**

The next step is to define the fields in the tables. You should also need to determine data-validation rules for each field.

First you must name each field. The name must be easy to remember and yet descriptive so that you recognize the function of the field by its name. You must also determine the data types for each field. In the table **Science** we have opted the memo type for the **gtxt3** as the contents of the field exceeds 255 characters.

### **Query Design**

A query lets you ask questions about the data that is stored in the database. The data that is produced by the query can be saved in to its own table for future use. You can add as many tables as you want to query.

Queries can be designed by filling in the MS ACCESS query screen or by using an sql statements. Queries are also used for validation in the forms by exhibiting **Dynasets** or **Snapshots** through select query.

In the **Multimedia Science Teacher** we have created three queries namely, **Qrygeneral** , **Qryquest1** and **Qryquest2**.

### **Qrygeneral**

In this query by adding the required tables, we extracted the relevant datas for displaying the text from the **Science** table and pictures,videos and animations from their corresponding tables.

### **Qryquest1**

Here by using the **Object** , **Question1** , **Picture** , **Animation** and **Video** tables we collect all the questions that are present in any particular chapter and its corresponding answers , pictures , videos and animation.

### **Qryquest2**

The same procedure that is followed in the query **qryquest1** is also carried out here. Instead of **Question1** table we make use of **Question2** table.

## FORM DESIGN

When the data and table relationships are established, it's time to design your forms. The front end for the **MULTIMEDIA TEACHER** is designed using **VISUAL BASIC**. The front for an multimedia presentation must be catchy and attractive because here in **MULTIMEDIA TEACHER**, **WHAT WE SEE IS WHAT WE LEARN**.

We have selected **Visual Basic** as our front end tool because it is more flexible than any other multimedia authoring tools and it is more compatible with **MS ACCESS** data engine. Another objective of selecting **VISUAL BASIC** is that it provides a visually satisfying environment.

The **MULTIMEDIA SCIENCE TEACHER** consists of following forms and modules:

- Intro.frm
- MDIclass.frm
- Frmchapter.frm
- School.frm
- Frmpic.frm
- School.bas

The descriptions for the all above mentioned are as follows.

## **INTRO FORM**

This is the startup form for the project. It gives the introduction about developers.

This form uses fixed single border style so that the size cannot be altered by the user. The Maxbutton, Minbutton, Controlbox, Clipcontrols property is set to false for the same reason. The Labelboxes are used for displaying the names of the developers and a Start button (CB3START in code) is used to start the demo.

A Multimedia Control Interface (MCISchool) is used to control the startup animation. In the Done event of MCI control the code for showing the chapters form is written.

## **MDICLASS FORM**

The Multiple Document Interface (MDI) allows the user to create an application that maintains multiple forms within a single container form. It allows the user to display multiple documents at the same time, with each document displayed in its own window.

In the activate event of the MDIClass form we open the database (School.mdb) and we play the startup animation. From here we switch on to the chapter form.

## **CHAPTER FORM**

This form is used to select the chapters. For this we have made use of nine Thread command buttons. The Maxbutton, Minbutton, Clipcontrol and controlbox property is made false.

When any one of the chapters are selected, the snapshots containing the relevant chapter records are created using the querydef objects. We make use of snapshot object because it does not allow the user to make any changes to the data obtained from the database through queries. Querydef objects nothing just a string variables that contains a query constructed in MS ACCESS. The snapshot SSSCHL is generated using the query QRYGENERAL in School.Mdb. This snapshot consist of information like text, pictures, videos and animation files.

## **SCHOOL FORM**

This School form helps the user to browse through the selected chapters. There are many controls that aid the user to browse. The Nextpage and previouspage button helps to move back and forth of the chapter. Corresponding to the text displayed we enable the picture, video and animation buttons.

In the click event of the question button we generate all the questions corresponding to the chapter. This is done by creating a snapshot using the queries

QRYQUEST1 and QRYQUEST2 . In the click event of the list box we have displayed the answers to the questions and enabling the picture , video and animation buttons if they are present.

We load the picture from the snapshot to the Imagebox in the **FRMPIC.FRM**.FRMPIC is just used to view the pictures that are selected.In this we are provided with a picture dictionary to have a look at all the pictures.This form has a control which is used to transfer the control back to the School form and continue with the demo.

The video and animation files are played using the **MCIcontrol**.The device type for playing the video file is **AVIVIDEO** and for playing the animation files is **ANIMATION**.Whenever a video button is clicked a popup picture box is displayed in which the video files are viewed.

From this we have a control which takes us back to the chapter form , to select any other new chapters.During this switch over we close all the snapshots.

We can always end up the session using the **BYE** button that is provided.

## CONCLUSION

The project "Multimedia Science Teacher" serves as a powerful front end for educational purposes . The objective of the project is fulfilled and it proved to be useful in education as well as entertainment.It is implemented successfully with high degree of accuracy and user interactivenes. It is tested successfully for all samples of data and proved to be efficient.

**Science Table**

| Column Name | Type    |
|-------------|---------|
| id          | counter |
| chid        | integer |
| class       | integer |
| gtext3      | memo    |

**Object Table**

| Column Name | Type    |
|-------------|---------|
| id          | counter |
| id2         | integer |
| pid         | integer |
| vid         | integer |
| aid         | integer |

**Questions Table**

| Column Name | Type    |
|-------------|---------|
| id          | integer |
| text        | text    |
| quest       | text    |
| pid         | integer |

**Picture Table**

| Column Name | Type      |
|-------------|-----------|
| pid         | integer   |
| pict        | character |

**Video Table**

| Column Name | Type      |
|-------------|-----------|
| vid         | integer   |
| video       | character |

**Animation Table**

| Column Name | Type      |
|-------------|-----------|
| aid         | integer   |
| animation   | character |

```
qdfschart As querydef
```

```
Command3D1_Click ()
```

```
EL1.Caption = "WAIT.... THE SELECTED CHAPTER IS GETTING LOADED"
```

```
qdfschart = dbschl.OpenQueryDef("QRYGENERAL")
```

```
chart!chid = 1
```

```
id = 1
```

```
ssschl = qdfschart.CreateSnapshot()
```

```
ssschl.RecordCount
```

```
chl.MoveFirst
```

```
i = 1 To c
```

```
chool.List1.AddItem (ssschl!video)
```

```
chool.List1.AddItem (ssschl!animation)
```

```
chool.List1.AddItem (ssschl!pict)
```

```
chl.MoveNext
```

```
t i
```

```
chl.MoveFirst
```

```
chool.Label2.Caption = ssschl!gtxt3
```

```
ssschl!video <> NIL Then
```

```
nschool.cb3video.Enabled = True
```

```
deo = ssschl!video
```

```
nd If
```

```
ssschl!animation <> "NIL" Then
```

```
ANIM = ssschl!animation
```

```
ANIM = "NIL" Then
```

```
nschool.cb3anim.Enabled = False
```

```
nd If
```

```
nd If
```

```
ssschl!pict <> NIL Then
```

```
ct = ssschl!pict
```

```
nschool.cb3sound.Enabled = True
```

```
nd If
```

```
nschool.visible = True
```

```
Sub
```

```
Command3D2_Click ()
```

```
EL1.Caption = "WAIT.... THE SELECTED CHAPTER IS GETTING LOADED"
```

```
qdfschart = dbschl.OpenQueryDef("QRYGENERAL")
```

```
chart!chid = 8
```

```
pid = 8
```

```
ssschl = qdfschart.CreateSnapshot()
```

```
ssschl.RecordCount
```

```
chl.MoveFirst
```

```
i = 1 To c
```

```
school.List1.AddItem (ssschl!video)
```

```
school.List1.AddItem (ssschl!animation)
```

```
school.List1.AddItem (ssschl!pict)
```

```
chl.MoveNext
```

```
t i
```

```
chl.MoveFirst
```

```
school.Label2.Caption = ssschl!gtxt3
```

```

If ssschl!video <> NIL Then
    frmschool.cb3video.Enabled = True
    video = ssschl!video
End If
If ssschl!animation <> "NIL" Then
    ANIM = ssschl!animation
    If ANIM = "NIL" Then
        frmschool.cb3anim.Enabled = False
    End If
End If
If ssschl!pict <> NIL Then
    pict = ssschl!pict
    frmschool.cb3sound.Enabled = True
End If

frmschool.Show

End Sub

Sub Command3D3_Click ()
LABEL1.Caption = "WAIT... THE SELECTED CHAPTER IS GETTING LOADED"
Set qdfschart = dbschl.OpenQueryDef("QRYGENERAL")
qdfschart!chid = 9
chapid = 9
Set ssschl = qdfschart.CreateSnapshot()
c = ssschl.RecordCount
ssschl.MoveFirst
For i = 1 To c
    frmschool.List1.AddItem (ssschl!video)
    frmschool.List1.AddItem (ssschl!animation)
    frmschool.List1.AddItem (ssschl!pict)
    ssschl.MoveNext
Next i
ssschl.MoveFirst
frmschool.Label2.Caption = ssschl!gtxt3

If ssschl!video <> NIL Then
    frmschool.cb3video.Enabled = True
    video = ssschl!video
End If
If ssschl!animation <> "NIL" Then
    ANIM = ssschl!animation
    If ANIM = "NIL" Then
        frmschool.cb3anim.Enabled = False
    End If
End If
If ssschl!pict <> NIL Then
    pict = ssschl!pict
    frmschool.cb3sound.Enabled = True
End If

frmschool.Show

```

End Sub

Sub Command3D4\_Click ()

LABEL1.Caption = "WAIT.... THE SELECTED CHAPTER IS GETTING LOADED"

Set qdfschart = dbschl.OpenQueryDef("QRYGENERAL")

qdfschart!chid = 3

chapid = 3

Set ssschl = qdfschart.CreateSnapshot()

c = ssschl.RecordCount

ssschl.MoveFirst

For i = 1 To c

frmschool.List1.AddItem (ssschl!video)

frmschool.List1.AddItem (ssschl!animation)

frmschool.List1.AddItem (ssschl!pict)

ssschl.MoveNext

Next i

ssschl.MoveFirst

frmschool.Label2.Caption = ssschl!gtxt3

If ssschl!video <> NIL Then

frmschool.cb3video.Enabled = True

video = ssschl!video

End If

If ssschl!animation <> "NIL" Then

ANIM = ssschl!animation

If ANIM = "NIL" Then

frmschool.cb3anim.Enabled = False

End If

End If

If ssschl!pict <> NIL Then

pict = ssschl!pict

frmschool.cb3sound.Enabled = True

End If

frmschool.Show

End Sub

Sub Command3D5\_Click ()

LABEL1.Caption = "WAIT.... THE SELECTED CHAPTER IS GETTING LOADED"

Set qdfschart = dbschl.OpenQueryDef("QRYGENERAL")

qdfschart!chid = 4

chapid = 4

Set ssschl = qdfschart.CreateSnapshot()

c = ssschl.RecordCount

ssschl.MoveFirst

For i = 1 To c

frmschool.List1.AddItem (ssschl!video)

frmschool.List1.AddItem (ssschl!animation)

frmschool.List1.AddItem (ssschl!pict)

ssschl.MoveNext

Next i

```

ssschl.MoveFirst
frmschool.Label2.Caption = ssschl!gtxt3

If ssschl!video <> NIL Then
  frmschool.cb3video.Enabled = True
  video = ssschl!video
End If
If ssschl!animation <> "NIL" Then
  ANIM = ssschl!animation
  If ANIM = "NIL" Then
    frmschool.cb3anim.Enabled = False
  End If
End If
If ssschl!pict <> NIL Then
  pict = ssschl!pict
  frmschool.cb3sound.Enabled = True
End If

frmschool.Show

End Sub

Sub Command3D6_Click ()
LABEL1.Caption = "WAIT... THE SELECTED CHAPTER IS GETTING LOADED"
Set qdfschart = dbschl.OpenQueryDef("QRYGENERAL")
qdfschart!chid = 5
chapid = 5
Set ssschl = qdfschart.CreateSnapshot()
c = ssschl.RecordCount
ssschl.MoveFirst
For i = 1 To c
frmschool.List1.AddItem (ssschl!video)
frmschool.List1.AddItem (ssschl!animation)
frmschool.List1.AddItem (ssschl!pict)
ssschl.MoveNext

Next i
ssschl.MoveFirst
frmschool.Label2.Caption = ssschl!gtxt3

If ssschl!video <> NIL Then
  frmschool.cb3video.Enabled = True
  video = ssschl!video
End If
If ssschl!animation <> "NIL" Then
  ANIM = ssschl!animation
  If ANIM = "NIL" Then
    frmschool.cb3anim.Enabled = False
  End If
End If
If ssschl!pict <> NIL Then
  pict = ssschl!pict
  frmschool.cb3sound.Enabled = True
End If

```

```
frmschool.Show
```

```
End Sub
```

```
Sub Command3D7_Click ()
```

```
LABEL1.Caption = "WAIT.... THE SELECTED CHAPTER IS GETTING LOADED"
```

```
Set qdfschart = dbschl.OpenQueryDef("QRYGENERAL")
```

```
qdfschart!chid = 6
```

```
chapid = 6
```

```
Set ssschl = qdfschart.CreateSnapshot()
```

```
c = ssschl.RecordCount
```

```
ssschl.MoveFirst
```

```
For i = 1 To c
```

```
frmschool.List1.AddItem (ssschl!video)
```

```
frmschool.List1.AddItem (ssschl!animation)
```

```
frmschool.List1.AddItem (ssschl!pict)
```

```
ssschl.MoveNext
```

```
Next i
```

```
ssschl.MoveFirst
```

```
frmschool.Label2.Caption = ssschl!gtxt3
```

```
If ssschl!video <> NIL Then
```

```
frmschool.cb3video.Enabled = True
```

```
video = ssschl!video
```

```
End If
```

```
If ssschl!animation <> "NIL" Then
```

```
ANIM = ssschl!animation
```

```
If ANIM = "NIL" Then
```

```
frmschool.cb3anim.Enabled = False
```

```
End If
```

```
End If
```

```
If ssschl!pict <> NIL Then
```

```
pict = ssschl!pict
```

```
frmschool.cb3sound.Enabled = True
```

```
End If
```

```
frmschool.Show
```

```
End Sub
```

```
Sub Command3D8_Click ()
```

```
LABEL1.Caption = "WAIT.... THE SELECTED CHAPTER IS GETTING LOADED"
```

```
Set qdfschart = dbschl.OpenQueryDef("QRYGENERAL")
```

```
qdfschart!chid = 7
```

```
chapid = 7
```

```
Set ssschl = qdfschart.CreateSnapshot()
```

```
c = ssschl.RecordCount
```

```
ssschl.MoveFirst
```

```
For i = 1 To c
```

```
frmschool.List1.AddItem (ssschl!video)
```

```
frmschool.List1.AddItem (ssschl!animation)
```

```
frmschool.List1.AddItem (ssschl!pict)
```

```
ssschl.MoveNext
```

```

Next i
ssschl.MoveFirst
frmschool.Label2.Caption = ssschl!gtxt3
If ssschl!video <> NIL Then
  frmschool.cb3video.Enabled = True
  video = ssschl!video
End If
If ssschl!animation <> "NIL" Then
  ANIM = ssschl!animation
  If ANIM = "NIL" Then
    frmschool.cb3anim.Enabled = False
  End If
End If
If ssschl!pict <> NIL Then
  pict = ssschl!pict
  frmschool.cb3sound.Enabled = True
End If

frmschool.Show

End Sub

Sub Command3D9_Click ()
LABEL1.Caption = "WAIT.... THE SELECTED CHAPTER IS GETTING LOADED"
Set qdfschart = dbschl.OpenQueryDef("QRYGENERAL")
qdfschart!chid = 2
chapid = 2
Set ssschl = qdfschart.CreateSnapshot()
c = ssschl.RecordCount
ssschl.MoveFirst
For i = 1 To c
frmschool.List1.AddItem (ssschl!video)
frmschool.List1.AddItem (ssschl!animation)
frmschool.List1.AddItem (ssschl!pict)
ssschl.MoveNext

Next i
ssschl.MoveFirst
frmschool.Label2.Caption = ssschl!gtxt3
If ssschl!video <> NIL Then
  frmschool.cb3video.Enabled = True
  video = ssschl!video
End If
If ssschl!animation <> "NIL" Then
  ANIM = ssschl!animation
  If ANIM = "NIL" Then
    frmschool.cb3anim.Enabled = False
  End If
End If
If ssschl!pict <> NIL Then
  pict = ssschl!pict
  frmschool.cb3sound.Enabled = True
End If

```

```
frmschool.Show
```

```
End Sub
```

```
Sub Form_Activate ()  
LABEL1.Caption = " "  
command3d6.SetFocus
```

```
End Sub
```

```
Sub cb3nextpic_Click ()
    RMSCHOOL.Visible = True
    RMSCHOOL.Label1.Caption = " "
End Sub
```

```
Sub CB3PIC_Click ()
    piclist.Visible = True
End Sub
```

```
Sub Form_Activate ()
    d = "c:\SCHLPRJ\BMP\" & pict
    RMSPIC.picpicture.Picture = LoadPicture(d)
    Dim NO As Integer
    cb3nextpic.SetFocus
    TEMPSTR = "SELECT * FROM [PICTURE MASTER]"
    Set SSPICT = DBSCHL.CreateSnapshot(TEMPSTR)
    SSPICT.MoveLast
    NO = SSPICT!ID
    SSPICT.MoveFirst
    For I = 1 To NO - 1
        piclist.AddItem (SSPICT!pict)
        SSPICT.MoveNext
    Next I
End Sub
```

```
Sub PICLIST_Click ()
    On Error Resume Next
    Ind = piclist.ListIndex
    picpicture.Picture = LoadPicture("C:\SCHLPRJ\BMP\" & piclist.List(Ind))
End Sub
```

```
Sub MDIForm_Activate ()
    Set dbschl = OpenDatabase("c:\schlprj\school.mdb")
    ORM1.mcischool.Command = "Close"
    ORM1.mcischool.DeviceType = "Animation"
    ORM1.mcischool.Shareable = False
    ORM1.mcischool.Notify = False
    ORM1.mcischool.Wait = True
    ORM1.mcischool.FileName = "C:\schlprj\animatio\intro.aas"
    ORM1.mcischool.Command = "open"
    ORM1.mcischool.Command = "Play"
    ORM1.mcischool.Notify = True
    ORM1.mcischool.Wait = False
```

```
End Sub
```

```

im sp As Integer

Sub cb3anim_Click ()
cischool.Command = "Close"
cischool.Refresh
cischool.DeviceType = "Animation"
cischool.Shareable = False
cischool.Notify = False
cischool.Wait = True
cischool.FileName = "C:\schlprj\anim\" & anim
cischool.Command = "open"
frmpic.Print mcischool.NotifyMessage
RMPIC.Show

cischool.hWndDisplay = sp
cischool.Command = "Play"
cischool.Notify = True
cischool.Wait = False

End Sub

Sub cb3anim_MouseMove (Button As Integer, Shift As Integer, X As Single, Y As Single)
rmschool.Caption = " CLICK TO SEE ANIMATIONS "
End Sub

Sub CB3BYE_Click ()
Const IDYES = 6
Const IDNO = 7
STATUS = MsgBox("DO 'U' REALLY WANT TO QUIT", 4, " ")
If STATUS = IDYES Then
End
Else
Exit Sub
End If
End Sub

Sub cb3chapters_Click ()
rmschool.Label2.Caption = ssschl!gtxt3
sschl.Close
rmchapter.Visible = True
End Sub

Sub cb3chapters_MouseMove (Button As Integer, Shift As Integer, X As Single, Y As Single)
n3quest.Visible = False
End Sub

Sub cb3goback_Click ()
On Error Resume Next
n3quest.Visible = False
sschl.MovePrevious
label2.Caption = ssschl!gtxt3
COMMAND3D1.Enabled = True
video = ssschl!video
If video = "NIL" Then
cb3video.Enabled = False

```

```

Else
cb3video.Enabled = True
End If
nim = ssschl!animation
f anim = "NIL" Then
cb3anim.Enabled = False
Else
cb3anim.Enabled = True
End If
pict = ssschl!pict
If pict = "NIL" Then
cb3sound.Enabled = False
Else
cb3sound.Enabled = True
End If

End Sub

Sub cb3goback_MouseMove (Button As Integer, Shift As Integer, X As Single, Y As Single)
on3quest.Visible = False
End Sub

Sub cb3questions_Click ()
on3quest.Visible = True
cb3sound.Enabled = False
cb3anim.Enabled = False
cb3video.Enabled = False
on3quest.Visible = True
Set qryquest = dbschl.OpenQueryDef("qryquest1")
qryquest!chid = chapid
Set ssquest = qryquest.CreateSnapshot()
c = ssquest.RecordCount
ssquest.MoveFirst
For i = 1 To c
If ssquest!video <> "NIL" Then
frmschool.List1.AddItem (ssquest!video)
End If
frmschool.List1.AddItem (ssquest!pict)
ssquest.MoveNext
Next i
ssquest.MoveFirst
For i = 1 To c
stquestions.AddItem (ssquest!quest1)
list2.AddItem (ssquest!text1)
If (ssquest!animation <> "nil") Then
stanim.AddItem (ssquest!animation)
End If
stpict.AddItem (ssquest!pict)
stvideo.AddItem (ssquest!video)
ssquest.MoveNext
Next i
ssquest.Close
Set qryquest2 = dbschl.OpenQueryDef("qryquest2")
qryquest2!chid = chapid
Set ssquest2 = qryquest2.CreateSnapshot()

```

```

c = ssquest2.RecordCount
For i = 1 To c
If ssquest2!video <> "NIL" Then
frmschool.List1.AddItem (ssquest2!video)
End If
frmschool.List1.AddItem (ssquest2!pict)
ssquest2.MoveNext
Next i
ssquest2.MoveFirst
For i = 1 To c
lstquestions.AddItem (ssquest2!quest2)
list2.AddItem (ssquest2!text2)
lstanim.AddItem (ssquest2!animation)
lstpict.AddItem (ssquest2!pict)
lstvideo.AddItem (ssquest2!video)
ssquest2.MoveNext
Next i
ssquest2.Close
End Sub

```

```

Sub cb3sound_Click ()
Mcischool.Command = "Close"
Mcischool.Refresh
Mcischool.DeviceType = "Waveaudio"
Mcischool.Shareable = False
Mcischool.Notify = False
Mcischool.Wait = True
Mcischool.FileName = "C:\SCHLPRJ\record5.wAV"
Mcischool.Command = "open"
frmschool.Print Mcischool.NotifyMessage
Mcischool.Command = "Play"
Mcischool.Notify = True
Mcischool.Wait = False

```

```

label1.Caption = " WAIT...The picture is getting loaded"
Mcischool.Visible = False
FRMPIC.Show
End Sub

```

```

Sub cb3sound_MouseMove (Button As Integer, Shift As Integer, X As Single, Y As Single)
frmschool.Caption = " CLICK TO VIEW PICTURES "
End Sub

```

```

Sub cb3video_Click ()
Mcischool.Command = "Close"
Mcischool.Refresh
Mcischool.DeviceType = "Avivideo"
Mcischool.Shareable = False
Mcischool.Notify = False
Mcischool.Wait = True
Mcischool.FileName = "C:\SCHLPRJ\VIDEO\DEER.AVI" & video
Mcischool.Command = "open"
picture2.Visible = True
PICTURE1.SetFocus
' FRMPIC.Show

```

End Sub

```
Sub cb3video_MouseMove (Button As Integer, Shift As Integer, X As Single, Y As Single)
frmschool.Caption = "CLICK TO SEE VIDEO"
End Sub
```

```
Sub Command3D1_Click ()
pn3quest.Visible = False
ssschl.MoveNext
If (ssschl.EOF) Then
MsgBox ("YOU HAVE FINISHED THIS CHAPTER")
COMMAND3D1.Enabled = False
Exit Sub
Else
video = ssschl!video
If video = "NIL" Then
cb3video.Enabled = False
Else
cb3video.Enabled = True
End If
anim = ssschl!animation
If anim = "NIL" Then
cb3anim.Enabled = False
Else
cb3anim.Enabled = True
End If
pict = ssschl!pict
If pict = "NIL" Then
cb3sound.Enabled = False
Else
cb3sound.Enabled = True
End If
Label2.Caption = ssschl!gtxt3
End If
End Sub
```

```
Sub Command3D1_MouseMove (Button As Integer, Shift As Integer, X As Single, Y As Single)
pn3quest.Visible = False
End Sub
```

```
Sub Command3D2_Click ()
Mcischool.Command = "Close"
Mcischool.Refresh
Mcischool.DeviceType = "Waveaudio"
Mcischool.Shareable = False
Mcischool.Notify = False
Mcischool.Wait = True
Mcischool.FileName = "C:\SCHLPRJ\WAV\FISHONOM.WAV"
Mcischool.Command = "open"
'frmschool.Print Mcischool.NotifyMessage
Mcischool.Command = "Play"
Mcischool.Notify = True
Mcischool.Wait = False

End Sub
```

```
Sub Command3D3_Click ()
```

```
End Sub
```

```
Sub Command3D4_Click ()
```

```
frmchapter.Show
```

```
End Sub
```

```
Sub Form_Activate ()
```

```
COMMAND3D1.SetFocus
```

```
If chapid = 1 Then
```

```
frmschool.Caption = "1. LIVING THINGS"
```

```
ElseIf chapid = 2 Then
```

```
frmschool.Caption = "2. PLANTS AND ANIMALS"
```

```
ElseIf chapid = 3 Then
```

```
frmschool.Caption = "3. MY HOUSE"
```

```
ElseIf chapid = 4 Then
```

```
frmschool.Caption = "4. MY BODY"
```

```
ElseIf chapid = 5 Then
```

```
frmschool.Caption = "5. OUR SOCIETY"
```

```
ElseIf chapid = 6 Then
```

```
frmschool.Caption = "6. AIR"
```

```
ElseIf chapid = 7 Then
```

```
frmschool.Caption = "7. OUR UNIVERSE"
```

```
ElseIf chapid = 8 Then
```

```
frmschool.Caption = "8. ROCK AND MINERALS"
```

```
ElseIf chapid = 9 Then
```

```
frmschool.Caption = "9. THINGS AROUND US"
```

```
End If
```

```
End Sub
```

```
Sub Form_Load ()
```

```
ssschl.MoveFirst
```

```
fr3SHOW.Visible = True
```

```
cb3sound.Enabled = False
```

```
cb3anim.Enabled = False
```

```
cb3video.Enabled = False
```

```
Label2.Caption = ssschl!gtxt3
```

```
End Sub
```

```
Sub Form_MouseMove (Button As Integer, Shift As Integer, X As Single, Y As Single)
```

```
If chapid = 1 Then
```

```
frmschool.Caption = "1. LIVING THINGS"
```

```
ElseIf chapid = 2 Then
```

```
frmschool.Caption = "2. PLANTS AND ANIMALS"
```

```
ElseIf chapid = 3 Then
```

```
frmschool.Caption = "3. MY HOUSE"
```

```
ElseIf chapid = 4 Then
```

```
frmschool.Caption = "4. MY BODY"
```

```
ElseIf chapid = 5 Then
```

```
frmschool.Caption = "5. OUR SOCIETY"
```

```
seIf chapid = 6 Then
mschool.Caption = "6. AIR"
seIf chapid = 7 Then
mschool.Caption = "7. OUR UNIVERSE"
seIf chapid = 8 Then
mschool.Caption = "8. ROCK AND MINERALS"
seIf chapid = 9 Then
mschool.Caption = "9. THINGS AROUND US"
d If
```

```
d Sub
```

```
b Image1_MouseMove (Button As Integer, Shift As Integer, X As Single, Y As Single)
  chapid = 1 Then
```

```
mschool.Caption = "1. LIVING THINGS"
seIf chapid = 2 Then
mschool.Caption = "2. PLANTS AND ANIMALS"
seIf chapid = 3 Then
mschool.Caption = "3. MY HOUSE"
seIf chapid = 4 Then
mschool.Caption = "4. MY BODY"
seIf chapid = 5 Then
mschool.Caption = "5. OUR SOCIETY"
seIf chapid = 6 Then
mschool.Caption = "6. AIR"
seIf chapid = 7 Then
mschool.Caption = "7. OUR UNIVERSE"
seIf chapid = 8 Then
mschool.Caption = "8. ROCK AND MINERALS"
seIf chapid = 9 Then
mschool.Caption = "9. THINGS AROUND US"
d If
```

```
d Sub
```

```
o List1_Click ()
= "C:\SCHLPRJ\BMP\" & List1.List(List1.ListIndex)
st1.AddItem (d)
MPIC.Show
MPIC.picpicture.Picture = LoadPicture(d)
```

```
d Sub
```

```
o lstquestions_Click ()
mschool.Label2.Caption = ssschl!gtxt3
dex = lstquestions.ListIndex
mschool.Label2.Caption = list2.List(index)
(lstanim.List(index) <> "NIL") Then
3anim.Enabled = True
im = lstanim.List(index)
se
3anim.Enabled = False
d If
(lstpict.List(index) <> "NIL") Then
```

```
cb3sound.Enabled = True
pict = lstpict.List(index)
Else
cb3sound.Enabled = False
End If
If (lstvideo.List(index) <> "NIL") Then
cb3video.Enabled = True
video = lstvideo.List(index)
Else
cb3video.Enabled = False
End If
End Sub

Sub mcischool_Done (NotifyCode As Integer)
If NotifyCode = 1 Then
Mcischool.Command = "Close"
Mcischool.Refresh
Mcischool.DeviceType = "Avivideo"
Mcischool.Shareable = False
Mcischool.Notify = False
Mcischool.Wait = True
picture2.Visible = False
End If
fr3SHOW.Refresh
pn3quest.Refresh
lstquestions.Refresh
End Sub

Sub Picture1_GotFocus ()
sp = PICTURE1.hWnd
Mcischool.hWndDisplay = sp
Mcischool.Notify = True
Mcischool.Wait = False
Mcischool.Command = "PLAY"

End Sub
```

```

Declare Function sndPlaySound Lib "MMSYSTEM" (ByVal lpszSoundName As String, ByVal

' flag values for wFlags parameter
Const SND_SYNC = &H0 ' play synchronously (default)
Const SND_ASYNC = &H1 ' play asynchronously
Const SND_NODEFAULT = &H2 ' don't use default sound
Const SND_MEMORY = &H4 ' lpszSoundName points to a memory file
Const SND_LOOP = &H8 ' loop the sound until next sndPlaySound
Const SND_NOSTOP = &H10 ' don't stop any currently playing sound

Global dbschl As database
Global ssschl As SNAPSHOT
Global ssquest As SNAPSHOT
Global qryschl As String
Global qryquest As querydef
Global qryquest2 As querydef
Global chapid As Integer
Global ssquest2 As SNAPSHOT
Global SSPICT As SNAPSHOT
Global TEMPSTR, TEMPSTR2 As String
Global pict, anim, video As String

Sub main ()
End Sub

```

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