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# **E-LEARNING FOR KIDS IN TAMIL**

## **PROJECT REPORT**

*Submitted By*

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*in partial fulfilment for the award of the degree*

*Of*

**MASTER OF COMPUTER APPLICATIONS**

*in*

**COMPUTER APPLICATIONS**

**KUMARAGURU COLLEGE OF TECHNOLOGY**

**(An Autonomous Institution Affiliated to Anna University, Coimbatore)**

**May, 2010**

# KUMARAGURU COLLEGE OF TECHNOLOGY

(An Autonomous Institution Affiliated to Anna University, Coimbatore)

**COIMBATORE – 641 006.**

Department of Computer Applications

**PROJECT WORK**

**MAY 2010**

This is to certify that the project entitled  
**E-LEARNING FOR KIDS IN TAMIL**  
is the bonafide record of project work done by

**P.GOWRIMANOHARI**

**Register No: 0720300009**

of MCA (Computer Applications) during the year 2009-2010.

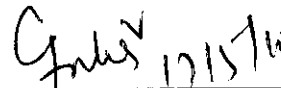


Project Guide



Head of the Department

Submitted for the Project Viva-Voce examination held on 17.05.2010



Internal Examiner



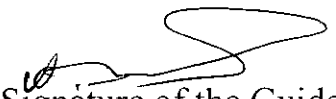
External Examiner

## DECLARATION

I affirm that the project work titled **E-LEARNING FOR KIDS IN TAMIL** being submitted in partial fulfilment for the award of **MASTER OF COMPUTER APPLICATIONS** is the original work carried out by me. It has not formed the part of any other project work submitted for award of any degree or diploma, either in this or any other University.

P. GOWRI MANOHARI,  
Register No. : 0720300009.

I certify that the declaration made above by the candidate is true

  
Signature of the Guide

Apr. 30, 2010.

CERTIFICATE

This is to certify that Ms.P.Gowrimanohari(0720300009) has undertaken a project with us entitled "E-learning for kids in Tamil" and completed successfully on Apr. 30. 2010. She is a sincere and hardworking project student and reported regularly about her progress.

  
V. Govindaraju,  
Partner

## ACKNOWLEDGEMENT

First of all, I wish to thank the almighty who have blessed me with good health and wealth to carry out this project successfully.

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My heartfelt thanks to my lovable family members and friends, who have provided the mental support for me throughout the course of this project work.

## ABSTRACT

Project entitled as “**E-learning for kids in Tamil**” developed in order to teach kids in Tamil. It consists full of animations in the form of audios and videos. So the children can learn easily by using animations. It teaches Tamil alphabets, numbers, rhymes in Tamil and also their pronunciation. We also conduct test to evaluate the student knowledge.

Children’s can register their information with this site and login in order to avail the benefits. Administrator has the overall control of the system. The Administrator can view, add, update and delete all the teaching techniques that already exist. Administrator also view the marks that scored by the children.

By using this website, foreigners who are interested to learn Tamil can use this site, with out guidance of any Tamil people.

Present system teaches the children by using only few Tamil words .As a result, no children are aware of Tamil words. Pronunciation of Tamil words is not mentioned in the existing system. Evaluation not conducted in the existing system to encourage the Student

In order to overcome all those above mentioned problems our Tamil website is going to give solutions. In present system we use full of Tamil fonts, so that children can easily able to learn.

To design the website we use PHP as designing software and MYSQL as backend. PHP is one of the most popular server side scripting languages running today. It is used for creating dynamic webpage’s that interact with the user offering customized information .Another plus of PHP is that the language interfaces very well with MYSQL. MYSQL is a commercial grade database application that is made available free under the Open Source to anyone. So it is easy to use with PHP because it is also one of Open Source Code.

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## CHAPTER 1

### INTRODUCTION

#### 1.1 ORGANIZATION PROFILE

Bannari Research Consultancy (Barcindia.net) was started in the year of 2008 by two PSG tech aluminate, as a training and research institute. They have trained more than 15 Students in various platforms and on various applications. Their areas of specialization are E-LEARNING and TAMIL COMPUTING. They also concentrate on software development on free open sources software platforms. This project work experience is to be illustrated at Tamil internet conference 2010 to be held at Coimbatore.

#### 1.2 PROJECT OVERVIEW

This project “E-Learning for kids in Tamil” serves to teach the kids in Tamil. It consists of animations in the form of audios and vedios. So the children can learn easily by using animations. It teaches Tamil alphabets, numbers, rhymes in Tamil and also their pronunciation. We also conduct test to evaluate the student knowledge. This application system is designed for kinder garden Children. E-learning for kids is mainly to teach the students in Tamil. The major process involved in this application is to use animations, sound effects, etc.

Children’s can register their information with this site and login in to avail the benefits .Children’s can also specify their ages to avail class books. We will also provide password box while login, just in order to teach what for what we are using password, how we need to secure our self. Children no need type their password we provide three alphabets there, so it’s enough to select the favourite alphabet. If children forget their password they can retrieve by giving the required details.

Administrator has the overall control of the system. The Administrator can view, add, update and delete all the teaching techniques that already exist.

This site is very useful for foreign children, who can learn Tamil by sitting in their home just by login in to that site. No need to search for Tamil teachers. This project is designed mainly to promote Tamil and to create enthusiasms among the children to learn Tamil words and rhymes.

## **CHAPTER 2**

### **SYSTEM STUDY AND ANALYSIS**

A complete understanding of the requirement is essential for the success of software development. The software scope, initially established by the system engineer and refined during the project planning, is refined in detail. Alternative solution are analyzed and allocated to various software elements

#### **2.1 EXISTING SYSTEM**

In existing system, they teach children in English and they use only few Tamil words. It will not easily accessible by all children.

##### **2.1.1 Disadvantages of existing system:**

- As a result, no children are aware of Tamil words.
- Pronunciation of Tamil words is not mentioned in the existing system.
- Evaluation not conducted in the existing system to encourage the student.
- They use so many procedures to login to the site, as a result children hesitate to enter into the site

#### **2.2 PROPOSED SYSTEM**

This project aims to promote Tamil and to teach the children in Tamil. So the full content of the site is in Tamil. Use many animations to teach the children, by seeing that children can learn with interest.

##### **2.2.1 Advantages of Proposed System:**

- Children can able to learn their subjects fully in Tamil. So they can be aware of Tamil words.
- Pronunciation of some words also can be teach in this system by using some background audios.
- More animations are included in the present system.
- Evaluation can be conducted to encourage the student applause will be given.

## **CHAPTER 3**

### **DEVELOPMENT ENVIRONMENT**

#### **3.1 HARDWARE REQUIREMENTS**

The hardware support required for deploying the application

Processor	:	Intel Pentium IV
Speed	:	3.1 GHZ
Memory	:	1 GB RAM
Hard Disk Capacity	:	80 GB
Monitor	:	15" inch SVGA
Mouse	:	Logitech Mouse (Scroll)
Keyboard	:	108 Keys

#### **3.2 SOFTWARE REQUIREMENTS**

The software support required for deployment is

Operating System	:	Windows XP
Designing Tool	:	Macromedia Flah, AdobePhotoshop.
Scripting Language	:	PHP, Java Script.
Web Server	:	WampServer2.0i
Database	:	MY SQL

### 3.3 SOFTWARE OVERVIEW

#### PHP:

**PHP: Hypertext Preprocessor** is a widely used, general-purpose scripting language that was originally designed for web development to produce dynamic web pages. For this purpose, PHP code is embedded into the HTML source document and interpreted by a web server with a PHP processor module, which generates the web page document. Originally designed to create dynamic web pages, PHP now focuses mainly on server-side scripting, and it is similar to other server-side scripting languages that provide dynamic content from a web server to a client, such as Microsoft's Active Server Pages, Sun Microsystems' Java Server Pages, and `mod_perl`.

PHP only parses code within its delimiters. Anything outside its delimiters is sent directly to the output and is not processed by PHP (although non-PHP text is still subject to control structures described within PHP code). The most common delimiters are `<?php` to open and `?>` to close PHP sections. The first form of delimiters, `<?php` and `?>`, in XHTML and other XML documents, creates correctly formed XML 'processing instructions'. This means that the resulting mixture of PHP code and other mark up in the server-side file is itself well-formed XML.

Variables are prefixed with a dollar symbol and a type does not need to be specified in advance. Unlike function and class names, variable names are case sensitive. Both double-quoted (") and heredoc strings allow the ability to embed a variable's value into the string. PHP treats newlines as whitespace in the manner of a free-form language (except when inside string quotes), and statements are terminated by a semicolon. PHP has three types of comment syntax: `/* */` marks block and inline comments; `//` as well as `#` are used for one-line comments. The `echo` statement is one of several facilities PHP provides to output text (e.g. to a web browser).

In terms of keywords and language syntax, PHP is similar to most high level languages that follow the C style syntax. If conditions, `for` and `while` loops, and function returns are similar in syntax to languages such as C, C++, Java and Perl.

**MYSQL:**

MySQL, the most popular Open Source SQL database management system, is developed, distributed, and supported by Sun Microsystems, Inc.

**MySQL is a database management system.**

A database is a structured collection of data. It may be anything from a simple shopping list to a picture gallery or the vast amounts of information in a corporate network. To add, access, and process data stored in a computer database, you need a database management system such as MySQL Server. Since computers are very good at handling large amounts of data, database management systems play a central role in computing, as standalone utilities, or as parts of other applications.

**MySQL is a relational database management system.**

A relational database stores data in separate tables rather than putting all the data in one big storeroom. This adds speed and flexibility. The SQL part of “MySQL” stands for “Structured Query Language.” SQL is the most common standardized language used to access databases and is defined by the ANSI/ISO SQL Standard. The SQL standard has been evolving since 1986 and several versions exist. In this manual, “SQL-92” refers to the standard released in 1992, “SQL:1999” refers to the standard released in 1999, and “SQL:2003” refers to the current version of the standard. We use the phrase “the SQL standard” to mean the current version of the SQL Standard at any time.

**MySQL software is Open Source.**

Open Source means that it is possible for anyone to use and modify the software. Anybody can download the MySQL software from the Internet and use it without paying anything. If you wish, you may study the source code and change it to suit your needs. The MySQL software uses the GPL (GNU General Public License, to define what you may and may not do with the software in different situations.

**The MySQL Database Server is very fast, reliable, and easy to use.**

MySQL Server was originally developed to handle large databases much faster than existing solutions and has been successfully used in highly demanding production environments for several years. Although under constant development, MySQL Server today offers a rich and useful set of functions. Its connectivity, speed, and security make MySQL Server highly suited for accessing databases on the Internet.

**MySQL Server works in client/server or embedded systems.**

The MySQL Database Software is a client/server system that consists of a multi-threaded SQL server that supports different back ends, several different client programs and libraries, administrative tools, and a wide range of application programming interfaces (APIs). We also provide MySQL Server as an embedded multi-threaded library that you can link into your application to get a smaller, faster, easier-to-manage standalone product.

**A large amount of contributed MySQL software is available.**

It is very likely that your favourite application or language supports the MySQL Database Server.

**WampServer:**

WAMP5 (WAMP means Windows Apache Mysql PHP) is a platform of Web development under Windows. WAMP is a form of mini-server that can run on almost any Windows Operating System. WAMP includes Apache 2, PHP 5 (SMTP ports are disabled), and MySQL (phpMyAdmin and SQLitemanager are installed to manage your databases) preinstalled.

WampServer is a Windows web development environment. It allows you to create web applications with Apache, PHP and the MySQL database. It also comes with PHPMyAdmin and SQLiteManager to easily manage your databases.

An icon on the taskbar tray displays the status of WAMP, letting you know if; a) WAMP is running but no services are opened (the icon will appear red), b) WAMP is running and one service is opened (the icon will appear yellow) or c) WAMP is running with all

services opened (the icon will appear white). Apache and MySQL are considered to be services (they can be disabled by left-clicking on the taskbar icon, guiding your cursor over the service you wish to disable and selecting "Stop Service").

The files/web pages that are hosted on your WAMP server can be accessed by typing *http://localhost/* or *http://127.0.0.1/* in the address bar of your web browser. WAMP must be running in order to access either of the above addresses.

### **Flash and Photoshop:**

**Need to change** Flash is a highly productive, free, open source framework for building expressive web applications that deploy consistently across browsers, desktops, and operating systems by leveraging the Adobe® Flash® Player and Adobe AIR® runtimes. Flash applications can be built using only the Flex framework, Adobe Flash Builder™ (formerly Adobe Flex® Builder™) software can accelerate development through features like intelligent coding, interactive step-through debugging, and visual design of the user interface layout.

Flash is the way to make rich Internet applications (RIAs) quickly and easily. At its basic level, it's a framework for creating RIAs based on Flash Player. Along with being a framework, Flex is also a new language. At its heart is MXML, a markup language based on Extensible Markup Language (XML) that makes it really easy and efficient to create applications. Unlike developing for some desktop platforms requiring a proprietary binary file format, MXML is just text, so it's easy to read and modify using just a text editor. Therefore, sharing code is as easy as sharing a simple text file.

MXML is an XML language that you use to lay out user interface components for Adobe® Flex® applications. You also use MXML to declaratively define nonvisual aspects of an application, such as access to server-side data sources and data bindings between user interface components and server-side data sources.

MXML development is based on the same iterative process used for other types of web application files such as HTML, JavaServer Pages (JSP), Active Server Pages (ASP), and ColdFusion Markup Language (CFML). Developing a useful Flex application is as easy



as opening your favorite text editor, typing some XML tags, saving the file, requesting the file's URL in a web browser, and then repeating the same process.

In the Flex model-view design pattern, user interface components represent the view. The MXML language supports two types of user interface components: controls and containers. Controls are form elements, such as buttons, text fields, and list boxes. Containers are rectangular regions of the screen that contain controls and other containers.

Remote-procedure-call (RPC) services let your application interact with remote servers to provide data to your applications, or for your application to send data to a server. Flex is designed to interact with several types of RPC services that provide access to local and remote server-side logic.

### **Javascript:**

One of the more wonderful Flash capabilities is its ability to communicate with JavaScript. Flash's ability to integrate with JavaScript just took a huge leap forward with the release of Flash 8.,Introducing the External Interface. This is a new feature in Flash 8 that allows for better communication between Flash and its host. Most of us will use this for integration with JavaScript. Flash 8 introduces a ground-breaking new way to integrate Flash with its host called the **External Interface**. This allows Flash/JavaScript integration to be more powerful and stable. It is also very easy to use. External Interface offers Flash 8 Developers the following advantages: it's easier to implement, it allows for synchronous communication, and it supports sending a wider selection of data types, including objects.

External Interface is extremely easy to implement. Only a few line codes are needed for interaction. The only code required on the host page for Flash to call a JavaScript function is the function itself. Flash can call any JavaScript function on the SWF's host page without any additional JavaScript code. Going from JavaScript to Flash is also very simple. All we need to do in JavaScript is get a reference to your HTML object or embed tag (depending on the browser) and call the Action Script function. Inside the Flash application, you simply need to make that function available to JavaScript by calling the addCallback function of the External Interface class.

## UNICODE

Unicode provides a unique number for every character,  
no matter what the platform,  
no matter what the program,  
no matter what the language.

Fundamentally, computers just deal with numbers. They store letters and other characters by assigning a number for each one. Before Unicode was invented, there were hundreds of different encoding systems for assigning these numbers. No single encoding could contain enough characters: for example, the European Union alone requires several different encodings to cover all its languages. Even for a single language like English no single encoding was adequate for all the letters, punctuation, and technical symbols in common use.

These encoding systems also conflict with one another. That is, two encodings can use the same number for two different characters, or use different numbers for the same character. Any given computer (especially servers) needs to support many different encodings; yet whenever data is passed between different encodings or platforms, that data always runs the risk of corruption.

### **Unicode is changing all that!**

Unicode provides a unique number for every character, no matter what the platform, no matter what the program, no matter what the language. The Unicode Standard has been adopted by such industry leaders as Apple, HP, IBM, JustSystems, Microsoft, Oracle, SAP, Sun, Sybase, Unisys and many others. Unicode is required by modern standards such as XML, Java, ECMAScript (JavaScript), LDAP, CORBA 3.0, WML, etc., and is the official way to implement ISO/IEC 10646. It is supported in many operating systems, all modern browsers, and many other products. The emergence of the Unicode Standard, and the availability of tools supporting it, are among the most significant recent global software technology trends.

Incorporating Unicode into client-server or multi-tiered applications and websites offers significant cost savings over the use of legacy character sets. Unicode enables a single software product or a single website to be targeted across multiple platforms, languages and countries without re-engineering. It allows data to be transported through many different systems without corruption.

### **About the Unicode Consortium**

The Unicode Consortium is a non-profit organization founded to develop, extend and promote use of the Unicode Standard, which specifies the representation of text in modern software products and standards. The membership of the consortium represents a broad spectrum of corporations and organizations in the computer and information processing industry.

The consortium is supported financially solely through membership dues. Membership in the Unicode Consortium is open to organizations and individuals anywhere in the world who support the Unicode Standard and wish to assist in its extension and implementation.

**NHM writer – The ultimate Tamil typing software:**

NHM Writer is a never-seen-before tool for Tamil typing.

**Features of NHM writer:**

1. Free-of-cost
2. Downloadable. An online version of NHM writer will be launched soon.
3. This makes your Windows system Tamil ready on installing this. So you will be able to read, write Tamil well in all Windows applications. This is cool, as every other software would require you to do some additional tweaks in the system.
4. Extendable. You can use NHM Writer to include new encodings, keyboards for any language of your wish. You just need to insert an xml file. To make this xml file, there is a developer kit for NHM writer which will be released soon.
5. Customizable. You can edit the existing key map files to make changes according to your needs.
6. Visual keyboards. You have visual keyboards to guide you learn the layout for novice users.

And all this comes in a less than 1 MB software which is really nice.



## CHAPTER 4

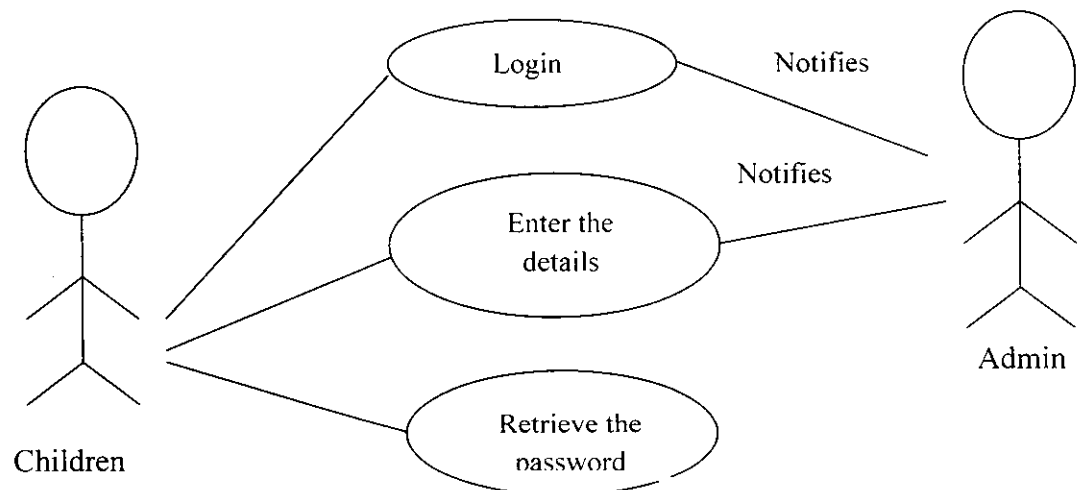
### SYSTEM DESIGN

#### 4.1 DIAGRAMS

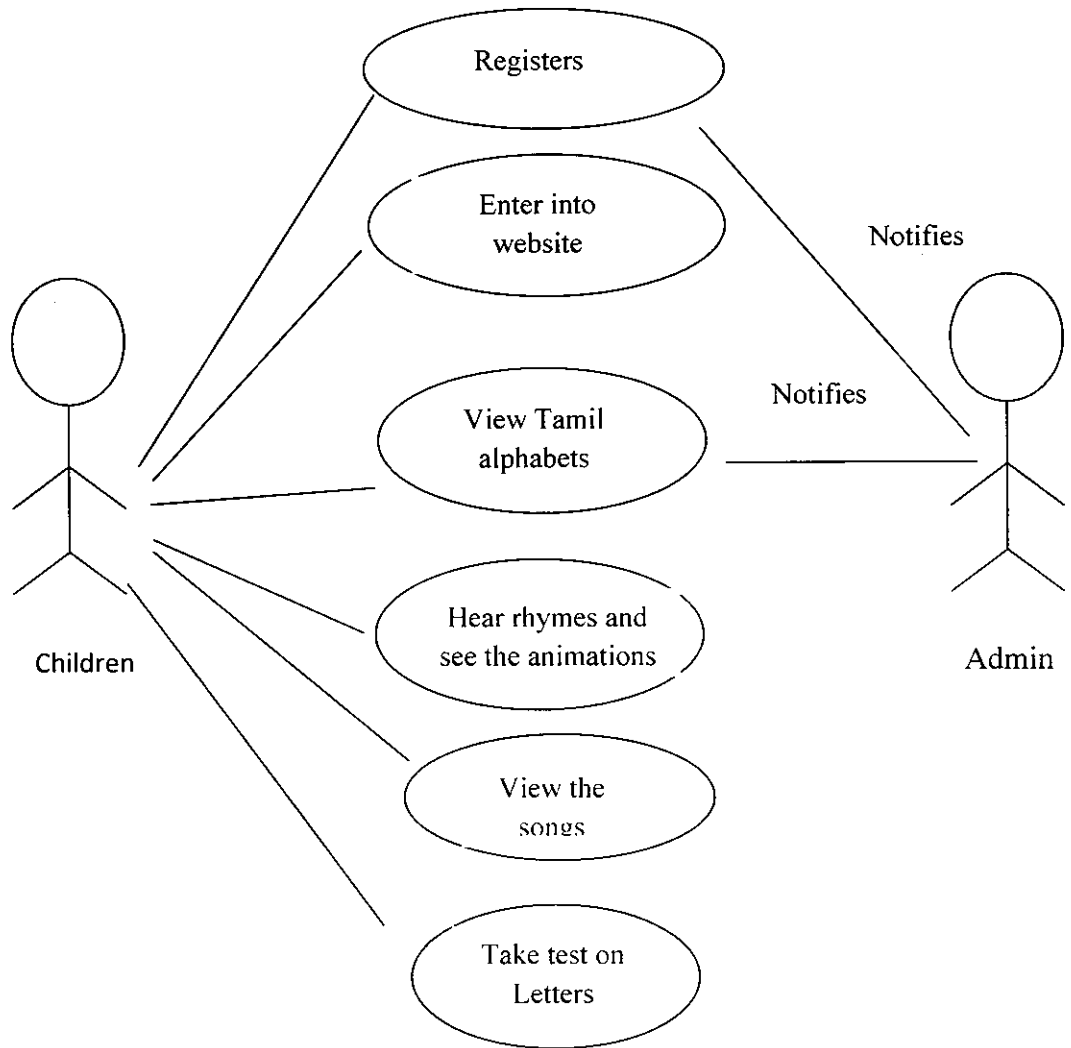
##### 4.1.1 USE-CASE DIAGRAMS

A use case diagram in the Unified Modeling Language (UML) is a type of behavioral diagram defined by and created from a Use-case analysis. Its purpose is to present a graphical overview of the functionality provided by a system in terms of actors, their goals (represented as use cases), and any dependencies between those use cases. The main purpose of a use case diagram is to show what system functions are performed for which actor. Roles of the actors in the system can be depicted.

**Fig 4.1.1.1: Children Log-in:**



**Fig 4.1.1.2: Children Course Undertaking**



## 4.2 ELEMENTS OF DESIGN

System Design is the most creative and challenging phase in the development of a software system. The first step is to determine what input data is needed for the system and then to design a database that will meet the requirements of the proposed system. The next step is to determine what outputs are needed from the system and the format of the output to be produced.

During the design of the proposed system some areas where attention is required are:

- ⌘ How are the inputs required and the outputs produced?
- ⌘ How should the data be organized?
- ⌘ What will be the processes involved in the system?
- ⌘ How should the screen look?

The steps carried out in the design phase are as follows:

- ✓ Input Design
- ✓ Output Design
- ✓ Database Design

### 4.2.1 INPUT DESIGN

Input design is a part of the system design and hence must be carefully designed which otherwise lead to serious errors in the later stages of development. Inaccurate input data is the most common cause of errors in data processing. The main objective of designing input focus on

- ↷ Controlling the amount of input required
- ↷ Avoiding delayed responses
- ↷ Keeping process simple
- ↷ Controlling and avoiding errors

#### 4.2.2 OUTPUT DESIGN

Output generally refers to the results and information that are generated by the system. For many end-users, output is the main reason for developing the system and the basis on which they will evaluate the usefulness of the application. This website is mainly designed for children so we must know how children wanted their page and what makes them to learn. According to requirements we must design our output.

When designing output, system analysis must accomplish the following.

- Determine what information to present
- Decide whether to display, print or speak the information and select the output medium
- Arrange the presentation of information in an acceptable format.
- Decide how to distribute the output to intended recipients.

The arrangement of information on a display or printed document is termed as layout. Accomplish the general activities listed above will require specific decisions, such as whether to use pre-printed forms when preparing reports and documents, how many lines to plan on a printed page or whether to use graphics and colour.

The output design is specified on layout performs, sheets that describe the location characteristics, and format of the column headings and pagination.

The output must be provided in a format easily understandable even by all kids. Layouts of page will attract the children which make the children to learn and hear the rhymes.



### 4.2.3 DATABASE DESIGN

A database is a collection of inter-related data stored with minimum redundancy to serve many users quickly and efficiently. The general objective of database design is to make the data access easy, inexpensive and flexible to the user. An elegantly designed database can play a strong foundation for the whole system.

The details about the relevant data for the system are first identified. According to their relationship, tables are designed through the following method.

- The data type for each data item in the table is decided.
- The tables are then normalized.

The tables are normalized so that they can provide better response time, have data integrity, avoid redundancy and be secure.

#### DATABASE STRUCTURE:

This system uses number of flash files and also it is designed to teach the children. Databases are not necessary for this type of projects. It contains database only for login page.

#### 4.2.3(a): Table Name: user\_info

This table contains the list of financial organizations where the agents are the members

Field Name	Data type	Size	Constraint
User_id	Varchar	10	Primary
U_name	Varchar	10	
U_age	Number	25	
U_class	Number	75	
Password	Varchar	13	

#### 4.2.4 MODULAR DESIGN

**Modular design** — or "modularity in design" — is an approach that subdivides a system into smaller parts (modules) that can be independently created and then used in different systems to drive multiple functionalities. Besides reduction in cost (due to lesser customization, and less learning time), and flexibility in design, modularity offers other benefits such as augmentation (adding new solution by merely plugging in a new module), and exclusion.

This system is also modularized to reduce the complexity of the system. This contains various modules.

##### A) Tamil alphabets Module

User modules are modelled based on the users of the system. This module is designed for the three purposes,

- It's an opening page, which consists of one black board to teach the children and below that numbers are arranged by using flash .so when the hover on that letter respected word will appear on the black board.
- The second concept is inclusion of pronunciation of each letters, when mouse hover on that word.
- Simultaneously when the word selected some related Tamil words displayed with pictures.

##### B) Numbers Module

The same concept of letters is used here to display the numbers up to 20. And also pronunciation of each numbers will be played in Tamil tone.

##### C) Rhymes and Story Module

This module consists of Rhymes and stories in the form of animations. In starting page it list out the stories children can choose the needed story. While that story is clicked the selected song or story will play with background voice.

### **D) Test Module**

This module consists of some tests which evaluate the student knowledge. It's designed mainly to encourage the student. First the letters will be displayed and pronounced and ask the children to click the correct word and applause will be given.

## CHAPTER 5

### SYSTEM IMPLEMENTATION AND TESTING

#### 5.1 IMPLEMENTATION

The system is implemented using Flash, Photoshop, PHP and MYSQL.

##### 5.1.1 Implementation of Business Logic

The business logic is implemented using Flash Builder. Flash contains many controls which make the website very user friendly. The data are entered using the controls and the output is displayed very effectively. This flash builder is very helpful in the way that it doesn't need to navigate through various pages. The loading of different pages for every function call is omitted which helps in improving performance. This IDE uses only one HTML page. The controls are made visible and invisible at needed times. The communication between the IDE and Database is through the Scripting language named PHP. The communication is in the form of XML data. This IDE uses an HTTP Object to send the data to the Scripting language. After processing of PHP file, the results are returned to IDE in the XML format which can be displayed using various controls and containers.

##### 5.1.2 Implementation of Database Communication

For database communication, MYSQL is used along with PHP. MYSQL is the most popular Open Source SQL database management system. MYSQL has many inbuilt functions to carry out the operations with database. These functions are used as a part of PHP file. Using these functions the queries are executed and the operations on database are carried out. The inputs are received from action script file of IDE. The operations are performed according to the command received from IDE. Those operations are performed and the results are returned to the IDE using XML files.

## 5.2 SYSTEM VERIFICATION

**System Verification** is the process of evaluating software to determine whether the products of a given development phase satisfy the conditions imposed at the start of that phase. Verification is ensuring that the product has been built according to the requirements and design specifications- i.e., you built it right. Verification is the assurance that the products of a particular development phase are consistent with the requirements of that phase and preceding phase(s).

In this website verification is done by playing the necessary files and check whether the voices are integrated in the correct way or not.

## 5.3 SYSTEM VALIDATION

**System Validation** is the process of evaluating software during or at the end of the development process to determine whether it satisfies specified requirements. Validation checks that the product design satisfies or fits the intended usage (high-level checking) — i.e., you built the right product. This is done through dynamic testing and other forms of review. Validation ensures that the product actually meets the user's needs, and that the specifications were correct in the first place.

In this project, validation checks whether the developer is moving towards the right product. Validation is done for each module by getting the feed back from end users mainly from children. For login page if there is any wrong entry, error messages or warnings will display. The login form is validated such that the valid registered user only can login to new page. Validation also determines if this project complies with the requirements and performs functions for which it is intended and meets user needs.

This website is mainly designed for children so no much validation and verifications is needed. Its just designed to teach the children not for any organistions.

## 5.4 TESTING

Testing is a critical element of software quality and assurance and represents the ultimate review of specification design and coding. It is a vital activity that has to be enforced in the development of any system. This could be done in parallel during all the phases of system development. The feedback received from these tests can be used for further enhancement of the system under consideration. The main type of test carried out is Unit Testing and Integration Testing.

### 5.4.1 Unit Testing

A series of stand-alone tests are conducted during Unit Testing. Each test examines an individual component that is new or has been modified. A unit test is also called a module test because it tests the individual units of code that comprise the application. Unit tests focus on functionality and reliability, and the entry and exit criteria can be the same for each module or specific to a particular module. Unit testing is done in a test environment prior to system integration. If a defect is discovered during a unit test, the severity of the defect will dictate whether or not it will be fixed before the module is approved.

In this project each component i.e. each page is tested individually to verify that the designed the page according to he understand ability of the children.

### 5.4.2 Integration testing

Integration testing is a logical extension of unit testing. In its simplest form, two units that have already been tested are combined into a component and the interface between them is tested. A component, in this sense, refers to an integrated aggregate of more than one unit. In a realistic scenario, many units are combined into components, which are in turn aggregated into even larger parts of the program. Eventually all the modules making up a process are tested together. Beyond that, if the program is composed of more than one process, they should be tested in pairs rather than all at once. Integration testing identifies problems that occur when units are combined.

Many forms in the system have communication between each other. This helps in testing integration testing. For ex: if the children logins, first system should check whether the children a valid user and then it should move to the content page and display some details of that the Tamil words. Here more than a single process is involved and so it needs integration testing.

## CHAPTER

### CONCLUSION AND FUTURE ENHANCEMENT

#### CONCLUSION

The project "E-learning for kids" is mainly designed in order to teach the kids in Tamil and also with the intension to promote Tamil. Highlight of the project is use of animations in order to induce the children to learn through using his website. Foreign children are mainly get benefited by this project, because they don't want to search Tamil teachers in their country.

Login page is helpful for the children to enter into the site. Main theme in login page is that we allow children to select the password which listed in the page; this is just designed in order to make know the children what the password meant. They can retrieve the password, if they forget.

Children can get benefited using this site. They can learn the lessons by sitting in their home.

#### FUTURE ENHANCEMENT

This project has been developed as a Master's project and is constrained by time. There is scope for extending the system as per the need.

In this project at last we included test page in order to evaluate the children knowledge .Test page contains only test for alphabets. If needed extra test page will be added for words, letters, and songs etc.Login form for admin will created if needed. In order to secure the site. Database will be created for test pages by using some techniques.

Pages for extra games also will be designed in order to refresh the children .So that children relax them selves while studying.

# APPENDIX

## SCREEN SHOTS

Figure A.1 Login page-New User





Figure A.2 Login-User

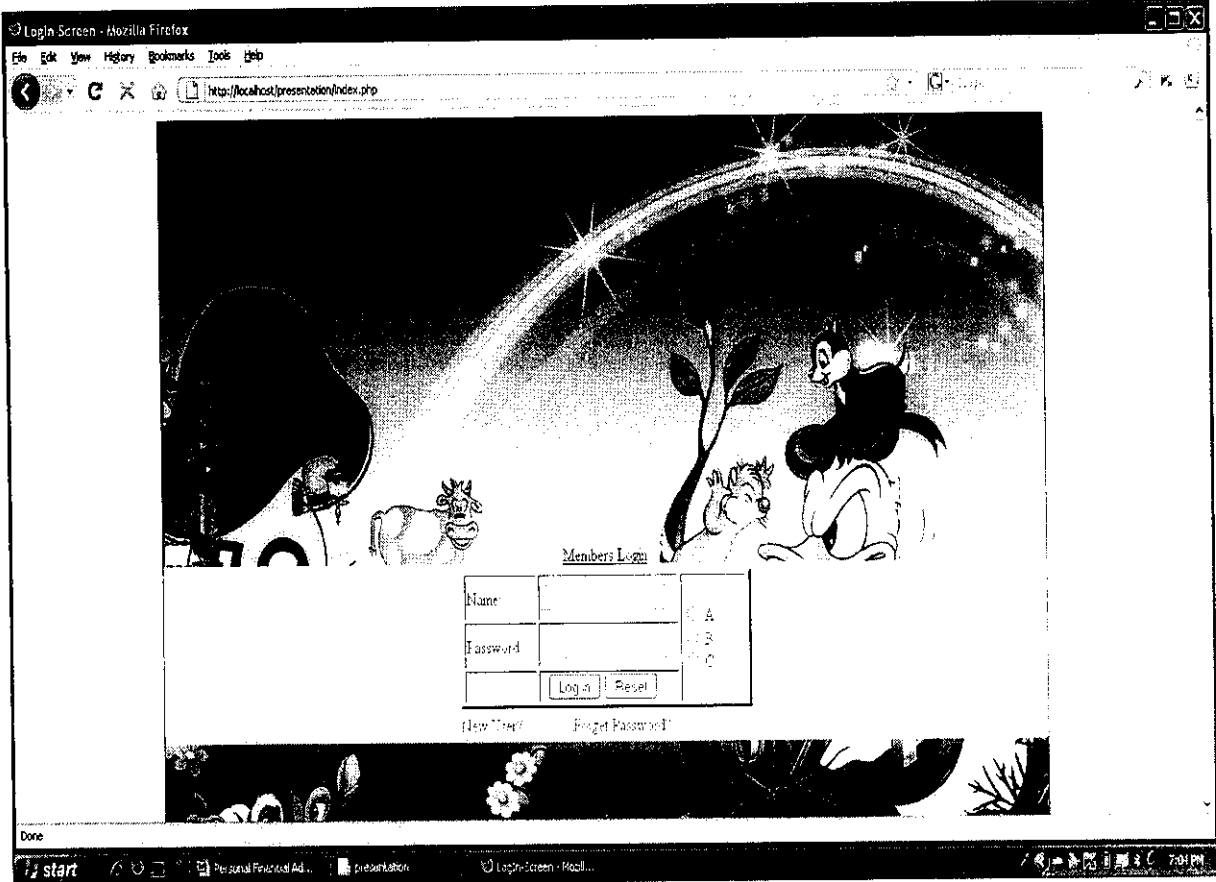


Figure A.3 Home Page



Figure A.4 Tamil Letters



Figure A.5 Numbers



Figure A.6 Rhymes Starting Page

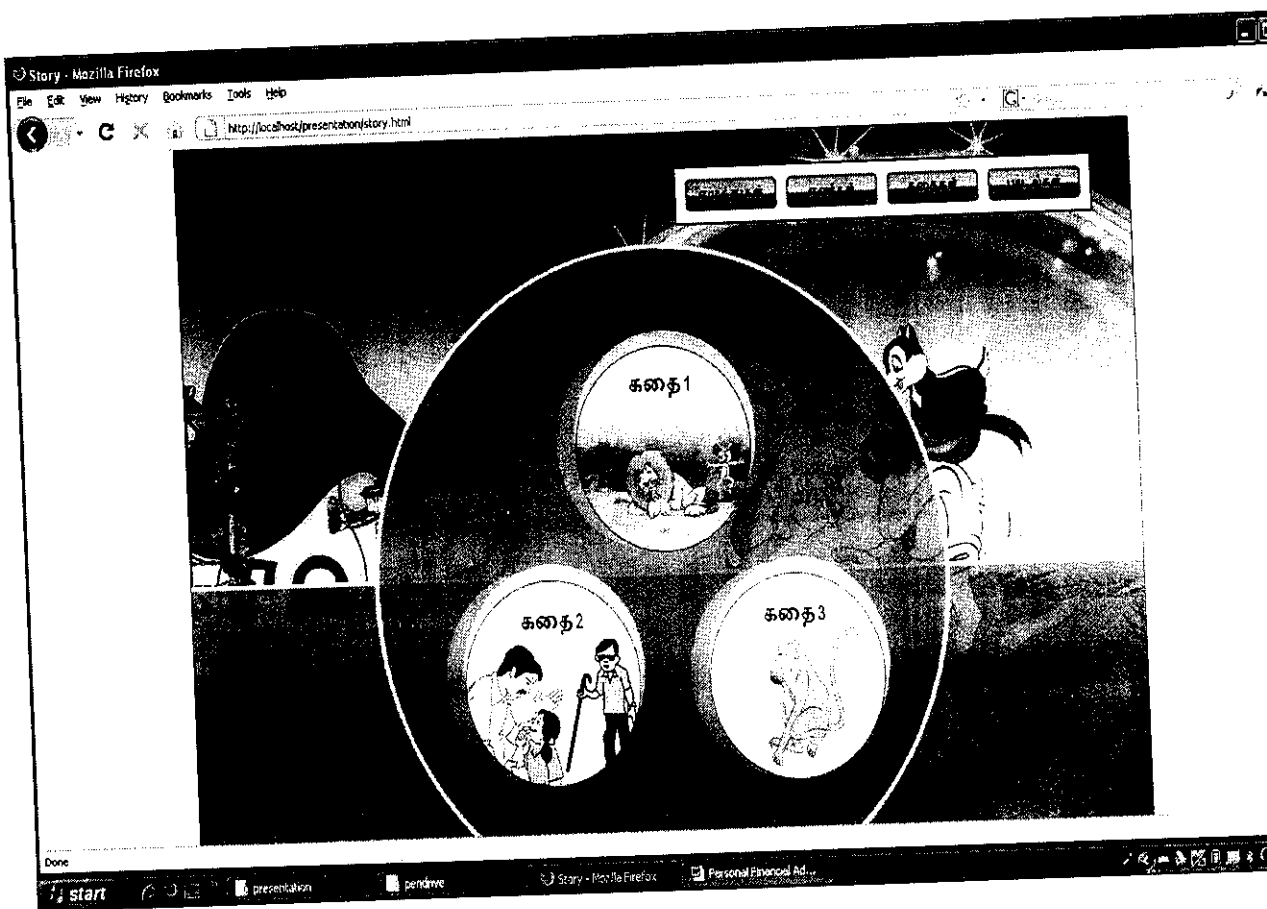


Figure A.7 Story Page

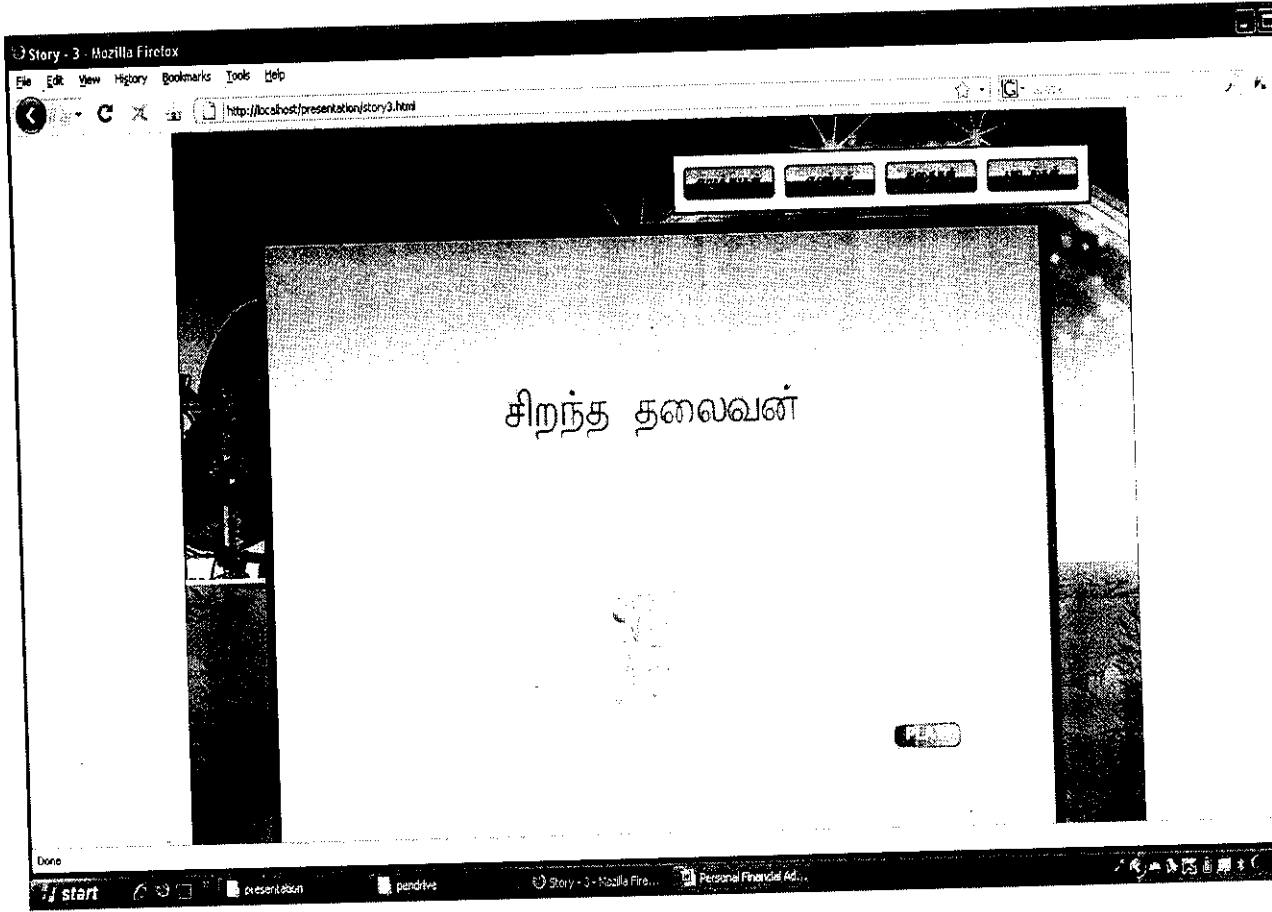


Figure A.8 Story Page



Figure A.9 Home page





Figure A.10 Song –Starting Page

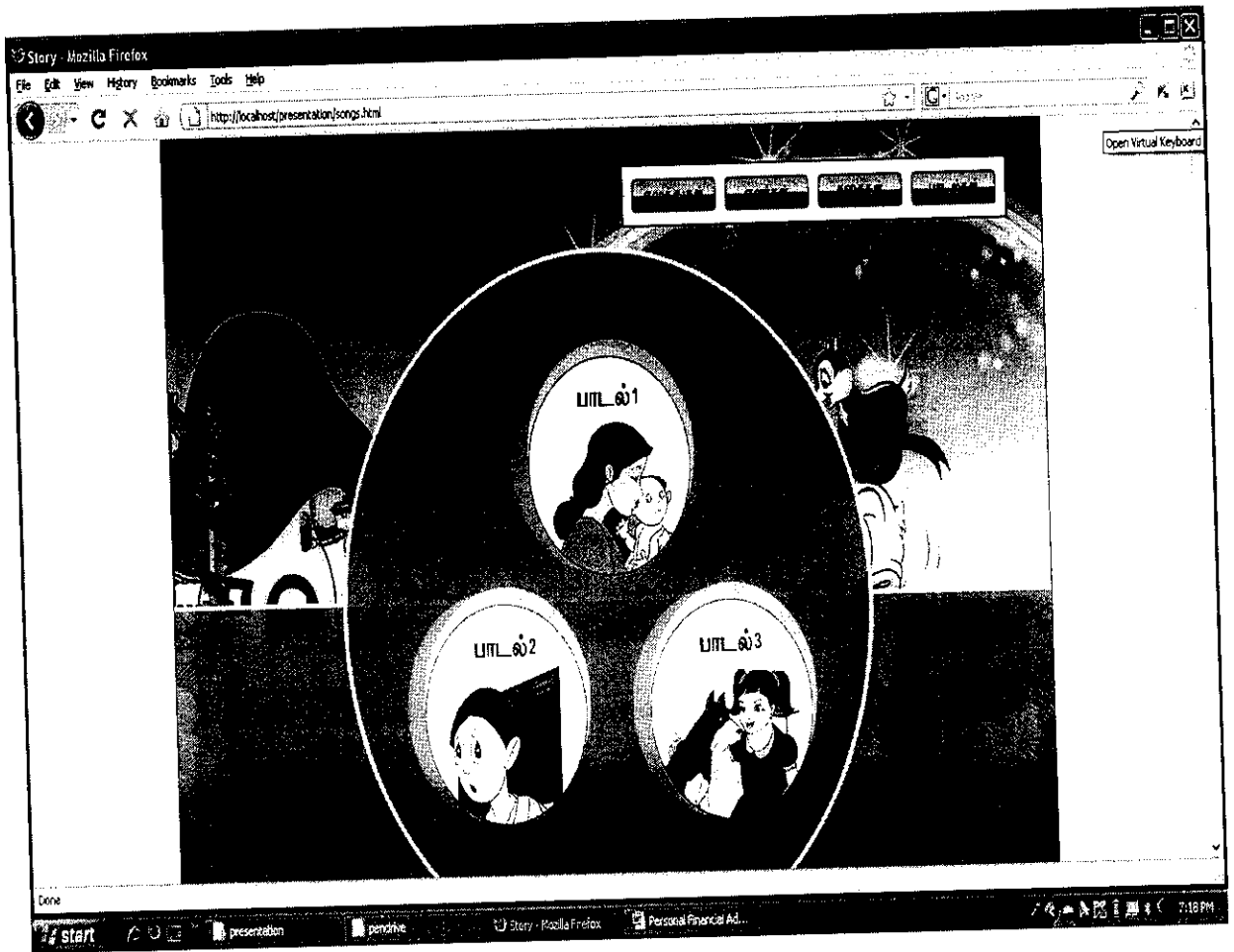


Figure A.11 Song 1



Figure A.12 Test Page

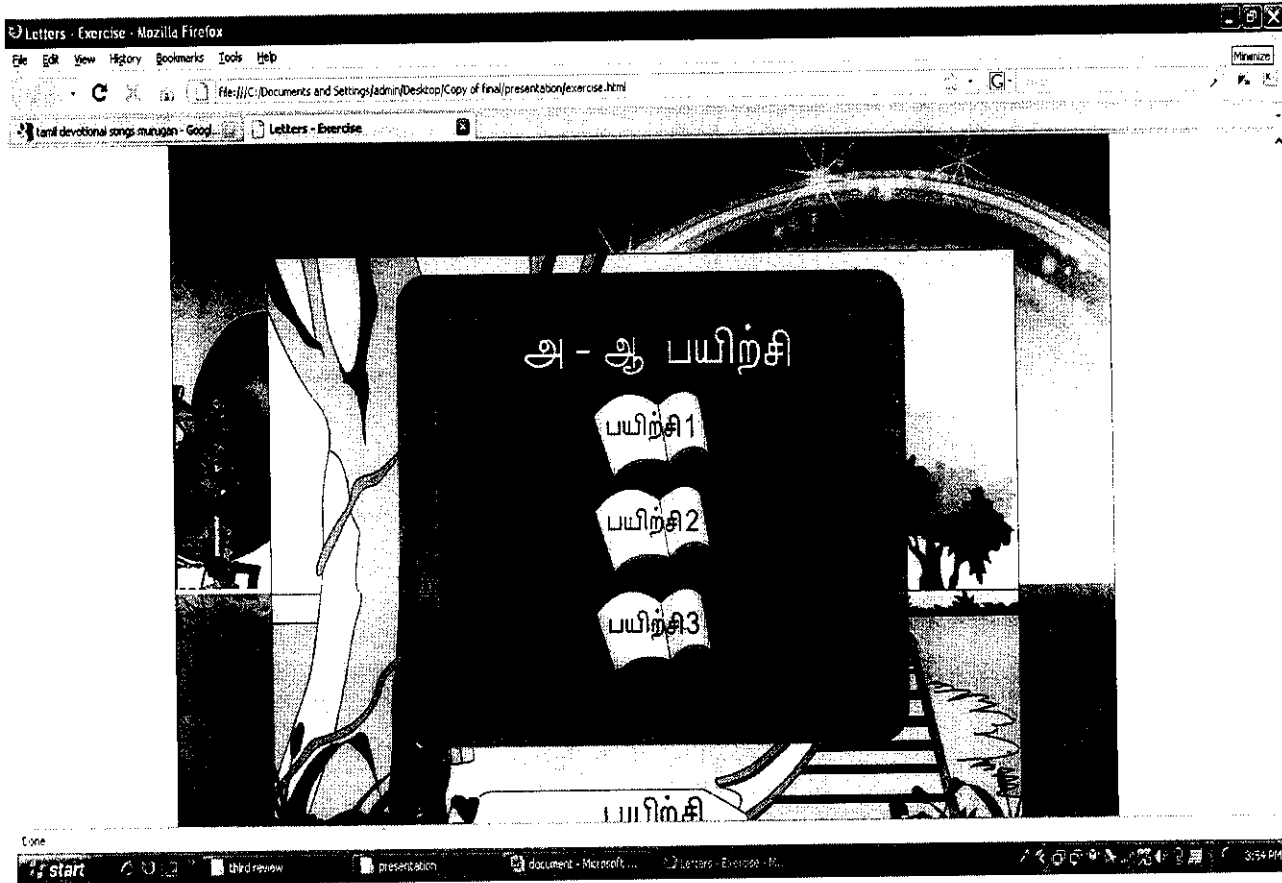


Figure A.13 Test Starting Page



Figure A.14 Test -1



Figure A.15 Test Page -1



Figure A.16 Test Page -2



Figure A.17 Test Page-3





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