

E-Skill Information Acquisition Software: A Key to Poverty Alleviation Or Self Reliance

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Abstract

*Unemployment is now eating deep into the Nigerian economy. This has greatly affected most of our youths. The Federal, State and Local Governments are making frantic effort towards solving this chronic problem but the effort is not enough. The traditional method of transferring knowledge has not helped matters. This project is about developing an e-skill transfer using software. The software developed here has simplified skill acquisition. It has also made such effort more cost effective. and less expensive for people to learn new skills such as paint production. **E-Skill Information Acquisition Software (ESA)** can enhance speedy acquisition of skills by any interested learner. This project is achieved using Showcasing approach. **Paint production** has been chosen as a case study.. The same method can be used in other following internationally accepted software engineering principles.. PHP and MYSQL were deployed as programming platform for the production of the software. The project integrates visual and audio aids for easy demonstration and comprehension. ESA is recommended to organizations such as the National Directorate of Employment (NDE) and other acquisition training centers to reduce the burden vocational skill acquisition. The output of this research provides a key to enhanced skill acquisition towards self employment and self reliance.*

Key Words: unemployment trauma, e-skill acquisition, NDE, self employment, self reliance

Introduction

The key motivation for this research is the alarming rate of youth unemployment which has led many youths into crime. With the alarming rate of graduates being turned out from diverse tertiary institutions with no place for absorption, there is increasing tension in the land, particularly insecurity leading to near anarchy [6]. The resulting social malaise includes armed robbery, car snatching, kidnapping, assassinations and suicide bombing to

mention but a few. Street roaming is also the order of the day. To worsen the situation these graduates with NCE, Diplomas, and Degrees are idle for five years or more without functional skills but with paper qualifications.

One may ask; what is the cause of this unemployment? Unemployment in this country is mainly caused by our battered economy which has seriously affected individuals. It is however structural.

Those who have acquired functional skills are busy and contribute to the national economy. The unemployment situation in Nigeria has been reinforced by total dependence on the mono-product crude oil in the economy [1]. Also the implementation of the present system of education makes it impossible to achieve a proper utilization of their natural skills and capabilities. It encouraged quest for white collar jobs of our colonial masters. To this effect, both Federal and State Governments have tried in one way or the other to reduce this unemployment by establishing skill acquisition bodies to handle such training. Such bodies include National Directorate of Employment (NDE), Basic Apprenticeship Training Center (BATC) [2]

It is true that government in the bid to reduce unemployment established some of these agencies; the impact of these programs is very minimal as they are not properly coordinated. Government spends lots of money on this venture but due to mismanagement, little or nothing has been achieved [5]

In order to make skill acquisition focal project of national importance in Nigeria, individuals, Local, State and Federal governments have to put in more effort to make our people realize the importance and the role they play in youth employment and self reliance [4]. In the light of the above, this E-Skill Acquisition Software is being developed. This project will help many of the unemployed graduates to learn skills that will help them to be self employed and be employers of labour, rather than looking or hoping to get white collar jobs. Time has come when we all must have to think and work in the direction of the popular saying of John Kennedy, *“Ask not for what your country can do for you but ask for what you can do for your country”*.

Problem Statement

Unemployment has become a cankerworm in the Nigerian society. This has led to different types of crimes in the society, such as stealing, bribery, corruption, kidnapping, car snatching, suicide bombing to mention but a few. Street roaming is the order of the day. To crown it all, large turnout of graduates with NCE, Diplomas and Higher Degrees cannot even defend the bunch of credentials at hand but constitute a danger because of idleness and un-employability.

Objective of the study

The objectives of this research include:

- To develop an E-Skill acquisition software for human capacity development.

In order to achieve this objective, the following procedure would be adopted:

- Design a webpage or portal for skill acquisition search
- Develop links to the e-skill acquisition sites.
- Design software called computer aided teaching/learning system for acquiring different skills.
- Develop a dynamic website for people to upload and download different skills.

Significance of the study

- i. To develop software for computer aided teaching on different skills so that interested learners can access them and acquire desired skill(s) of interest.
- ii. To develop a dynamic website for resource persons to upload and download their different skills learning courseware.
- iii. To reduce unemployment and help people to be self-employers of labor rather than to be job seekers.
- iv. To reduce crimes and other vices in the society.

- v. To improve the economy of the country as well as reduce migration from rural to urban cities.
- vi. To accelerate rural development as those who have acquired such skills can establish in rural communities.
- vii. To assist in reducing accommodation problems in urban cities. Therefore the benefits accruing from this project cannot be over emphasized.

Overview of the Envisaged System

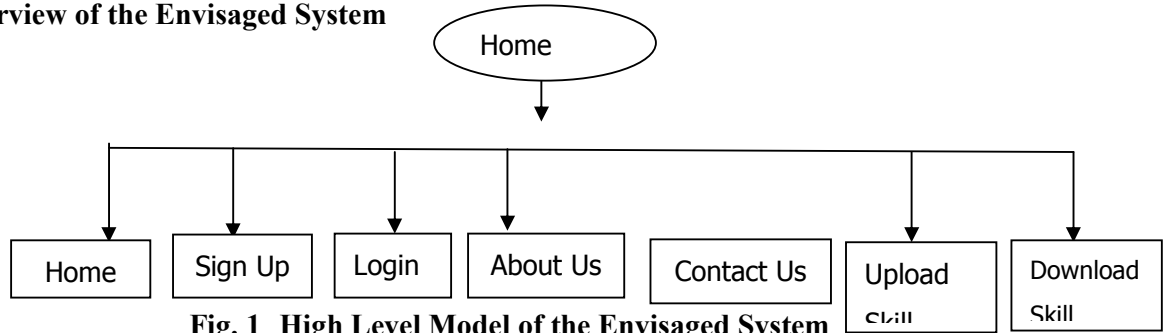


Fig. 1 High Level Model of the Envisaged System

Design Approaches

The design of the project is carried out based on the following guidelines:

- Database Design and Specifications
- User’s Module
- Admin Module
- Input / Output Specifications
- Input Specification and Design
- Output Specification and Design

System Design

Objective of Design

The objective of the new system is to design a platform for e-skill information acquisition software with the following modules:

- Online Materials on paint production
- Online materials on computer maintenance
- Online materials on bead making
- Online materials on soya beans processing

- Uploading and downloading skills

- Online users registration
- Online security checks on the database
- Restriction of unauthorized users from gaining access to restricted information.
- Maintain a database for Admin

The Control Centre (Main Menu)

The main menu shown in figure 1 has two main modules namely:

- The Database Administrator’s Module and
- The E-Skill User’s Module

The admin module is used to view both the admin and user’s report of login and to create admin password. It can also be used to view e-skill information. The e-skill user’s module is used to sign up as well as login to e-skill acquisition information of any interest by filling in the user registration form. This shall be implemented through the use of tree data structure and PHP/MYSql script.

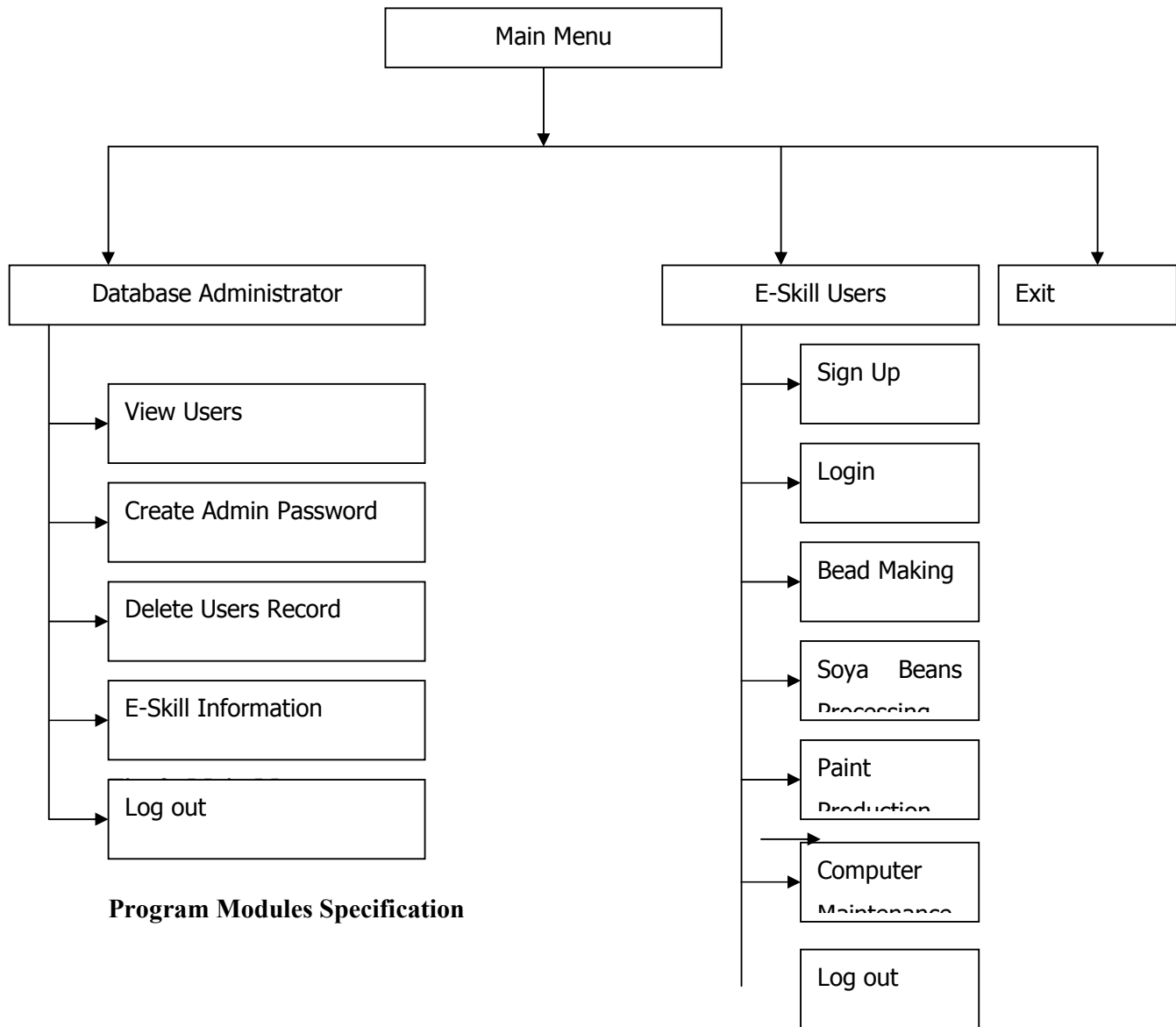


Fig. 1: The control Centre of the E-Skill Acquisition Software

The program was designed using Top – Down Approach. It makes use of the fundamental program solving techniques. The software is structured in such a way that each subsystem is selected and executed independently. The task is divided into several modules, which comes together to give the solution to the problem. The modules are as follows

The Admin Module

The Database Administrator’s module is used to create admin users id, maintain the database, and view e-skill user’s information. It can also enable the administrator to view e-skill user’s information.

The E-skill User’s Module

The user’s module is designed to enable users sign up for the purpose of login. On

registration, the user obtains user name and password. Only valid user accounts can be used by the user in login. The E-skill users can also use this module to learn how to produce paint, maintain computer system or any other skills of interest.

Database Design and Specifications

MySQL database was used in the design of the new system database. The structure of the data tables in the database includes: Username, password, level, full name, address, phone, Email, State and country as shown in table 4.1 below.

Table 1: The structure of the data tables userlogin

Field	Type	Null	Key
Username	varchar(40)	NO	PRI
Password	varchar(20)	NO	
Level	int(5)	NO	
full name	varchar(40)	YES	
Address	varchar(100)	YES	
Phone	varchar(30)	YES	
Email	varchar(30)	YES	
State	varchar(40)	YES	
Country	varchar(40)	YES	

The structure of the data tables in the database for uploading and downloading

of skills include: Name, Subject, Topic, Date, and Pic as shown in table 4.2 below

Table 2: The structure of the data tables

Field	Type	Null	Key
Name	varchar(100)	YES	
Subject	varchar(100)	YES	
Topic	Varchar(100)	YES	
Date	Date	YES	
Pic	varchar(200)	YES	

Input Specification and Design

The input specification and design in the new system is structured to capture user's information as well as some administrative updates. Bellow is some of the input forms designed in the new system.

- The Home Page and Login Page
- Admin Password Creation Form

- User Registration Form
- Upload Skill User Registration Form
- Download Skill User Form

Output Specification and Design

The website is created to enable admin users to view vital information from the site for management use. Reports on users

file and admin user report can be generated from the system. Below is some of the report formats designed in the new system.

- E-Skill Users Report
- Admin Users Report

- E-Skill Information Home Page
- Paint Production Page
- Computer Maintenance Page

Logic implementation algorithms

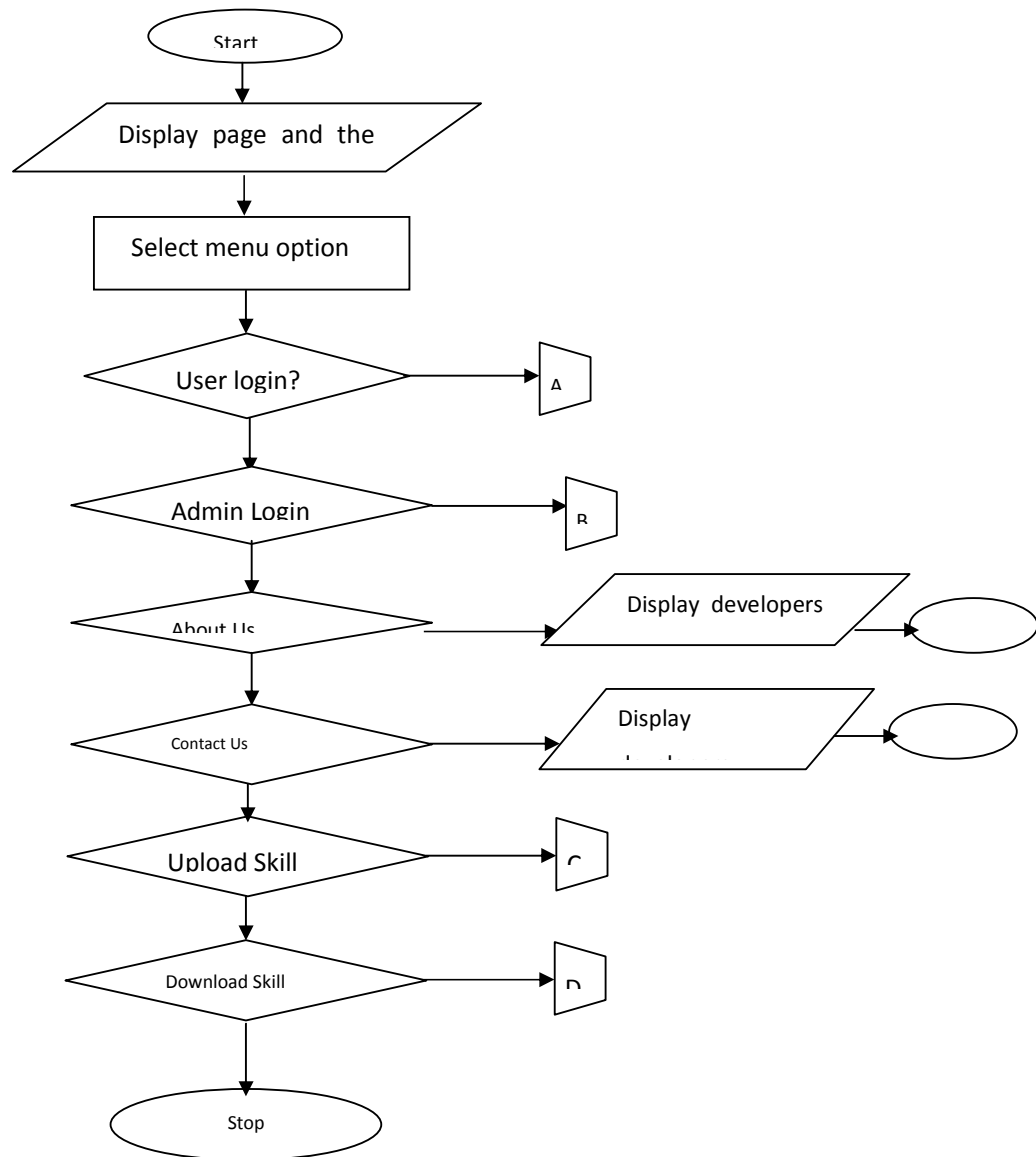


Fig.3 Menu Logic Flow for data selection

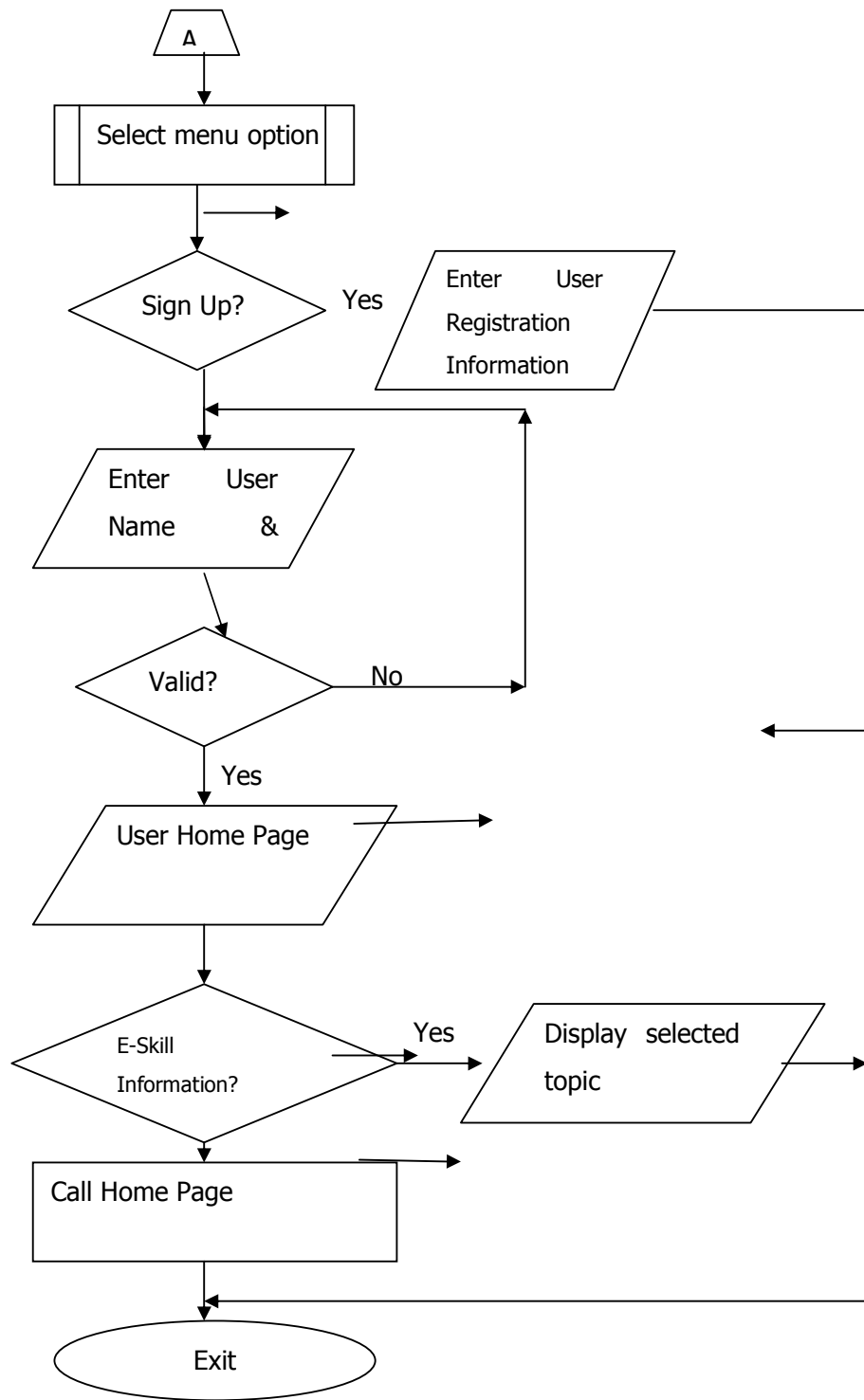


Fig. 3b: User login flow diagram

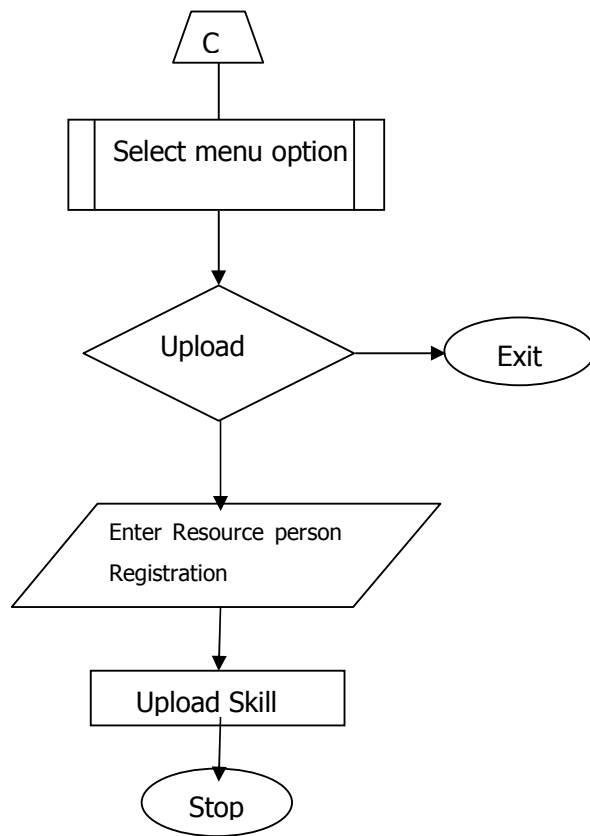


Fig. 3c Admin login flow diagram

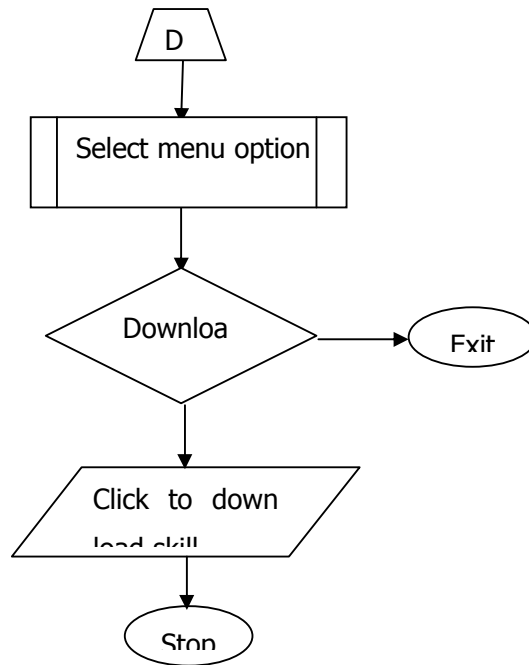


Fig. 3d: Uploading Skill Flow Diagram

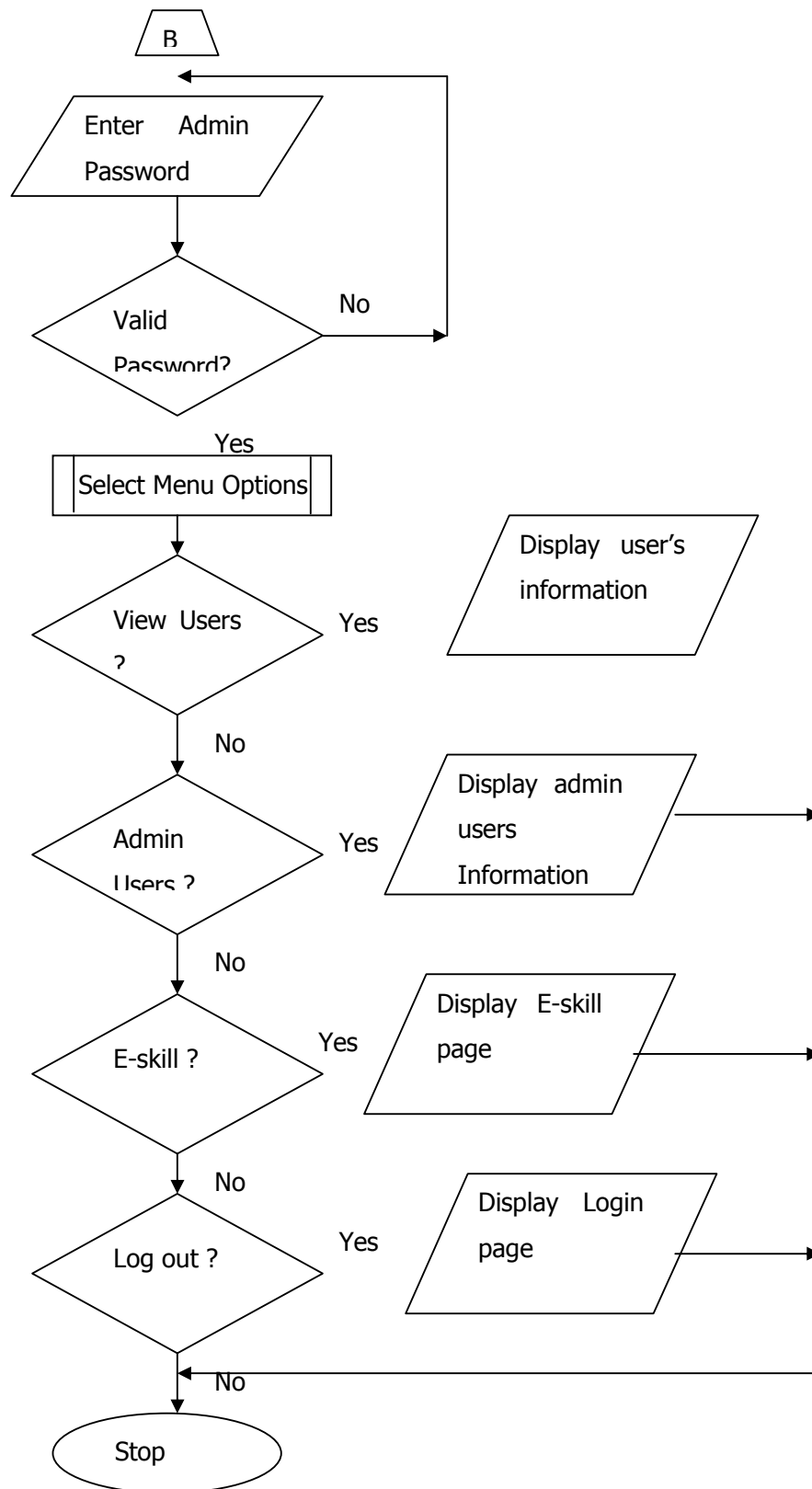


Fig. 3e Download Skill Flow Diagram

System Implementation

System Requirement

Computer system is made up of units that are put together to work as one in order to achieve a common goal. The requirements for the implementation of the new system are:

- The Hardware
- The Software

Software Requirement

For the effective implementation of the new system, the following software has to be installed on the computer system.

- Windows Xp, Windows 2000 , Vista or window 7
- PHP
- Dream Weaver
- Web Server
- Swish Max
- Fireworks
- Mysql

Hardware Requirement

- Pentium VI and Above
- 1GB Ram and above
- 40GB HD
- Printer
- Internet Access

How to Install Software

The Software was stored in a CD. To install it on the system to run from the hard disk, follow the procedure below.

- i. Click Start Button on the desktop
- ii. Select program
- iii. Click Windows explorer
- iv. Click Drive D:
- v. Select the folder “**eskill**”
- vi. Click Edit
- vii. Click Copy
- viii. Select drive C:
- ix. Select Wamp
- x. Select www

- xi. Click paste to Copy the Folder “**eskill**” from drive D: to Drive C:
- xii. The folder contains the entire sub program that makes up the software developed.
- xiii. Open internet explorer by keying in:
localhost/eskill/index.php

Development Tools

The PHP and web server technology used in the development of the system is capable of interfacing with several development tools. It has interface that is compatible with virtually all Database Management System (DBMS). The database employed in this work is MySQL, which is used to design back ends of the system (ie data and knowledge base). For the design of the front ends of the work, Macromedia Dreamweaver is used.

System Security

Any important or valuable information system must have some kind of security. Permissions are usually given to authorized users; this can easily be noticed in client/server system where the user always has to log onto the system using an account, which comprises a username and a password. Just as it is in any other client/server system, this project is password protected. The functionality of a user is predetermined by his/her login details. Every authorized user can change his/her password at will to enhance more security. Typical examples of the login page and admin users create forms are shown in figure 4 and 5 respectively..



Fig. 4: Home page and login output form

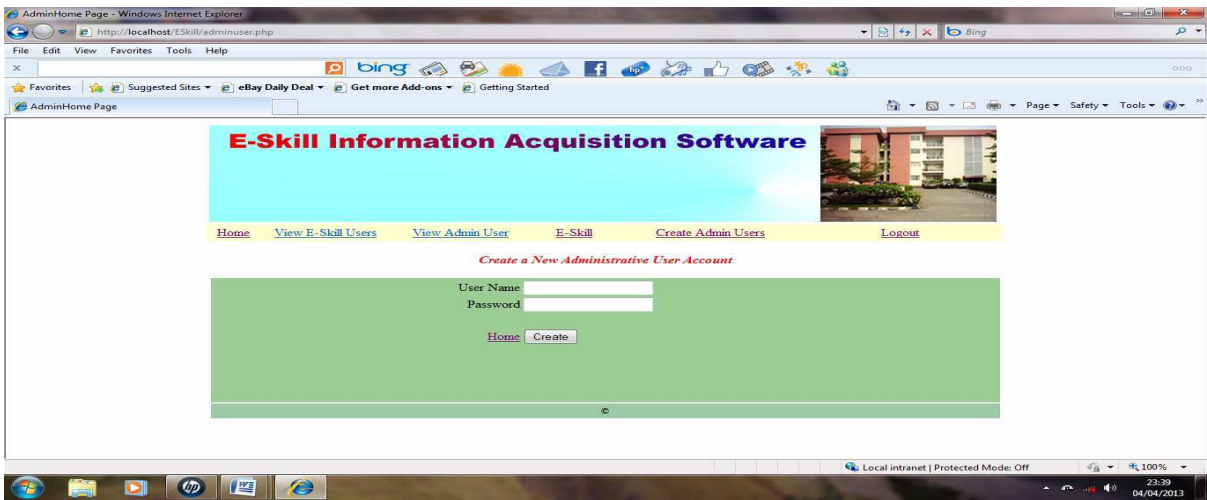


Fig 5: Admin users create password

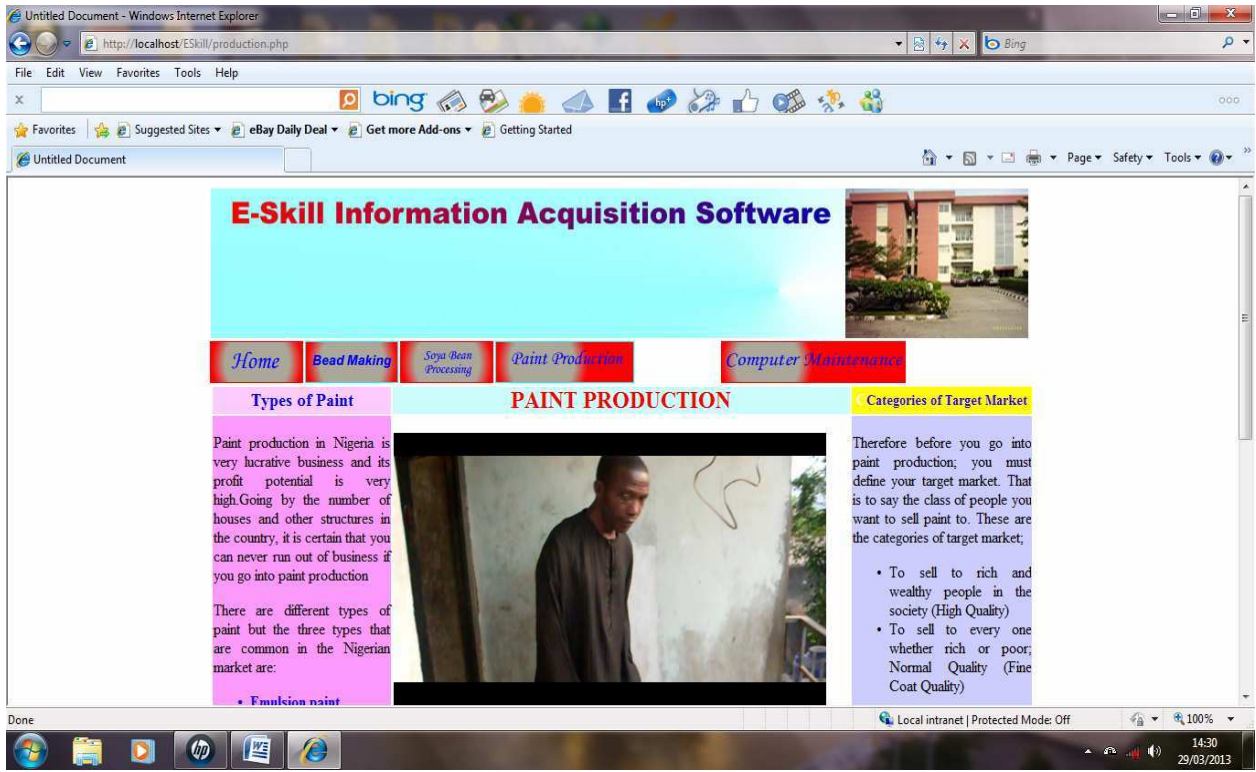


Fig.7: E-skill information both audio visual output report

The E-skill information output report shows the materials, equipment and procedures of how to learn a particular skill in a virtual and audio

form as shown in figures 7 and 8 as for paint production



Fig. 8: E-skill information output both audio and visual.

Conclusion

The project has succeeded in developing an e-learning tool for skill acquisition. The database in the e-skill information acquisition software has been carefully stored in the computer in such away anyone can login upon

given access to learn any skill of interest. The project is also made dynamic so that interested resource persons can upload their skills for people to download. It is an open source platform. It is recommended for deployment by all Skill Acquisition training centres in Nigeria

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