



WINDOWS MAINTENANCE MANAGER

By

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COIMBATORE - 641006

BONAFIDE CERTIFICATE

Certified that this project report titled "Windows Maintenance Manager" is the bonafide work of "Mr.S.Vijaya prasad" (Register Number: 71206621058) who carried out the project under my supervision. Certified further, that to the best of my knowledge the work reported herein does not form part of any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

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Head of the Department

Submitted to the Project and Viva Examination held on 06-07-2009

[Signature]
Internal Examiner

[Signature]
External Examiner



ACI India (Pvt) Ltd

TO WHOM SO EVER IT MAY CONCERN

PROJECT COMPLETION CERTIFICATE

This is to certify that Mr.S.Vijaya prasad (Reg. no: 71206621058) final year MCA student of Kumaraguru College of Technology completed his project work from Dec 2008 to May 2009 in our premises under the supervision of the undersigned.

The project of the candidates is focused on "Windows Maintenance Manager".

A copy of the report has been submitted to us at the end of his tenure. During the above said period he abided by the rules and regulations of our organization.

Regards,

For ACI India (Pvt) Ltd

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CHAPTER 1

INTRODUCTION

1.1 ABSTRACT

The project Entitled "Windows Maintenance Manager" gives security to the user by the administrator and to control several activities from the server. The main objective of the project is protection of the computer under various visions, here all the protection works getting together under one roof like allocating quota, protecting the desktop from unauthorized user, controlling user access, retrieving the documents visited even if they are cleared, controlling disk partition, etc.

With this it can facilitates the adding up the users of the operating system and limits their usages. Not only protecting the primary storage devices but it can also securing the auxiliary storage devices by make a USB as write protection mode. It does not allow writing the data from main memory to secondary memory.

By adding the start up, it facilitates to run the executable files while booting operating system. Also disable the boot time executable files by removing from the start up.

Disk partition is used to do partition the local system from the server, and also we can hide the unwanted partition to the users. Quota is to limit the memory usage of the user in the local system and server.

This project has been developed under Visual Basic .Net 2005 as front end and SQL server as back end.

1.2 ORGANIZATION PROFILE

The idea of providing quality software products at a competitive price gave birth to ACI India (Pvt) Ltd. ACI works as a part of any organization seeking cost-effective solutions. ACI is blessed with a team of software professionals in order to achieve its mission. ACI works towards managing successful software products.

ACI India (Pvt) Ltd is a leading solution provider for software based applications. Established in 2001, The Company has been promoted by some highly experienced Professionals dedicated to provide total IT solutions under one roof.

ACI team provides top quality software solutions with an innovative view, our highly spirited ACI focus on meeting the complications of the present business with prodigious ease.

Mission

To help individuals enhance their creativity and build Knowledge that creates opportunities, thus deliver a result that maximizes customer's return on their existing investments, with Affordable cost High quality products in an Effective marketing time.

Vision

To evolve as leading software Services Company by using the available resource and to provide competitive products that are best fit to latest technological innovations.

Products

- Trading, Accounts, Production process Soft wares
- Networking Products
- Medical Soft Solutions
- Online Training Tools
- Project For Industry, Gear Industry, Corporate sectors, Bearing Industry, Textile Industry , Educational Institutions

Services

- Software Development
- Project consulting
- Training

CHAPTER 2 SYSTEM ANALYSIS

2.1 EXISTING SYSTEM

In the existing system, the documents or folders are to be carefully watched out so that any non-privileged users may delete or change the contents in the folder. Moreover, the contents changed may not be identified in the time.

There is no protection for the auxiliary storage devices so the data movements may be randomly occurred in the system so the system affected by the virus. Regular virus clearance is necessary. The system should be keenly watched for avoiding data theft and unauthorized users.

PROBLEM IDENTIFICATION

There are many drawbacks in the existing system, identified problems are...

- Accessed by unauthorized users
- Not possible to limit the memory usage from server
- Random data movements to and from the system
- Continuous listening is not possible
- Limited users can use system at any time
- If the documents are cleared, not able to retrieve the path data
- Unable to see the user mode of the operating system
- No chance to controlling the partition

2.2 PROPOSED SYSTEM

The proposed system "Windows Maintenance Manager" should confronting all the identified problems in the existing system; it provides high security to the system in various terms likely disk partition, task bar protection, controlling user access, desktop protection, USB protection and also facilitating

the creating user from this project (not necessary to follow the as usual procedure in operating system).

With this while activation of boot strap loader it allows to viewing, adding and deleting executable files in the system and it has sophisticated and pleasant environment.

MODULE DESCRIPTION

This project has the following main modules and its corresponding sub-modules.

1. File
 - a) History
 - b) Start up maintenance
 - c) Exit
2. Protection
 - a) Desktop lock
 - b) USB protect
 - c) Task bar control
3. Control
 - a) Disk Partition
 - b) User Access
 - c) Quota
4. Windows
 - a) Boot mode
 - b) Add user

1. FILE

A) History

This module displays the recently visited websites and recently used documents of the particular user even if it is cleared. Some users utilize internet for their personal purpose. So administrator can report this to the manager if necessary.

B) Start-up Maintenance

It is used to add, delete and view the executable files while booting the system. Many system files need to be executed when the system starts itself. Administrator has to add or remove the executable files which are necessary to each user.

2. PROTECTION

A) Desktop Lock

It provides locking the desktop of the user system from the server if the user enters wrong password more than particular time. If the user tries to insert any unnecessary cables in the system like Head phone, Data cable, USB drive, etc., then it will lock that user desktop.

B) USB Protect

Through the Universal Serial Bus (USB), the data can be easily transferred by any unauthorized user from the computer, this module facilitates to protect the USB. It turns to be write mode state. (i.e.)No data movements from primary storage to secondary storage (pen drive, mobile phones).

B) Task Bar Control

This module is similar to USB protection. If task bar protection enables then task bar control of that user turns to be a disable state. Additionally it facilitates to display the time in different format like IST, GMT, etc.

3. USER CONTROL

A) Disk Partition

In the existing system we don't have any options to control the disk from server. Administrator can create, delete, view and hide the disk partition of the user from the server itself.

B) User Access

It is to create a new user with several controls. Here we can give the user privileges from the server. Using this module, we can limit the total time can be used to each user and number of logins allowed to the user.

C) Quota

This module split the memory usage for each user. A particular user can't use more memory space than what the administrator mentioned in their local system. We can also allocate server memory space to each user.

4. WINDOWS

A) Boot Mode

This module is to know the user details from the server. Using this module administrator can know boot mode, domain name, system name, drivers which the user can access and terminal session status of each user.

B) Add User

It facilitates to create new user account in local system from the server. And also we can control their activities like timing, folder access, memory usage, etc.

ADVANTAGES OF THE PROPOSED SYSTEM

This system has following advantages:

- Controlling user activities from the server.
- Protection of the desktop it leads to securing the System from unauthorized user
- Protection the USB for avoiding the random data movements from the system
- We can limit the memory usage to all the users
- Creating the new user login for the system with lot of controls
- To lock the task bar for avoiding of task bar norm changes
- It displays the documents used, even if it is cleared in the actual history
- It allows to seeing the boot mode of the system
- Allocating quota to each user
- It facilitates the viewing, adding and deleting executable files in the system while booting the system
- More reliability than existing system.

CHAPTER 3

DEVELOPMENT ENVIRONMENT

3.1 HARDWARE REQUIREMENTS

The hardware support required for deploying the application

PROCESSOR	:	Pentium IV
RAM	:	256 MB
HARDDISK	:	Seagate 80 GB
KEYBOARD	:	Logitech 104 Keys

3.2 SOFTWARE REQUIREMENTS

The software support required for deployment is:

Operating System	:	Windows Server 2003
Database	:	SQL Server 2000
Software for development	:	Visual Studio 2005

3.3 PROGRAMMING ENVIRONMENT

3.3.1. Visual Basic.Net

- Visual Basic . Net has flexibility , allowing one or more language to interoperate to provide the solution. This Cross Language Compatibility allows to do project at faster rate.
- Visual Basic . Net has Common Language Runtime , that allows all the component to converge into one intermediate format and then can interact.

- Visual Basic .Net has provide excellent security when your application is executed in the system
- Visual Basic .Net has flexibility, allowing us to configure the working environment to best suit our individual style. We can choose between a single and multiple document interfaces, and we can adjust the size and positioning of the various IDE elements.
- Visual Basic .Net has Intelligence feature that make the coding easy and also Dynamic help provides very less coding time.
- The working environment in Visual Basic .Net is often referred to as Integrated Development Environment because it integrates many different functions such as design, editing, compiling and debugging within a common environment. In most traditional development tools, each of separate program, each with its own interface.
- The Visual Basic .Net language is quite powerful – if we can imagine a programming task and accomplished using Visual Basic .Net.
- After creating a Visual Basic .Net application, if we want to distribute it to others we can freely distribute any application to anyone who uses Microsoft windows. We can distribute our applications on disk, on CDs, across networks, or over an intranet or the internet.
- Toolbars provide quick access to commonly used commands in the programming environment. We click a button on the toolbar once to carry out the action represented by that button. By default, the standard toolbar is displayed when we start Visual Basic. Additional toolbars for editing, form design, and debugging can be toggled on or off from the toolbars command on the view menu.
- Many parts of Visual Basic are context sensitive. Context sensitive means we can get help on these parts directly without having to go through the help menu. For example, to get help on any keyword in the Visual Basic language, place the insertion point on that keyword in the code window and press F1.

- Visual Basic interprets our code as we enter it, catching and highlighting most syntax or spelling errors on the fly. It's almost like having an expert watching over our shoulder as we enter our code.



3.3.2 SQL Sever 2000

Microsoft SQL Server 2000 is a full-featured relational database management system (RDBMS) that offers a variety of administrative tools to ease the burdens of database development, maintenance and administration. In this article, we'll cover six of the more frequently used tools: Enterprise Manager, Query Analyzer, SQL Profiler, Service Manager, Data Transformation Services and Books Online.

Enterprise Manager is the main administrative console for SQL Server installations. It provides you with a graphical "birds-eye" view of all of the SQL Server installations on your network. You can perform high-level administrative functions that affect one or more servers, schedule common maintenance tasks or create and modify the structure of individual databases.

Query Analyzer offers a quick and dirty method for performing queries against any of your SQL Server databases. It's a great way to quickly pull information out of a database in response to a user request, test queries before implementing them in other applications, create/modify stored procedures and execute administrative tasks.

SQL Profiler provides a window into the inner workings of your database. You can monitor many different event types and observe database performance in real time. SQL Profiler allows you to capture and replay system "traces" that log various activities. It's a great tool for optimizing databases with performance issues or troubleshooting.

Service Manager is used to control the MSSQLServer (the main SQL Server process), MSDTC (Microsoft Distributed Transaction Coordinator) and SQLServerAgent

processes. An icon for this service normally resides in the system tray of machines running SQL Server. You can use Service Manager to start, stop or pause.

Data Transformation Services (DTS) provide an extremely flexible method for importing and exporting data between a Microsoft SQL Server installation and a large variety of other formats. The most commonly used DTS application is the "Import and Export Data" wizard found in the SQL Server program group.

Books Online is an often overlooked resource provided with SQL Server that contains answers to a variety of administrative, development and installation issues. It's a great resource to consult before turning to the Internet or technical support.

CHAPTER 4 SYSTEM DESIGN

4.1 PROCESS MODEL

4.1.1 USECASE DIAGRAM

A **use case diagram** is used 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.

File Module:

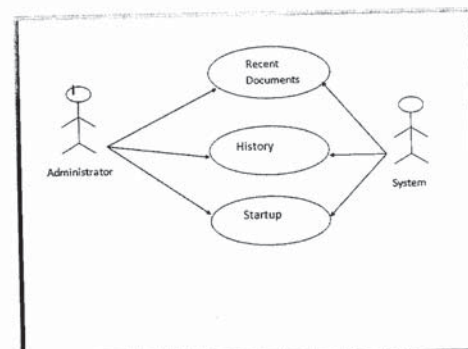


Fig 1.1: Use case diagram for File module

Protection Module:

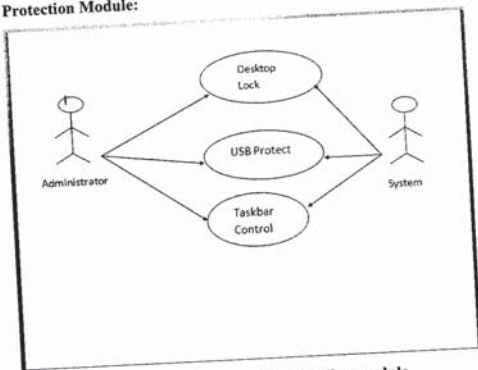


Fig 1.2: Use case diagram for Protection module

Control Module:

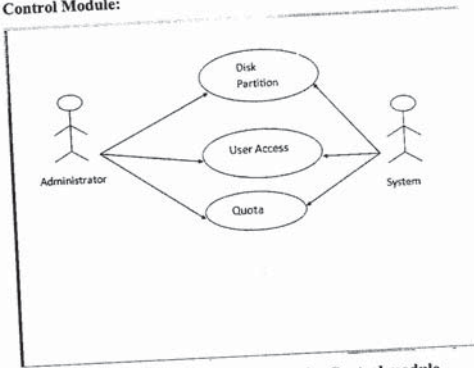


Fig 1.3: Use case diagram for Control module

Windows Module:

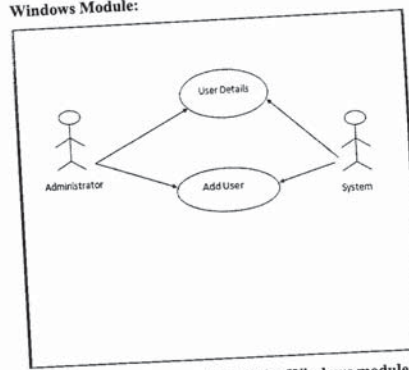


Fig 1.4: Use case diagram for Windows module

4.1.2 SYSTEM FLOW DIAGRAM

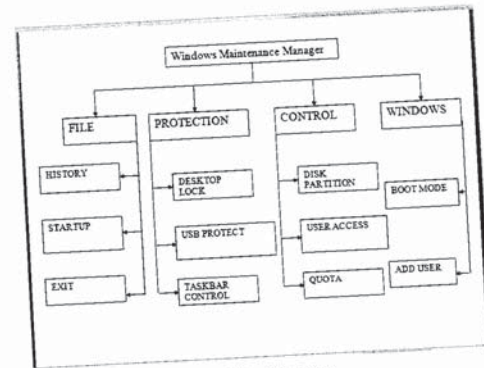


Fig 2: System Flow Diagram

**CHAPTER 5
TESTING**

5.1 TESTING AN OVERVIEW

Introduction:

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 phases of the system development. The feedback received from these testes can be used for further enhancement of the system under consideration. The testing phase conducts test using the Software Requirement Specification as a reference and with the goal to see whether the system satisfies the specified requirements.

Testing objectives are,

- Testing is a process of executing a program with the intent of finding an error.
- A successful test is one that uncovers an as yet undiscovered error.
- A good test case is one that has a high probability of finding an as yet undiscovered error.

Unit Testing:

Unit testing focuses verification efforts even in the smallest design in each module. This is also known as "Unit Testing". Since the proposed project has three modules, the testing is done individually on each module and every form designing. Using the test plans, prepared in design phase of the system development as a guide, important control paths are tested to uncover error with in the boundary of the proposed project. In this testing each module is found to be working satisfactory, as regard to expected output from the proposed project.

Test Case: Add User

Test Case ID	Test Case Description	Procedure	Input	Actual Output	Expected Output	Result
AU001	Data not Input	Leave the User Name Field Empty	Nil	Error Message	Error Message	Pass
AU002	Password not match	Password not match	*****	Error Message	Error Message	Pass
AU003	Length of password	Minimum length should be 8 characters	****	Error Message	Error Message	Pass
AU004	Already exists	User name already there	ACI	Error Message	Error Message	Pass

Table 1: Test case report for Add User Module

Validation Testing:

Software validation is achieved through a series of black box testing that demonstrate conformity with requirements. A test plans out lines the classes of testes to be conducted and test procedure defines specific test cases that will be used to demonstrate conformity with requirements.

Test Case: Login

Test Case ID	Test Case Description	Procedure	Input	Actual Output	Expected Output	Result
L001	Data not Input	Leave the User Name Field Empty	Nil	Error Message	Error Message	Pass
L002	Data not Input	Password Field Empty	Nil	Error Message	Error Message	Pass
L003	Wrong Password	Enter wrong password	*****	Error Message	Error Message	Pass

Table 2: Test case report for Login Module

Test Case: Startup Maintenance

Test Case ID	Test Case Description	Procedure	Input	Actual Output	Expected Output	Result
SM001	Data not Input	Leave the Name & address Field Empty	Nil	Error Message	Error Message	Pass
SM002	Wrong location	Give invalid location to access	Z:/ugam/	Error Message	Error Message	Pass
SM003	Wrong EXE	Give invalid EXE file	Ugam.exe	Error Message	Error Message	Pass

Table 3: Test case report for Startup Maintenance Module

Security Testing:

Security testing is important in system testing. The system in no way shall be accessible to unauthorized users. Testing is done to ensure that a user with respective permission can only view the various forms and reports presented by the project.

Test Case: Access Control

Test Case ID	Test Case Description	Procedure	Input	Actual Output	Expected Output	Result
AC001	USB protection Enable	Enable USB protection	Click Enable option	Enable USB protection	Enable USB protection	Pass
AC002	USB protection Disable	Disable USB protection	Click Disable option	Disable USB protection	Disable USB protection	Pass
AC003	Desktop Lock	Lock the desktop	Click desktop protection option	Lock the desktop	Lock the desktop	Pass
AC004	Start Menu Name	Change Start Menu Name	Ugam	Change Name value	Start Menu Name as Ugam	Pass

Table 3: Test case report for Access Control Module

CHAPTER 7

CONCLUSION AND FUTURE ENHANCEMENTS

CONCLUSION:

In today's world there is a necessity for implementing any system using a computer. Building cost estimate has met its objectives. It has minimized the problem arising due to the existing system. Efforts have been taken to make the system more user friendly and effective. The system has undergone various tests and the desired results have been achieved. Since, it is a flexible system, future improvements, modifications and expansions can be made on the system.

This project has developed with maximum care. It has been developed with an eye on expansion and flexibility at every stage of all the modules. This is developed to meet all the requirements of the user. This will replace the existing problems. This is more advantageous over the existing system as it takes into account the security and efficiency of the system.

FUTURE ENHANCEMENTS:

This system is developed such a way that additional enhancement can be done without much difficulty. The renovation of the project would increase the flexibility of the system, also the features are provided in such a way that the system can also be made better and efficient

- Any up gradation or change to the existing details can easily be done.
- Can add more modules.
- Portable: The entire application can be adopted in any new system.

CHAPTER 6

SYSTEM IMPLEMENTATION

System Implementation is the part of the software engineering life cycle, where, the design artifacts are converted to a working application. Coding is done in this stage using an apt framework and programming language, which would solve the specific problem the best way. Once the design is coded into a working application, it has to be verified, validated and tested in detail. The tested product if successful is deployed in the user environment.

Successful implementation may not guarantee improvement in the organization using the new system, but it is the crucial stage in achieving a new successful system and giving confidence on the new system for the users that will work efficiently and effectively. In this phase, we can build the components either from scratch or by composition. Given the architecture document from the design phase and requirement document from the analysis phase, we can build exactly what has been requested.

This phase deals with issue of quality, performance, baselines, libraries and debugging. The end deliverable is the application product itself. There are three types of implementation

1. Implementation of a computer system to replace a manual system.
2. Implementation of a new computer system to replace an existing system.
3. Implementation of a modified application to replace an existing one using the same computer.

Implementation of "Windows Maintenance Manager" comes under third category. At the end of the specific period, the system performance and the reliability are tested. The developed system is efficient because it has been repeatedly tested with the help of variety of test cases and can therefore be implemented successfully. Since the system has been developed using standard programming codes, rules and conventions, it is easily understandable and can be reused under similar circumstances.

CHAPTER 8

APPENDICES

APPENDIX 1: SAMPLE SCREENS

Welcome Screen:

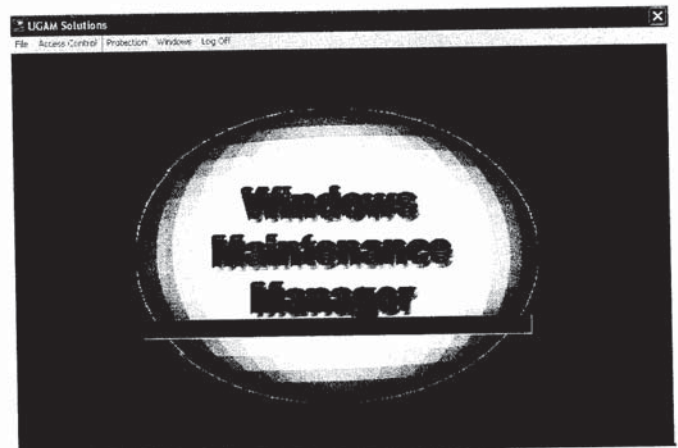


Fig 3.1: Screen shot for Welcome Screen

Login Screen:



Fig 3.2: Screen shot for Login Screen

Available System Details:

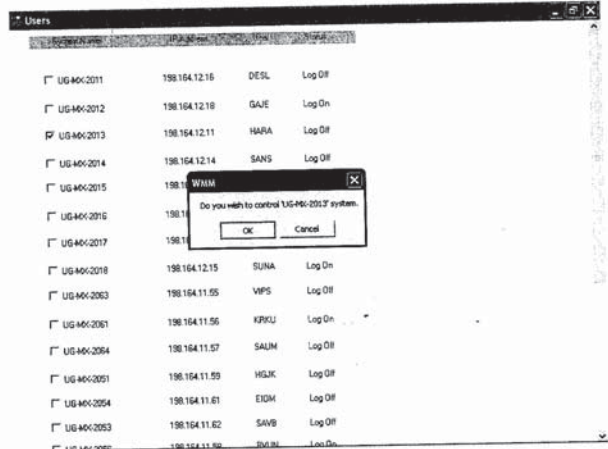


Fig 3.3: Screen shot for System details Screen

Internet History:



Fig 3.4: Screen shot for Internet History Screen

Startup Maintenance:

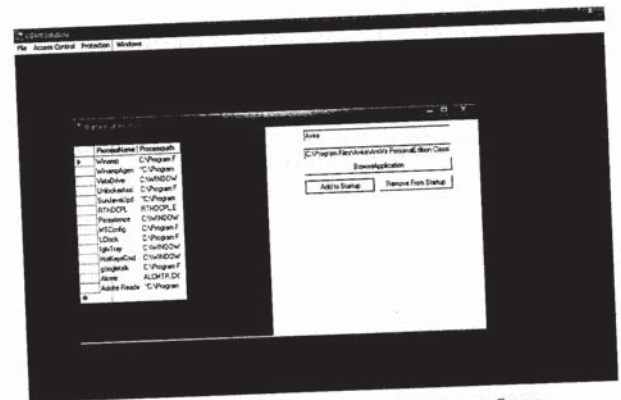


Fig 3.5: Screen shot for Startup Maintenance Screen

Taskbar Control:

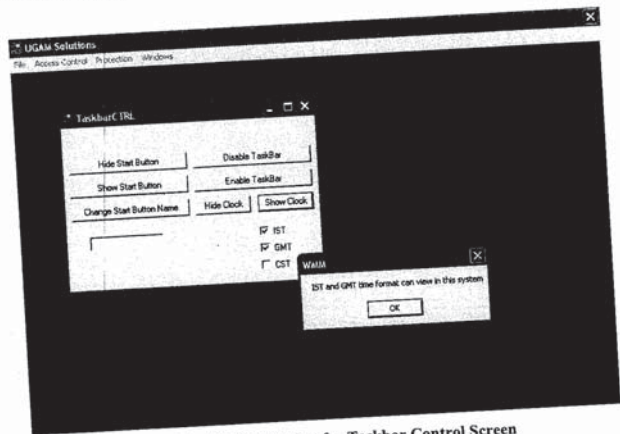


Fig 3.6: Screen shot for Taskbar Control Screen

USB Control:



Fig 3.7: Screen shot for USB Control Screen

User Details:

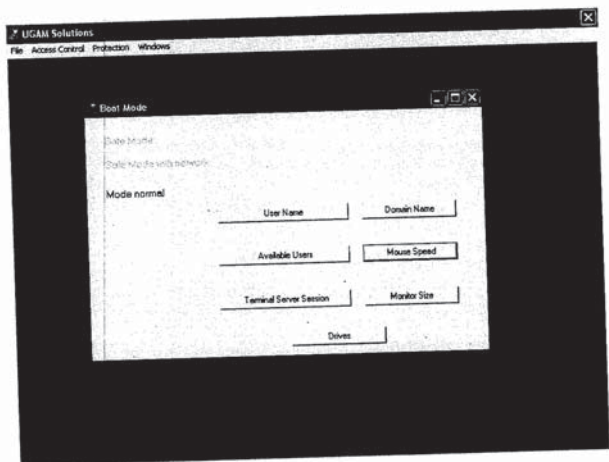


Fig 3.8: Screen shot for User Details Screen

Allocating Quota in Server:

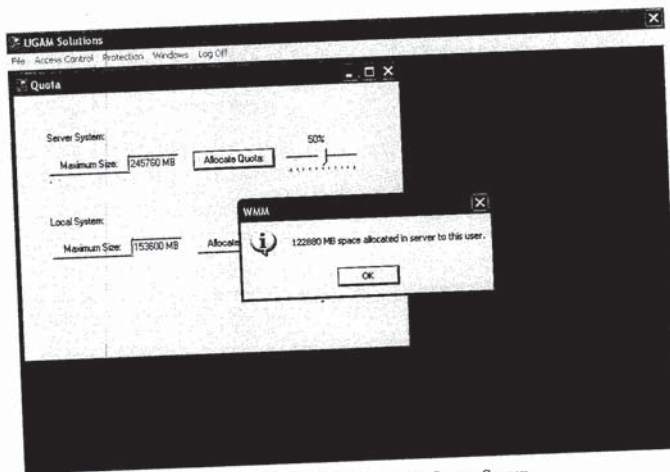


Fig 3.9: Screen shot for Allocating Quota in Server Screen

Allocating Quota in Local System:

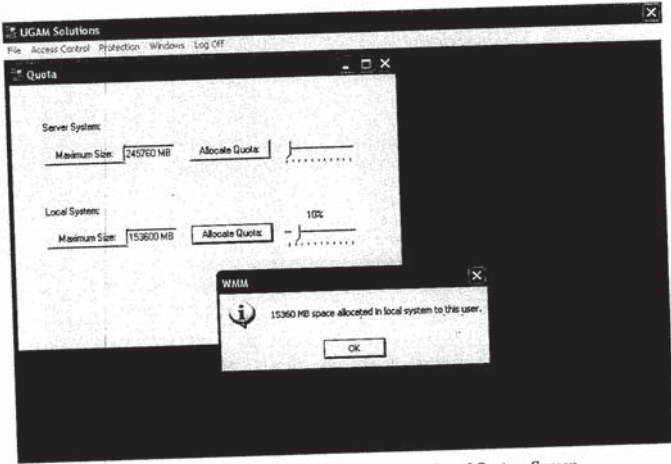


Fig 3.10: Screen shot for Allocating Quota in Local System Screen

Allocating Over Quota:

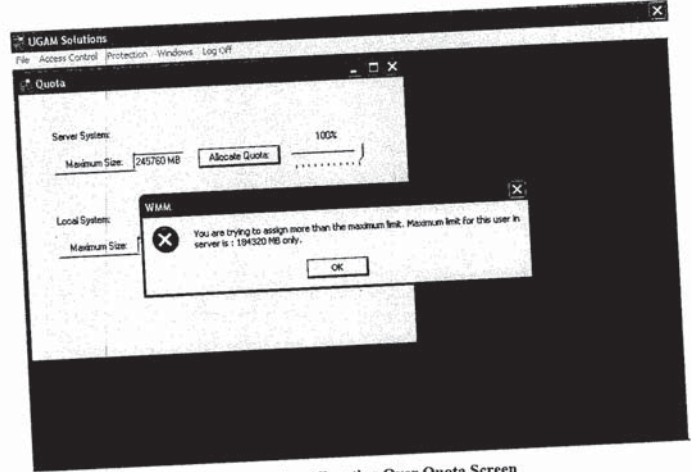


Fig 3.11: Screen shot for Allocating Over Quota Screen

Disk Partition:

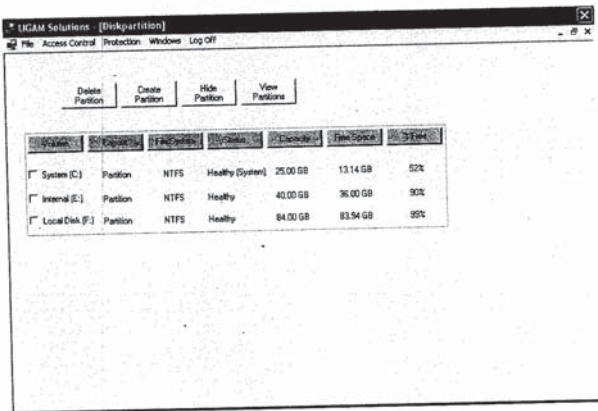


Fig 3.12: Screen shot for Disk Partition Screen

Hiding Partition:

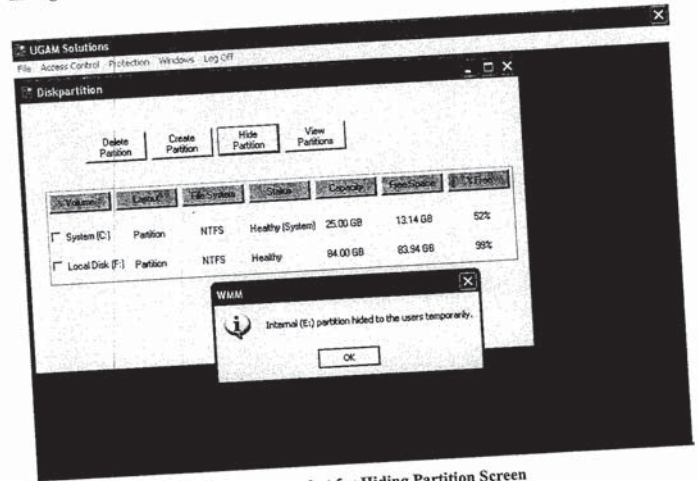


Fig 3.13: Screen shot for Hiding Partition Screen

Creating New Partition:

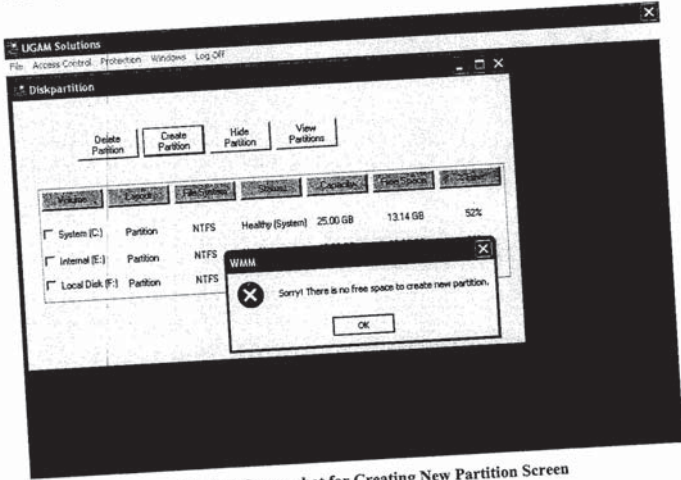


Fig 3.14: Screen shot for Creating New Partition Screen

Deleting Partition:

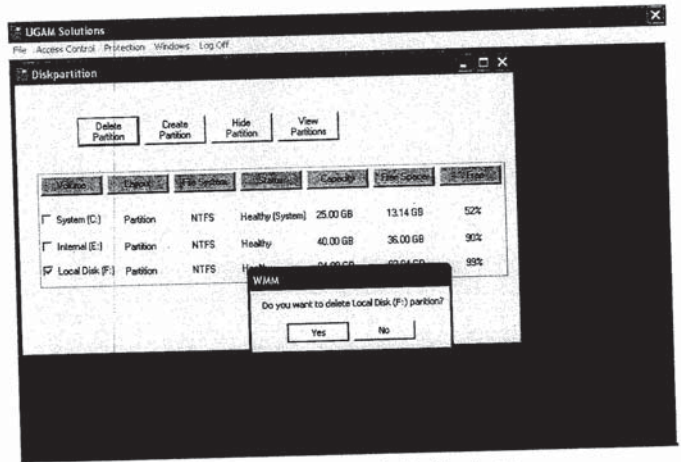


Fig 3.15: Screen shot for Deleting Partition Screen

User Access to New User:

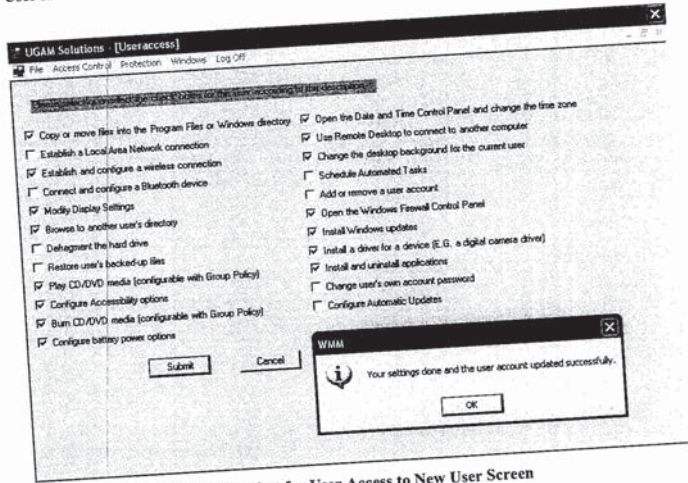


Fig 3.16: Screen shot for User Access to New User Screen

User Access to Existing User:

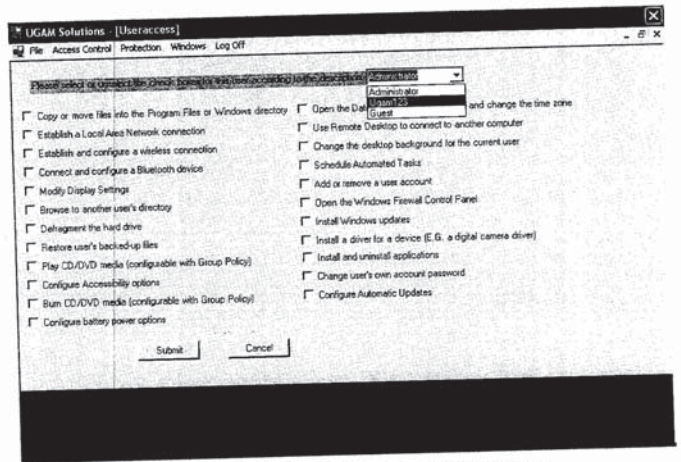


Fig 3.17: Screen shot for User Access to Existing User Screen

Add User:

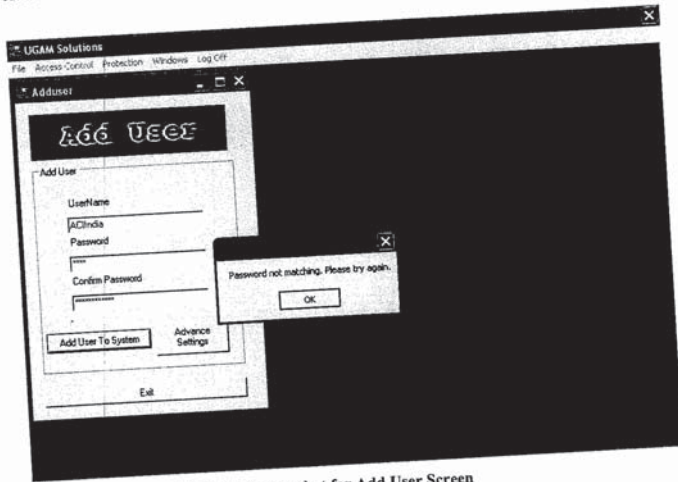


Fig 3.18: Screen shot for Add User Screen

Log Off:

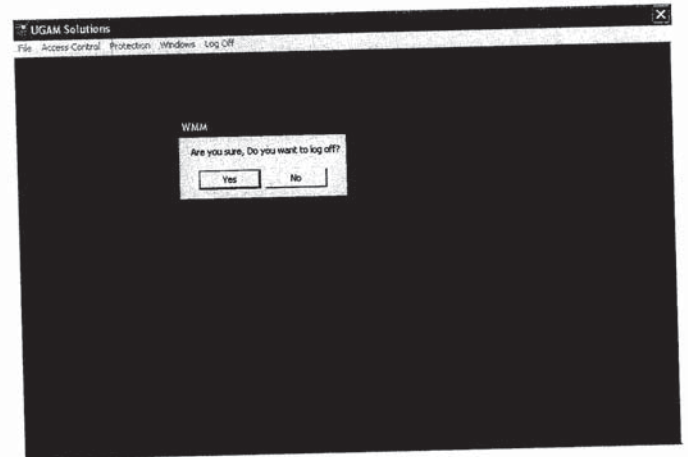


Fig 3.19: Screen shot for Log Off Screen

CHAPTER 9

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