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Piracy Control Serial Key Generation

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Abstract: *Software piracy has been a great issue that has been discussed over the past few years. A lot of big companies and software developers have lost a lot of money due to the abundance of software piracy. This paper "piracy control serial key generation" is mainly used to protect the software piracy. In the product key comes with the software that you by which include hard disk id and the processor id of the buyer's computer which is encrypted using AES algorithm.*

Keywords: *Piracy, Abundance, Serial Key.*

I. INTRODUCTION

Software Piracy is a term for the illegal duplication of copyrighted computer software. Software piracy involves the use, distribution of the software without the permission of the software owner. Software piracy has been a great issue that has been discussed over the past few years. A lot of big companies and software developers have lost a lot of money due to the abundance of software piracy. There are several types of software piracy that are discussed below.

TYPES OF SOFTWARE PIRACY

- **Soft Lifting**

Purchasing a single licensed copy of the software and loading it onto several computers in violation of license terms. An example of this would be sharing software with friends, co-workers, and others.

- **Uploading and Downloading**

Making unauthorized copies of copyrighted software available to end users connected to online service providers and/or peer-to-peer networks via the Internet.

- **Unrestricted Client Access Infringement**

Allowing clients of an organization to freely access software on the organization's network server in violation of the terms of the license agreement.

- **Hard Disk Loading**

Installing unauthorized copies of software onto the hard disks of personal computers, often as an incentive for the end user to buy the hardware from that particular hardware dealer.

- **Commercial Use of Non-Commercial Software**

Using educational or other commercial-use-restricted software in violation of the software license.

HOW PIRACY AFFECTS

Pirated software hurts everyone — from software developers to retail store owners, and ultimately to all software users. The illegal duplication and distribution of software have a significant impact on the economy, costing. In addition, companies facing the loss of revenue due to piracy must pull resources from the development of new technology, and devote it to protecting both their software, and its legitimate users. In the end, software piracy is unfair to everyone.

RISK FACTORS USING PIRATED SOFTWARE

- **Quality** - It often lacks key elements and documentation, and comes with no warranty protection or upgrade options
- **Viruses** - Untested, counterfeit discs may be infected with viruses that will damage your hard drive or cripple your network, without the benefit of technical support
- **At Work** - copying or using the illegally copied software at work puts the entire company at risk for copyright infringement.

Pirated software that is either dysfunctional or that contains viruses wastes company resources and drives up IT costs.

The proposed piracy control serial key generation a product key comes with the software that you buy. Before fully installing the software on your computer, you must provide the specific code key that came with the software. After providing the product key, you can run the software on your computer. The product key also locks after it has been used. i.e. machine dependent lock. This is so that the software cannot be installed on other computers after it has been installed on one. You will have to call the manufacturer of the software to be able to use the code key again. This process is done by encryption which uses various encryption methods

II. RELATED WORK

- ❖ In [1], The authors have used product key based on the MAC address of the system.
- ❖ In [2]i.e., "piracy prevention methods in software business "the authors have analyzed various issues and techniques to overcome the software piracy.
- ❖ In [3], The authors have used a programming language to develop the code , this technique converts the plain code to an encrypted form that cannot be understood by the hacker.

III. PROPOSED METHODOLOGY

Piracy control serial key generation is used to prevent software piracy. Piracy control serial key generation is an application where the software developers and software companies can generate unique serial keys for buying software product using buyer's processor id and hard disk id. In this, a product key comes with the software that you buy. Before fully installing the software on your computer, you must provide the specific code key that came with the software. After providing the product key, you can run the software on your computer. The product key also locks after it has been used. i.e. machine dependent lock. This is so that the software cannot be installed on other computers after it has been installed on one. You will have to call the manufacturer of the software to be able to use the code key again. This process is done by encryption which uses various encryption methods. Here AES algorithm is used.

AES ALGORITHM

- Step 1: Input plain text
- Step 2: Input password
- Step 3: check if password length is equal to 8
- Step 4: if valid then
 - Choose bits
 - if 128 then
 - 10 cycles
 - else if 192
 - 12 cycles
 - else if 256 then
 - 14 cycles
 - end if
- Step 5: Start Round
- Step 6: Add Round Key
- Step 7: use Bitwise XOR
 - Add Sub bytes
 - Non linear Substitution
 - Shift Rows
 - left shift
 - Mix columns
 - Transposition of last 3 rows
 - Repeat step1
 - Convert to base 64 string

Product Function

- User Management
- Registration
- Customer Request Management
- Customer Details
- Generate Authenticate Key

- Generate Serial Key
- Bank Master
- Product Master
- Decryption
- Report

Module Description

User Management: The User management module will be used for the logins to the software. The ADMIN ID and Password will be entered to gain access. And other accounts can login to gain access to the software.

Registration: This module will be used by the client to register this request by entering details about his personal information and payment information.

Customer Request Management: This module will be used by vendor side to manage the client request and mail the product key to the client.

Customer Details: This module is used to keep an account of customer details.

Generate Authenticate Key: This module is used to get authenticate code by combining processor id and hard disk id of customer's computer.

Generate Serial Key: This module is used to generate a serial key by using AES algorithm.

Decryption: This module is used for decryption of serial key.

Bank Master: This module is used to by admin to input the Bank names.

Product Master: This module is used to upload a software product to the server.

Report: This module is used to create reports from data collected from the database using specific conditions.

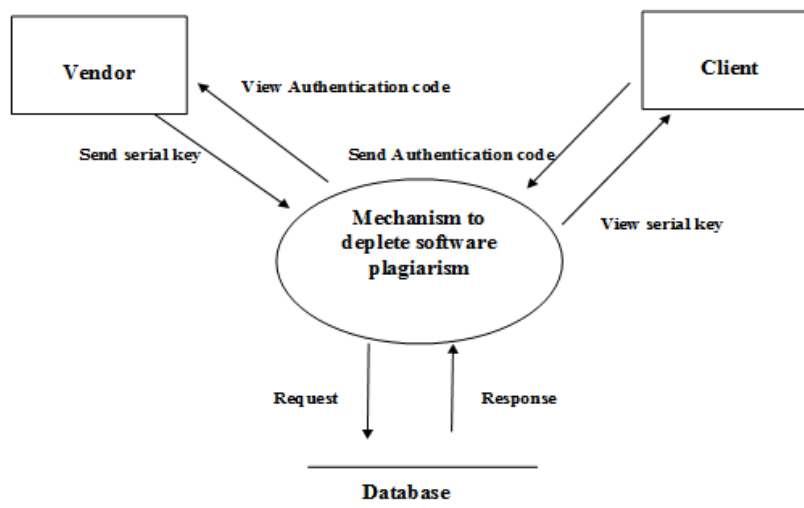


Figure 1: Context Flow Diagram

In the above figure 1, the client will request a product, during that time the client's computers hard disk id and processor id will be sent to the vendor without knowing to the client. The vendor will generate a serial key using AES algorithm and that will be sent to the client. The client will use the serial key now the product gets activated.

IV. ADVANTAGES AND FUTURE ENHANCEMENT

The Main Purpose of the Proposed Technique is:

- ❖ To improve the efficiency.
- ❖ To provide the user-friendly environment.

Future Enhancement of this Work is:

- ❖ To upgrade the software for use on the mobile platform.

V. CONCLUSION

“Piracy Control Serial Key Generation” is an automation software for generating product key/serial key based on encryption. It is used generate unique product key which will be unique to each computer. The scope of the project is to avoid privacy issues. The simplicity of this software makes the scope high

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