

SOFTWARE PIRACY PROTECTION

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ABSTRACT

Software piracy has been a major issue in software industries. Piracy has become so prevalent over the Internet that it poses a significant threat to software product companies. With the help of malicious codes and programs, hackers or an intruder can gain access to the software system and steal the information. Piracy by users is generally believed to harm both software firms and buying customers. This project is intended to protect software from piracy and assures that software is being accessed only by authenticated users.

Keywords: Analysis, investigation, research.

1. INTRODUCTION

Software is a requirement in technological development. Software piracy becomes a significant economic concern in today's life hence software anti-piracy is important. Most computer users today know that unauthorized use and duplication of software is illegal, and many users show negligence towards the importance of treating software as valuable Intellectual Property. Piracy has become so prevalent over the Internet that it poses a significant threat to software product companies. Pirated software being easily available on the Internet through some websites and financially weak people cannot afford to buy software were the major reasons behind the increasing software piracy issue. Software piracy is still growing globally because it is cheap and easy to copy. The effects of this growth are devastating. With the help of malicious codes and programs, hackers or an intruder can access the system and steal the information. Software piracy involves using or distributing information without having received expressed permission from the software author. Hence there is a need to protect the data and software products from being plagiarized.

This project is intended to maintain software copyright protection and assured that it is being accessed only by authenticated users. The major problems of software piracy are the high risk of viruses and malware infection to the computer system which may result in harmful system security and data corruption among others. The effect of piracy in software development industries has greatly increased which reduced its efficacy.

Now a day's more users download the software without having permission for the owner of the software, however, the software has the product key the unknown person also finds the key and it's used that software. Our way of implementation uses MAC based authentication and generate a product key, It checks the product key corresponds MAC address which is unique on every machine. If it is correct the software is installed, else the software is not installed in the system. Our system allows only authorized person to access software.

2. METHODOLOGY

2.1 Online registration

Users have to first register on portal by filling details about user like email, phone no, name etc.

2.2 PC Id Reader

The software reads your pc mac id.

2.3 Product Id Generation

The system generated a unique user id by applying an algorithm to the acquired mac id.

2.3 Key Generation

System generated a secret key every user needs to access software and perform any operation with it

2.4 Data matching And Authentication

System check the secret key and username along with password as well as device id to give access to logged in user.

2.5 Authentication

If the key matches the software works as a full version or is locked down.

3. MODELING AND ANALYSIS

The user has to register on the device. After that, the device will read the browser id and generate a unique user id. After that step, the user has to login again with the same id and request a serial key which is provided by the device itself. The device will

match all the required information and if all the information is correct then it allows the user to use the software, and if any of the information or any key is not getting matched then it will show an error message to the user.

If there would be no protection mechanism then anyone could copy and distribute the software and thus steal the copyright ownership. If the software gets pirated then it would lead to a loss of revenue and can have a detrimental impact on the company thus this system is useful in making revenue. No one can copy the software or share it as it requires an activation code that is different for each individual. Highly robust and secure system.

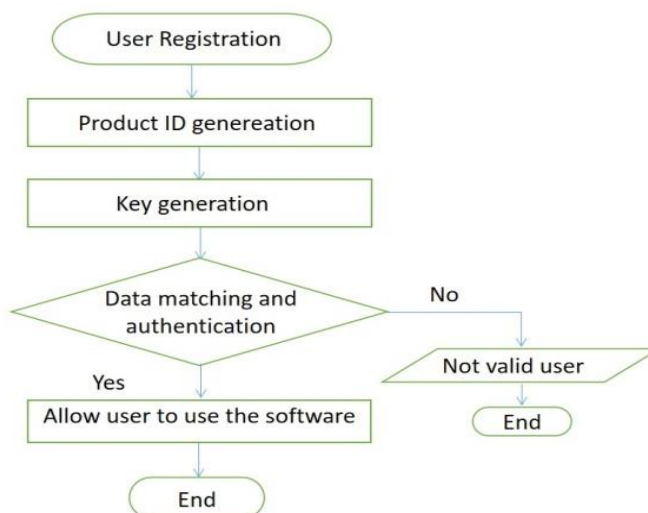


Figure 1: Data Flow Diagram

4. RESULTS AND DISCUSSION

Most of the people around the globe in universities are using pirated software. Statistics of the present study show that 67.3% of people do use pirated software. Large number of activation of the software is done through cracks and other illegal activation methods. The phony software activation key and key retrieved from old laptops are used as an alternate for showing the software is original, while in the actual original software, it is allowed only to those users who bought the software license. Piracy of software is a serious crime that most people do knowingly or unknowingly using fake activation keys. The statistics of the study conducted by various organizations show that the activation by online payment is on the lower side at 7.3%. Buying CD/DVD from the market is still less than 38.2% compared to activation by cracking the software which is at 54.5%. Surveys show that 81.8% of the participants do not buy the software online and pay for it, while only 18.2% have the facility to buy the software online. The total number of pirated software was identified is far greater in the survey. As per Surveys to the survey, 49.1% of participants admitted that they have more than six pirated software. remaining participants are not exempted from software piracy it is just that they only use less number of pirated software, and their ratio is 18.2% for 4–6 number of pirated software and 32.7% for 1–3 number of pirated software. Observations of different studies show that the existing piracy is huge in numbers and a significant number of people use pirated software.

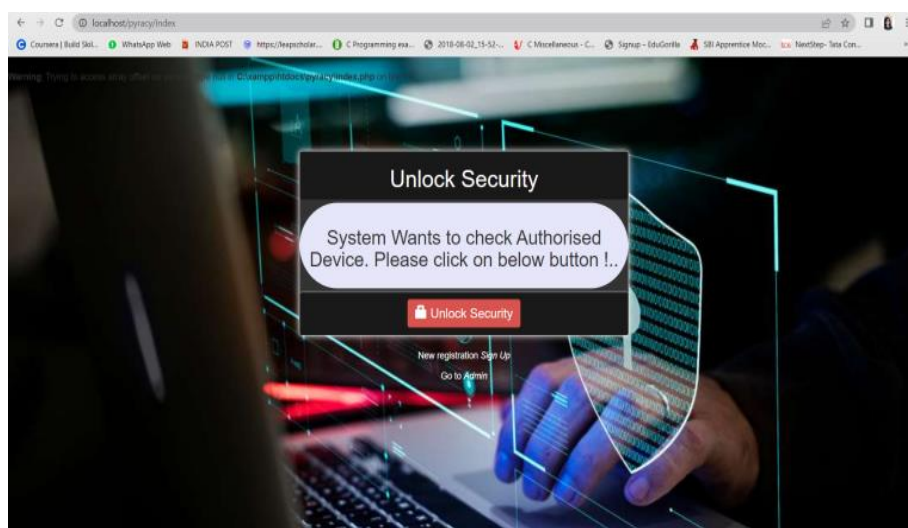
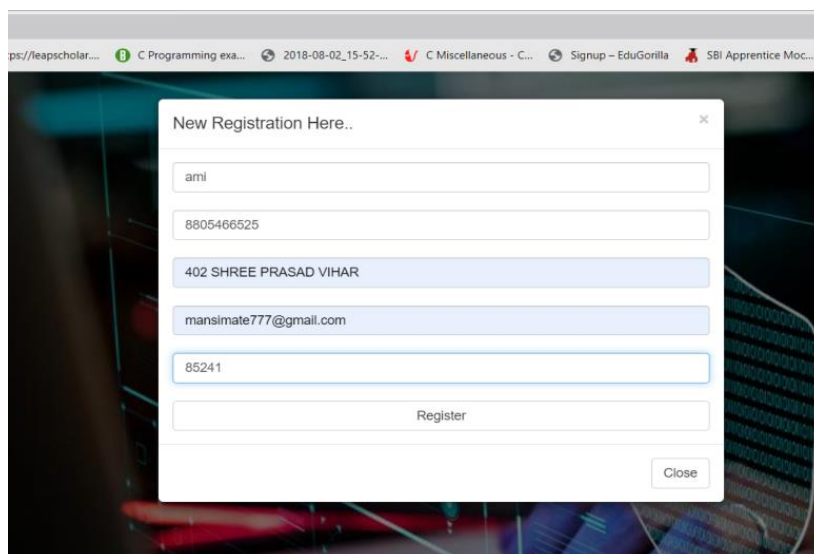


Figure 2: Security Page



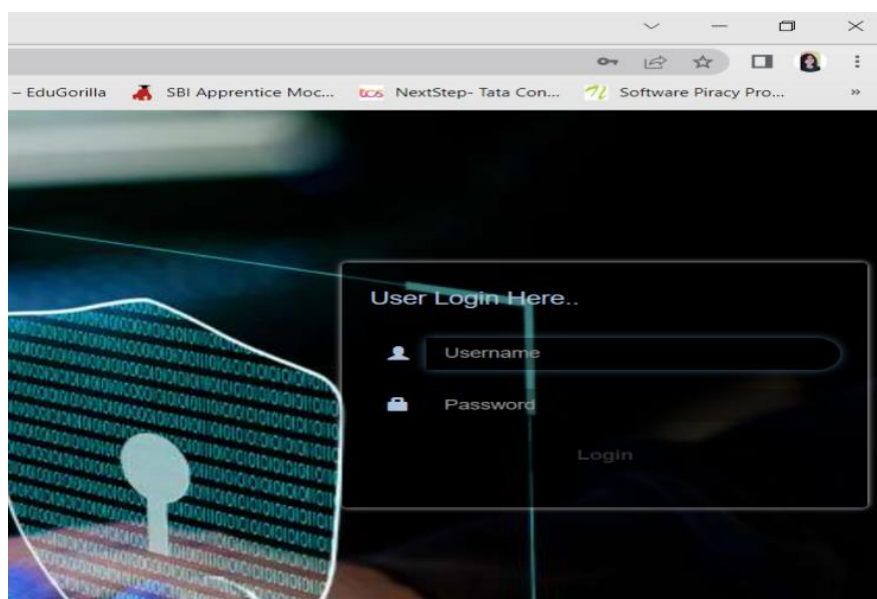
A screenshot of a web browser showing a 'New Registration Here..' dialog box. The dialog box contains the following fields: a text input with 'aml', a text input with '8805466525', a text input with '402 SHREE PRASAD VIHAR', a text input with 'mansimate777@gmail.com', and a text input with '85241'. Below these fields is a 'Register' button and a 'Close' button in the bottom right corner. The background of the browser window shows a blurred image of a person's hand holding a smartphone.

Figure 3: Registration Page



A screenshot of a web page titled 'Add Your Device'. It features a text area containing the text: 'Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/99.0.4844.84 Safari/537.36'. Below the text area is a red button labeled 'Add Device'.

Figure 4: Device Recognition



A screenshot of a web browser showing a 'User Login Here..' dialog box. The dialog box contains two input fields: 'Username' and 'Password'. Below these fields is a 'Login' button. The background of the browser window shows a blurred image of a person's hand holding a smartphone.

Figure 5: User Login

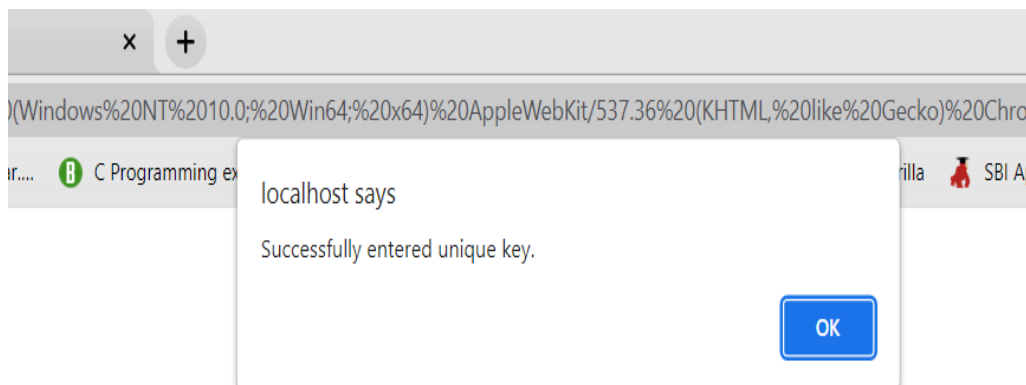


Figure 6: Dashboard Authentication Checking Successful

5. CONCLUSION

Software piracy is an ever-increasing problem in the modern-day software industry. In the era of evolution in software development and the Internet, software piracy has become a huge concern for many software companies. Software companies are confronted with humungous losses in revenue due to the piracy of software. Pirates make a huge sum of money by doing business with pirated software, and they do not think what they are doing is a crime. General users and the software community are not well aware of this serious crime. Often users and consumers think that it is not an issue that they should be concerned about. If an organization is using pirated software, there is a risk of failure of the software, and it might put the organization at a big loss of risk. Open-source software is available in the market, but some of this software needs a proper license from the concerned owner agencies and the user needs to pay for it. A large number of people cannot afford these license charges which become a burden on them. So they opt for piracy of the software. On the other hand, people use crack software (registered by the user in an unfair way) for their needs as they do not have enough money to pay for licensing the software, although they are aware of the real problems that pirated software has which include upgrades are not available, no assurance of quality and reliability, no technical support, no instruction manuals or documentation for debugging, exposure of network to security breaches, and many others.

The pirated software lacks the technical support from the organization which is developed. Because of these reasons, software piracy became a major concern—more emergent due to the extravagant development of the software industry and the availability of software on the Internet. This paper elaborates on the awareness of software piracy, the policy of the licensed software, and user perspective regarding the original licensed and pirated software. A questionnaire of about 38 questions was given to the students, faculty members, and administrative staff of different intuitions, and after the collection of data, an analysis was performed.

6. REFERENCES

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