**1.0 Introduction**

Back in the day, people often commit crime such as kidnapping or taking something important things from others and the victims who desperate to gain back their beloved people or belonging demanded to pay some amount of money. This is definition of ransom in the early of the day. In modern days, when internet and networking being too advance, people misuse the technologies to do crime. From this, ransomware born. Ransomware is a malicious software or malware that able to encrypt or lock data in the affected victim’s computer. In order to get back the data, victims forced to pay the ransomware but, there’s no guarantee that the data will be return. Once the ransom is paid, the attackers send a decryption key to restore access to the victim’s data. The ransom can range from a few hundred dollars to millions of dollars. Typically, payment is demanded in the form of a crypto currency, such as bitcoins.

**2.0 Analysis**

2.1 Malware:

Malware is Malicious Software, which are programs that act without a user's knowledge and deliberately or purposely alter the computer's operations. Malware divided in three general types which is, computer virus, worms, trojan horse and spyware.

2.2 Computer Virus:

A potentially damaging program that affects or infects a computer or mobile devices negatively by altering the way computer or devices wors without the user’s knowledge or permission. Once the virus infects the computer, it can spread throughout and may damage files and system software, including the operating systems. Computer Viruses can spread in many ways and one of the easiest ways to spread it is by file sharing through the internet like sharing files using email.

2.3 Worms:

A program that copies itself repeatedly, for example in memory, using up resources and possibly shutting down the computer, device or network.

2.4 Trojan Horse:

A program that hides within or looks like legitimate program. Unlike a virus or worm, a Trojan Horse does not replicate itself to other computers o devices. It usually appears to be a game or utility program. It cannot replicate themselves. It must be downloaded and installed.

**3.0 Recommendation**

There are some steps that we can take to handle ransomware attack and this called as security measures. Security measures is precautionary measures taken towards possible danger or damage.

3.1 Antivirus Program

Antivirus program is a software use to protect computers against viruses by identifying ad removing any computer virus found in memory, storage media or incoming files. Some examples for antiviruses is Mcfee VirusScan and Norton AntiVirus.

3.2 Anti-Spyware / Spyware remover

A program that detects and delete spyware and other similar program by identifying and removing any spyware found in memory, storage media and incoming files. Examples for anti-spyware is Spyware Blaster and Spy Sweeper. Anti-Spyware can prevent from privacy invasion. Slowdown of computer or computer crash.

3.3 firewall

Hardware or software that protects a network’s resources from intrusion b users on another network such as the Internet. Firewall can protect network resources from outsiders and to restrict user’s access to sensitive data.

3.4 Human Aspects: Awareness

Make a routine to check update from new virus, worms or other malicious threat. Had proper handling of computer and information.

**4.0 Conclusion**

Ransomware attacks is a serious issue and as a user, we need to take note of it. We cannot just put all the responsibilities to vendor such as Microsoft or Apple to protect our data in our computers or devices. We as users need to have extra precaution steps or security measure such as installing necessary antiviruses or any other software that can protects our computers and devices. Besides that, as a user we should alert about tricks how malware can get into our computers and devices. Do not simply download files from unknown source or install software from others than official developers.

**5.0 Reference**

* https://link.springer.com/chapter/10.1007/0-387-34799-2\_28 (computer virus)