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15035

Answer

R3

One important difference between symmetric and public key systems is that in symmetric key systems both the sender and receiver must know the same secret key. In public key systems, the encryption and decryption keys are distinct. The encryption key is known by the entire world (including the sender), but the decryption key is known only by the receiver.

R6

Each user wants to communicate with N other users, and then each pair of users must have a shared symmetric key.

There are N\*(N-1)/2 such pairs and thus there are N\*(N-1)/2 keys. With a public key system, each user has a public key which is known to all, and a private key.

There are thus 2N keys in the public key system.

R10

No! A hash may not be reversed, which mean it cannot be decrypted .

By design a hash algorithm has no inverse, there is no way to get the original message from the Hash. This is good news, turns out we have some really great applications for this type of function . we can validate message , we can securely store password , and we can quickly determine if a massge or file has been tempered with.

When using a public known hash function password hashes, makes sure to always use a slat ot shared secret . failure to do so will make your storage scheme susceptible to a rainbow table attack . A rainbow table allows a cracker to quickly match a list of hashes with a table of previously computed hash value and correlated passwords.

Essay

 The movie rental industry has become one of the most competitive industries, and is largely dependent on advanced technology and content rights management. The movie rental industry has made significant shifts from DVD-delivery services to online video streaming services. This case focuses on analyzing Netflix’s objectives, strategies, external environment, and its strengths and weaknesses.

Since launching online rental services in 1999, Netflix’s successful strategy and business model have helped the company to evolve into a world’s largest online entertainment subscription service and change the way people used to rent movies and watch TV shows. Throughout 2010 and beginning of 2011, Netflix experienced enormous growth: number of subscribers doubled, revenues climbed up from $445 million to $777, etc. However, Netflix has always been known as a rapidly evolving company that is adjusting to the changing market quickly. In mid-year, 2011 Netflix announced that it is going to separate its online streaming and DVD-by mail services. Along with the news about separation, Netflix announced that it would charge those services separately at the price of $7.99 each, in comparison with the price of $9.99 that it is used to charge for both: streaming and DVD’s.

Netflix is an innovative way of providing convenient ways for consumers to watch both movies and tv shows on their own time. At first Netflix created a way for movie watchers to make a list of movies that they wanted to rent and they would have them mailed to their house. Once the movie was mailed back and returned was when the next one would be sent out. The dvd would arrive with an addressed envelope to return the movie for convenience. Netflix also had a website that viewers were able to access from a computer that allowed them to stream certain movies and shows but not all of them. This helped both aspects of their services to be used and desired by the consumer. With technology advancing so rapidly as it has in the past decades, other companies began providing similar services. This lead to direct competition for Netflix by providers such as Apple’s iTunes store, Amazon Instant Video, Hulu.com, VUDU.com, Best Buy Cinema Now, Sony PlayStation Network, and Google’s YouTube. In order to stay competitive, Netflix needed to increase their convenience of their service and that’s what they have been doing. Netflix can keep modifying their already successful business model by continuously adding convenience to their service. They have been doing so by focusing heavily on streaming movies and shows via different platforms such as their website and mobile app. Another method they have been using and should continue to use is implementing their service built into smart TV’s. By doing this they are opening up to a much larger market. Almost all homes have TV sets in almost every bedroom. Not all age demographics are skilled and knowledgeable in the app world which I think is the most effective and convenient way of providing this type of service. Parents who may not have Netflix downloaded on their phone will find it very beneficial to have access to a library of movies and shows built into their TV sets that are easily accessible.   
 Netflix should continue to push their service in the app world and stress that streaming videos is now their main method of service. Smart phones are now more readily available then they ever were and it takes just a few seconds to download apps. Netflix is an established brand name in the movie rental industry, especially for my generation and on. The app should provide notifications or alerts on the consumer smart phone. Perhaps suggestions of movies or shows they would like as well as alerts on new movies or tv show series that are now available. One of the flaws about Netflix is how up to date their selection is. It normally takes quite a bit of time for new releases to be available through Netflix. Therefore, consumers tend to use Netflix to watch older movies that have been out of theaters for a while. If viewers knew that Netflix was one of the first services outside of the movie theater to have new releases available to watch, they would most likely be “hungrier” to seek out and stay up to date with Netflix.  
 Netflix should develop a strong team to develop and promote their app for smart phones and tablets. It is an app that requires the internet to be online to run. If there was a way to save a movie for a certain amount of time to watch during a period where the viewer does not have cell service. This would allow people who are traveling by plane or perhaps riding the subway to view movies or shows. Another step could be to link users Netflix accounts to their facebooks’. By doing this, after a viewer watches a movie it could be posted on their social media to

