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THREAT ASSESSMENT MATRIX
FOR STUDY PLACE

INTRODUCTION

Study Place is a fictitious company- Learning Portal, where students enroll in the program, learn new courses according to their requirements and develop their skills depending on the courses they enroll in. Teaching faculty are registered in the Study Place platform where they teach various courses. It is a platform that allows instructors to build online courses on their preferred topics.
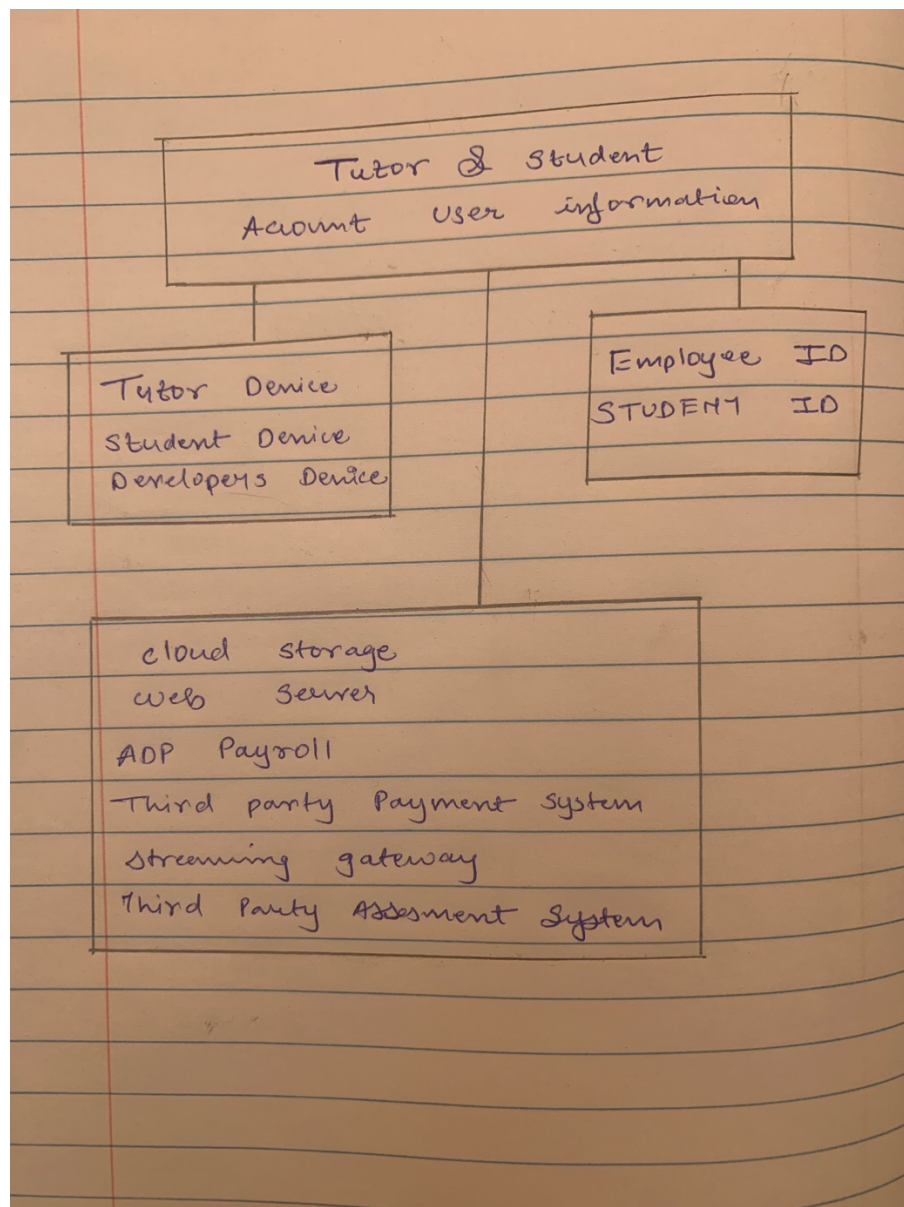
Threat Assessment Matrix

P – Probability
C – Consequences
R : Risks = P * C

Assets	Integrity	Availability	Theft	Confidentiality	Total
Employee Id Card	R=4 P=1 C=4	R=3 P=1 C=3	R=2 P=2 C=1	R=6 P=3 C=2	15
Student Id Card	R=6 P=3 C=2	R=3 P=1 C=3	R=2 P=2 C=1	R=5 P=5 C=1	17
Tutor device	R= 3 P=3 C=1	R= 2 P=2 C=1	R=4 P=2 C=2	R= 2 P=1 C=2	11
Student Device	R=6 P=3 C=2	R=4 P=2 C=2	R=6 P=2 C=3	R=3 P=1 C=3	19
Developer device	R=4 P=2 C=2	R=2 P=1 C=2	R=3 P=3 C=1	R= 4 P=2 C=2	13
Cloud Storage	R=3 P=1 C=3	R=6 P=3 C=2	R=3 P=3 C=1	R=3 P=1 C=3	12
Web Server	R=6 P=2 C=3	R=4 P=4 C=4	R=4 P=2 C=2	R=4 P=2 C=2	18
ADP Payroll	R=6 P=2 C=3	R=4 P=2 C=2	R=2 P=2 C=1	R=4 P=2 C=2	16
Third Party Payment	R= 6 P=3 C=2	R=8 P=2 C=4	R=1 P=1 C=1	R=3 P=1 C=3	18
Streaming Gateway	R=4 P=2 C=2	R=6 P=2 C=3	R=3 P=3 C=1	R=1 P=1 C=1	14
Third Party Assessment	R=2 P=2 C=1	R=3 P=1 C=3	R=4 P=2 C=2	R=4 P=4 C=1	13

Assessment in DESCENDING order

ASSESSTMENT	TOTAL
Student Device	19
Web Server	18
Third Party Payment	18
Student Id Card	17
ADP Payroll	16
Employee Id Card	15
Streaming Gateway	14
Developer device	13
Third Party Assessment	13
Cloud Storage	12
Tutor device	11

Confidentiality

Confidentiality: Threat is the risk of information exposure to uninvited parties. This occurs when competitors or news organizations obtain firm information that was not intended for them.

Employee Id Card: Since access cards are readily lost, the likelihood of it happening is great, but the impact is high because there is essentially personal information on it.

Student Id Card: The risk of it happening is high because access cards are frequently stolen, but the consequence is high

Tutor Device: The probability is very low compared to others where the risk ratio is much higher and for a tutor, the device is at a very low risk of losing data or being stolen.

Student Device: The probability of leaking data is minimal as information cannot get a leak. As it is a student device, not a developer account.

Developer Device: The probability of leaking data is moderate, it has the best-secured connection with software to establish the process.

Cloud Storage: The likelihood of an attack is not so great due to the presence of extremely sensitive material, including all of the source code and all of the backups. Since practically all confidential data is stored in the cloud, the impact on confidentiality is equally significant.

Web Server: Given that it is extremely well protected by firewalls and the proper settings, the probability is medium. Since only a small amount of sensitive information is stored on the web server, which is largely used to host the website, the impact on confidentiality is similarly minimal but might lose data sometimes at high risk.

ADP Payroll: Since it is very secure is not secure sometimes, the likelihood of an attack is quite minimal. However, the consequences are severe because it would give access to every employee's bank account information and salary information.

Third-party payment: Due to the lack of credit card information but the availability of all other information, the attack's likelihood is high but its impact is just moderate.

Streaming Gateway: Data Threat is not high but minimal sometimes firewalls are not encrypted to handle the situation.

Third-Party Assessment: Sometimes the probability is not higher of losing data through assessment.

Integrity

Integrity: Threat is the risk that an asset will be maliciously altered without the required authority. It also covers the asset's destruction.

Employee Id Card: The likelihood of it happening is high because losing the card is very high too, and the impact is moderate.

Student Id Card: The impact would be not minimal because it is possible to modify the card to prevent the employee from entering, but the possibility of it happening is significant because losing the card is highly likely.

Tutor Device: Impact is moderate and not high through the secured device with the secured operating system.

Student Device: Impact is very high compared to the tutor device, As the device may get lost or stolen and the data will get a leak.

Developer Device: The probability is moderate device is secured with the secured operating system through a firewall service which cannot be accessed unless it's a developer.

Cloud Storage: Given that it is properly configured and well-protected inside firewalls, the likelihood of it occurring is medium. Given that the content could be changed or removed, the impact is severe.

Web Server: The likelihood is high because it is adequately not defended, the impact is high because they may change the website, which is the company's primary sales channel.

ADP Payroll: Since it is a very secure external service and the company only serves as a payment gateway, the likelihood of an attack is quite moderate. Consequently, the risk is likewise not very low.

Third-party payment: Although using a third-party payment gateway can have an impact on the data, the risk is generally minor because most third-party services are provided by well-respected businesses.

Streaming Gateway: Data Threat is not high but minimal sometimes firewalls are not encrypted to handle the situation.

Third-Party Assessment: Sometimes the probability is not higher of losing data through assessment.

Availability

Availability: When an asset is maliciously barred from authorized usage, there is a threat. As a result, the item is no longer available for the organization to use.

Employee Id Card: Given how simple it is to misplace them, become inaccessible, and suffer the consequences of not having access cards, this is quite likely to occur.

Student Id Card: The impact would be minimal because it is possible to modify the card to prevent the employee from entering, but the possibility of it happening is significant because losing the card is highly likely.

Tutor Device: Impact is moderate and not high through the secured device with the secured operating system.

Student Device: Impact is very high compared to the tutor device, As the device may get lost or stolen and the data will get a leak.

Developer Device: The probability of leaking data is moderate, it has the best-secured connection with software to establish the process.

Cloud Storage: The likelihood of it happening is medium because it is highly protected by firewalls and up-to-date access systems, but the impact is high because if it were unavailable, the streaming service would be useless.

Web Server: The likelihood of it happening is moderate because the web server is adequately protected by firewalls and is always accessible, but the impact would be severe because clients would be unable to order any medications without the web server, which would affect business operations.

ADP Payroll: Since it is a well-maintained external service, the likelihood of it happening is low. However, the impact would be moderate because it would result in delays in processing employee salaries.\

Third-party payment: Although using a third-party payment gateway can have an impact on the data, the risk is generally minor because most third-party services are provided by well-respected businesses.

Streaming Gateway: Data Threat is not high but minimal sometimes firewalls are not encrypted to handle the situation.

Third-Party Assessment: Sometimes the probability is not higher of losing data through assessment.

Theft

Theft: The danger of stealing goods or services without paying for them is theft.

Employee Id Card: Due to the ease with which access cards can be stolen, there is a great likelihood that they will be utilized by someone else to access services as well as sensitive regions of buildings but depends on the card to card.

Student Id Card: There is a high possibility that someone else will use access cards to access services and sensitive areas of buildings due to how easily they may be stolen risk is not high.

Tutor Device: Impact is moderate and not high through the secured device with the secured operating system.

Student Device: Impact is very high compared to the tutor device, As the device may get lost or stolen and the data will get a leak.

Developer Device: The probability of leaking data is moderate, it has the best-secured connection with software to establish the process.

Cloud Storage: Due to how readily they can be stolen, there is a significant chance that someone else will utilize access cards to enter services and sensitive parts of facilities but depends on access to the card and the type of card stolen.

Web Server: Since they are in well-secured rooms, the likelihood is medium, but since they might also be attacked online and utilized to take services without paying, the impact may be severe.

ADP Payroll: Due to the external managed service's strong security and

the absence of a service that attackers could reuse, the likelihood of a breach is low.

Third-party payment: Due to the fact that it is an external service run by an external business, the likelihood is low, but the impact could be moderate because fraud could result in money theft.

Streaming Gateway: Data Threat is not high but minimal sometimes firewalls are not encrypted to handle the situation.

Third-Party Assessment: Sometimes the probability is not higher of losing data through assessment.