**Question 1**

Cybersecure is a company that provides cybersecurity services to its clients. Data.ai company reached out to Cybersecure for providing cybersecurity services to it. Cybersecure identified that the employees of Data.ai company had unnecessary access to a lot of confidential data. Devise a secure cyber approach for Data.ai company that ensures protection from external/internal threats in reference to the "A comprehensive approach to cyber resilience article". [4 Marks] [CLO 1]  
  
**ANSWER**:  
Prevention & Detection:

* Data Classification & Access Control: Implement a data classification system to label data based on sensitivity (e.g., confidential, restricted, public). Enforce the principle of least privilege, granting access only to those who need it for their specific roles. Utilize tools like Role-Based Access Control (RBAC) and Attribute-Based Access Control (ABAC) for granular control.
* User Activity Monitoring & Threat Detection: Employ a Security Information and Event Management (SIEM) system to monitor user activity and network traffic for anomalies and suspicious behavior. Implement AI-powered threat detection tools for real-time analysis and early identification of potential attacks.
* Endpoint Security: Equip endpoints with advanced endpoint detection and response (EDR) solutions to detect and isolate malware and prevent lateral movement within the network. Consider endpoint encryption for sensitive data on devices.
* Network Segmentation & Secure Architecture: Implement network segmentation to isolate critical systems and sensitive data from other parts of the network. Secure network perimeters with firewalls, intrusion detection/prevention systems (IDS/IPS), and web application firewalls (WAFs).

Response & Recovery:

* Incident Response Plan & Training: Develop a comprehensive incident response plan outlining steps for containment, eradication, recovery, and communication in case of cyberattacks. Regularly train employees on the plan and conduct simulation exercises to test its effectiveness.
* Data Backup & Recovery: Implement a robust data backup and recovery strategy to ensure timely restoration of compromised data. Utilize secure cloud storage for backups and follow the 3-2-1 rule (3 copies of data, 2 different media types, 1 offsite location).
* Business Continuity & Disaster Recovery: Develop a business continuity and disaster recovery (BCDR) plan to ensure critical business operations continue during and after disruptions. Regularly test the plan to ensure its effectiveness.

Additional Measures:

* Security Awareness Training: Educate employees on cybersecurity best practices, including phishing awareness, password hygiene, and social engineering tactics. Foster a culture of security within the organization.
* Vulnerability Management: Regularly conduct vulnerability assessments and penetration testing to identify and patch security weaknesses in systems and applications.
* Third-Party Vendor Management: Implement proper security controls for third-party vendors who access Data.ai's systems and data. Conduct due diligence and ensure contractual clauses on data security.

Recommendations from "A Comprehensive Approach to Cyber Resilience":

* Embrace a risk-based approach: Prioritize security measures based on the potential impact of threats and vulnerabilities.
* Utilize automation: Automate security tasks for efficiency and responsiveness.
* Maintain situational awareness: Continuously monitor the threat landscape and adapt security measures accordingly.
* Collaborate: Foster communication and collaboration between security teams, IT, and business units.

**Question 2**

Steve hosts a blog site and has wrong allegations against him for defaming a fortune 50 company on the blog site he hosts. Guide him on how he can defend himself and prove his innocence. [4 Marks] [CLO 2]

**ANSWER**

**Gather Evidence:**

* Preserve the alleged defamatory content: Take screenshots or printouts of the blog post(s) in question, ensuring timestamps and URLs are visible.
* Document evidence of truth: If the statements made were factual, gather supporting evidence like public records, news articles, or witness testimonies.
* Identify potential witnesses: Compile a list of anyone who can corroborate your story or support your good intentions.

**Legal Steps:**

* Consult a lawyer: Seek legal advice immediately to understand your rights and potential defense strategies. An experienced lawyer can navigate the legal complexities and advise on the best course of action.
* Consider retraction & apology: If factual errors were made, consider issuing a retraction or publishing an apology to mitigate potential damages. However, do this only upon your lawyer's advice to avoid admitting guilt.

**Public Defense Strategy:**

* Issue a public statement: Depending on the lawyer's advice, consider issuing a public statement outlining your side of the story and clarifying your intentions. Focus on factual information and avoid further inflammatory comments.
* Engage with the company: If appropriate, attempt direct communication with the company to address their concerns and seek a possible resolution.

Scenario:

Zainab is an ambitious and hardworking woman, recently graduated from a reputable institute of Pakistan in Master of Business Administration. During her last year at Business school, she had an idea to develop and market a new Energy Drink that is organic and has fewer side-effects on human body. As we live in the corporate world, she decided to market this fresh and organic juice in a portable packaging—energy drink that would easily be carried to your workplace, gym, and a picnic spot.After a year of hard work, she developed the formula and started processing it. Initially, because of a low budget, she produced and served it to customers on their order in a restaurant.Soon, the product gets appreciation among the customers because of its vitals and taste. Now she wants to take her product to the next level. Meanwhile, she hired Mr. Ahmed as an employee and went to Islamabad to meet the investor for a week. During this period, the employee Mr. Ahmed finds the formulae of the recipe.core Ingredients and its procedure). Zainab is not a tech-aware person. She shared her system (laptop)Mr. Ahmed to record the daily sales in it. The database of the system had all the negotiated rates with part distributors (region wise) across the country, Later, she discovered that her distribution agents cancel contracts with her and linked with a new company. On the other Mr. Ahmed is a very smart person. He found all the documents regarding her current and future business plan, cloned it and infected her computer system. On her return, he resigned from the job and immediately offered her new Investor a lucrative offer of 50 percent partnership. The Investor signed the deal and turned down Ms. Zainab's offer for some reasons. After a couple of weeks, Zainab saw her own idea of Energy Drink with featured flavors presented in pet

bottles and cans. After short research, she found that the owner of this product are Mr. Ahmed and ex-investor.Also, they have registered the formula under their names. She immediately, contacted her lawyer but he refused to take her case and advised her not to contest it otherwise she may face the defamation accusation instead.

**Question:(a)** What sort of breach was made by her employee, Mr. Ahmed?   
  
**ANSWER:**Breach of Trust:  
Sharing Ms. Zainab's system containing sensitive information constituted a serious breach of trust.

2. Misuse of Access:  
Mr. Ahmed used his authorized access to steal confidential information like formulas, business plans, and distributor agreements.

3. Trade Secret Misappropriation:  
Stealing the recipe formula, a core trade secret, is a major offense.

4. Data Theft:  
Copying the database containing contracts, financial details, and other valuable data amounts to data theft.

5. Unfair Competition:  
Utilizing stolen information to compete directly with Ms. Zainab in the same market is unfair competition.

6. Breach of Fiduciary Duty:  
If Mr. Ahmed was considered an employee with fiduciary duties (e.g., manager), he breached those duties by acting against Ms. Zainab's interests.

**(b)** Do you think the re-production of someone's idea is professionally and ethically allowed or not? Briefly argue on it in bullets in support and against of it.

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**Q5: (a)** What approach should Ms. Zainab adopt to secure her recipe of Energy Drink? **(b)** Suppose, you are the owner of this Energy Drink brand. Now, you need to draft an Employer Contract, what clauses you would add in the contract to avoid the breach of idea or formula of the drink.

**(a) Securing Ms. Zainab's Recipe:**

While the situation seems bleak, Ms. Zainab still has options to protect her recipe and potentially salvage her business:

1. Consult a Different Lawyer:

* Seek a second opinion from a specialized intellectual property lawyer who might have a different perspective on the case.

2. Investigate Data Traces:

* See if any digital fingerprints or timestamps can prove her ownership of the formula and business plan.

3. Public Disclosure:

* Consider strategically disclosing the core elements of the formula publicly under a Creative Commons license, making it harder for Mr. Ahmed to claim exclusive ownership.

4. Alternative Production:

* Explore alternative production methods that don't require sharing the formula with third parties.

5. Brand Differentiation:

* Focus on unique branding and marketing elements to distinguish her product from Mr. Ahmed's copy.

Remember: Legal action is still an option, but it may be resource-intensive and uncertain. Exploring alternate solutions while seeking legal advice might be the best course of action.

**(b) Drafting an Employer Contract:**

Clauses to Prevent Formula and Idea Theft:

* Confidentiality Agreement:
  + Explicitly require employees to maintain confidentiality of all trade secrets, formulas, and business plans.
* Non-compete Clause:
  + Restrict employees from competing in the same market for a specified period after leaving the company.
* Intellectual Property Ownership:
  + Clearly define that all inventions, formulas, and ideas conceived during employment belong to the company.
* Data Access Limitation:
  + Grant access to sensitive information only on a need-to-know basis and restrict data download/copying.
* Technological Measures:
  + Employ encryption, password protection, and access logs to monitor and secure sensitive data.
* Non-Solicitation of Customers/Distributors:
  + Prohibit employees from contacting or soliciting business from the company's clients or distributors after leaving.
* Exit Interview and Data Return:
  + Conduct exit interviews to remind employees of confidentiality obligations and ensure all company data is returned.

Additionally:

* Regularly educate employees about intellectual property and trade secret protection.
* Foster a culture of innovation and ownership within the company.
* Seek legal advice to ensure the contract is enforceable and complies with local laws.

**Q6:**

(a) Considering yourself in place of Ms. Zainab, list the core points that she should have included in the MoU while signing the deal with her investor. [4 Marks] [CLO 2]

(b) Ms. Zainab plans to move her business to the USA. If she had patented the formula in Pakistan, will it be protected over there as well? [4 Marks]  
**ANSWER: (a) Core Points for Ms. Zainab's MoU:**

1. Intellectual Property Ownership:

Clearly define ownership of the recipe formula, business plan, and brand elements.

Specify that any improvements or modifications made during the partnership belong to the original owner (Ms. Zainab) unless explicitly negotiated otherwise.

2. Confidentiality:

Require the investor to maintain complete confidentiality of all trade secrets, formulas, and sensitive information.

Specify limitations on information sharing with third parties and potential penalties for breaches.

3. Non-compete Clause:

Restrict the investor from directly competing with Ms. Zainab's product or entering the same market segment for a specific period after the partnership ends.

4. Profit Sharing and Control:

Clearly define the profit-sharing structure and decision-making power within the partnership.

Ensure Ms. Zainab retains appropriate control over key aspects like product development, branding, and distribution.

5. Exit Strategy:

Outline clear procedures for ending the partnership, including valuation of assets, intellectual property rights, and non-compete clauses.

6. Dispute Resolution:

Specify a preferred method for resolving any disputes that may arise during the partnership, such as arbitration or mediation.

7. Legal Review:

Ensure both parties have their legal counsel review the MoU before signing to safeguard individual interests.

These core points would have helped Ms. Zainab maintain ownership and control over her valuable idea and formula, protecting her from future exploitation by the investor.

**(b) Patent Protection in the USA:**

No, a patent filed in Pakistan would not automatically offer protection in the USA. Patents are territorial rights, meaning they only apply within the country where they are granted. To protect her formula in the USA, Ms. Zainab would need to file a separate patent application there.

However, filing a patent in Pakistan has some advantages:

Priority Date: Filing in Pakistan establishes an "earliest priority date" for the invention, which can be helpful in case Ms. Zainab later files in other countries, including the USA.

Evidence of Novelty: The Pakistani patent application can serve as evidence of the invention's originality and novelty, potentially strengthening the US patent application.

Q7:

(a) What rules of the data protection act were violated by Mr. Ahmed and how can Ms. Zainab pursue Mr. Ahmed in the court of law? [4 Marks]

(b) Why did Ms. Zainab's lawyer advise her to refrain from filing a lawsuit against Mr. Ahmed and the investor?

ANSWER:  
a) Violations of Data Protection and Legal Recourse for Ms. Zainab:

Data Protection Violations by Mr. Ahmed:

1. Unauthorized Access:

Mr. Ahmed accessed confidential data on Ms. Zainab's computer system without proper authorization, potentially violating provisions against unauthorized access to personal data.

2. Misuse of Personal Data:

He used the stolen data, including formulas, business plans, and distributor agreements, for unauthorized purposes like creating a competing business. This may be considered misuse of personal data for unauthorized gain.

3. Data Breach:

Copying the entire database containing contracts, financial details, and other valuable data constitutes a data breach, potentially violating data security obligations.

4. Unfair Competition:

Utilizing stolen information to compete directly with Ms. Zainab in the same market might be considered unfair competition under relevant laws.

Ms. Zainab's Legal Recourse:

Civil Lawsuit:

She can file a civil lawsuit against Mr. Ahmed for damages caused by his data breach and unfair competition. This could involve seeking recovery of lost profits, compensation for reputational damage, and potentially punitive damages.

Criminal Complaint:

Depending on the specific provisions of Pakistan's data protection laws, Mr. Ahmed's actions might also constitute a criminal offense. Filing a criminal complaint could lead to prosecution and penalties.

Injunction:

Ms. Zainab can seek an injunction to prevent Mr. Ahmed and the investor from further using the stolen information or infringing on her intellectual property rights.

Evidence Gathering and Legal Expertise:

Securing digital evidence like access logs, timestamps, and metadata from the computer system will be crucial for proving Mr. Ahmed's unlawful actions.

Consulting with a specialized data protection and intellectual property lawyer is essential to navigating the legal complexities and maximizing Ms. Zainab's chances of success.

(b) Lawyer's Advice and Potential Drawbacks of Lawsuit:

Reasons for Lawyer's Advice:

Difficulty Proving Ownership:

The lawyer might question the ease of proving Ms. Zainab's sole ownership of the formula and business plan, especially if Mr. Ahmed claims co-creation or contribution.

Conflicting Legal Claims:

The investor might have a separate contract or agreement with Ms. Zainab, potentially creating complex legal challenges regarding intellectual property rights.

Cost and Length of Litigation:

Lawsuits can be expensive and time-consuming, potentially draining Ms. Zainab's resources and delaying her business recovery.

Reputational Risk:

Public litigation might further damage the brand image of Ms. Zainab's drink, even if she wins the case.

Limited Penalties:

The potential penalties for data breaches and unfair competition might not fully compensate Ms. Zainab for the lost time, resources, and potential profits.