This scenario is based on a fictional company:

Botium Toys is a small U.S. business that develops and sells toys. The business has a single physical location, which serves as their main office, a storefront, and warehouse for their products. However, Botium Toy's online presence has grown, attracting customers in the U.S. and abroad. As a result, their information technology (IT) department is under increasing pressure to support their online market worldwide.

The manager of the IT department has decided that an internal IT audit needs to be conducted. She's worried about maintaining compliance and business operations as the company grows without a clear plan. She believes an internal audit can help better secure the company's infrastructure and help them identify and mitigate potential risks, threats, or vulnerabilities to critical assets. The manager is also interested in ensuring that they comply with regulations related to internally processing and accepting online payments and conducting business in the European Union (E.U.).

The IT manager starts by implementing the National Institute of Standards and Technology Cybersecurity Framework (NIST CSF), establishing an audit scope and goals, listing assets currently managed by the IT department, and completing a risk assessment. The goal of the audit is to provide an overview of the risks and/or fines that the company might experience due to the current state of their security posture.

My task is to review the IT manager's scope, goals, and risk assessment report. Then, perform an internal audit by completing a controls and compliance checklist.

Botium Toys: Scope, goals, and risk assessment report

Scope and Goals of the Audit

Scope: The scope is defined as the entire security program at Botium Toys. This means all assets need to be assessed alongside internal processes and procedures related to the implementation of controls and compliance best practices.

Goals: Assess existing assets and complete the controls and compliance checklist to determine which controls and compliance best practices need to be implemented to improve Botium Toys' security posture.

Current Assets

Assets managed by the IT Department include:

- On-premises equipment for in-office business needs
- Employee equipment: end-user devices (desktops/laptops, smartphones), remote workstations, headsets, cables, keyboards, mice, docking stations, surveillance cameras, etc.
- Storefront products available for retail sale on site and online; stored in the company's adjoining warehouse
- Management of systems, software, and services: accounting, telecommunication, database, security, ecommerce, and inventory management
- Internet access
- Internal network
- Data retention and storage
- Legacy system maintenance: end-of-life systems that require human monitoring

Control categories

Control categories

Controls within cybersecurity are grouped into three main categories:

- Administrative/Managerial controls
- Technical controls
- Physical/Operational controls

Administrative/Managerial controls address the human component of cybersecurity. These controls include policies and procedures that define how an organization manages data and clearly defines employee responsibilities, including their role in protecting the organization. While administrative controls are typically policy based, the enforcement of those policies may require the use of technical or physical controls.

Technical controls consist of solutions such as firewalls, intrusion detection systems (IDS), intrusion prevention systems (IPS), antivirus (AV) products, encryption, etc. Technical controls can be used in a number of ways to meet organizational goals and objectives.

Physical/Operational controls include door locks, cabinet locks, surveillance cameras, badge readers, etc. They are used to limit physical access to physical assets by unauthorized personnel.

Control types

Control types include, but are not limited to:

1. Preventative
2. Corrective
3. Detective
4. Deterrent

Controls and compliance checklist

Controls assessment checklist

Yes	No	Control	*Explanation*
	X	Least Privilege	*Currently, all employees have access to customer data; privileges need to be limited to reduce the risk of a breach.*
	X	Disaster recovery plans	*There are no disaster recovery plans in place. These need to be implemented to ensure business continuity.*
	X	Password policies	*Employee password requirements are minimal, which could allow a threat actor to more easily access secure data/other assets via employee work equipment/the internal network.*
	X	Separation of duties	*Needs to be implemented to reduce the possibility of fraud/access to critical data, since the company CEO currently runs day-to-day operations and manages the payroll.*
X		Firewall	*The existing firewall blocks traffic based on an appropriately defined set of security rules.*