Cybersecurity in Family and Consumer Sciences

8291 36 weeks

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Acknowledgments

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Course Description

Suggested Grade Level: 10 or 11 or 12  
Prerequisites: 6302

Students will examine how cybersecurity affects family and work life. The course focuses on emerging technologies in the work and home environments and the management of cybersecurity threats, protective measures, and investigations in family and consumer sciences.

Task Essentials Table

- Tasks/competencies designated by plus icons (⊕) in the left-hand column(s) are essential
- Tasks/competencies designated by empty-circle icons (◯) are optional
- Tasks/competencies designated by minus icons (⊖) are omitted
- Tasks marked with an asterisk (*) are sensitive.

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<td>Respond to breaches honestly.</td>
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Explain the consequences of security breaches in the Arts, A/V Technology and Communications Career Cluster.

Identify cybersecurity issues in the education setting.

Describe cybersecurity issues that arise in education and training.

Identify ways to keep education and training systems and data secure.

Describe ways hospitality and tourism are vulnerable to cybersecurity.

Identify ways hospitality and tourism can protect their guests.

Identify ways to protect counseling, personal care, and consumer services from security breaches.

Describe some cybersecurity threats to human services.

Educate clientele in human services.

Legend: ☑️Essential ☐Non-essential ☐Omitted

Curriculum Framework

Exploring Cybersecurity Fundamentals

Task Number 39

Contrast data, information, and knowledge.

Definition

Contrasting should include the following:

- Data (i.e., structured or unstructured but uninterrupted)
- Single-source data and big data (i.e., from one source, massive data files)
- Information (i.e., structured)
- Knowledge (i.e., actionable information)
- Data at rest (i.e., storage)
- Data in transit (i.e., transmission)
- Data being processed (i.e., memory)

For more information, see
• Improving Critical Infrastructure Cybersecurity
• BBB Cyber Security
• StopThinkConnect
• United States Computer Emergency Readiness Team
• National Restaurant Association's Cybersecurity 101: A Toolkit for Restaurant Operators (February 2016)
• National Restaurant Association's Cybersecurity 201: The Next Step (October 2017)
• Cybersecurity Framework Industry Resources
• National Cyberwatch Center
• Crunchwear
• Wearable Technology Insights

Process/Skill Questions

• What is data at rest?
• What is data in transit?
• What is the difference between structured data and unstructured data?

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Career Investigation

Check the national FCCLA portal.

Professional Presentation

Task Number 40

Describe cybersecurity in family and consumer sciences.

Definition

Description should state that cybersecurity is the protection of information and data, which includes information systems (e.g., networks, hardware, and software), the human element, and physical elements, from risks associated with threats, attacks, hazards, or physical damage. It is important to consider information assurance, risks, and risk management.

Process/Skill Questions

• How would you define information systems?
• What is risk management?
• How does cybersecurity influence family and consumer sciences programs and careers?

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Families First: Meet the Challenge

Financial Fitness: Protecting

Power of One: A Better You

STOP the Violence

FCCLA: STAR Events (2019)

Check the national FCCLA portal.

Interpersonal Communications

Professional Presentation

Public Policy Advocate

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Task Number 41

Examine legislative foundations that have shaped cybersecurity.

Definition

Examination should include major legislative acts considered to be the foundation of cybersecurity, including but not limited to

- Counterfeit Access Device and Computer Fraud and Abuse Act of 1984
- Electronic Communications Privacy Act of 1986 (ECPA)
- Computer Security Act of 1987
- Paperwork Reduction Act of 1995
- Clinger-Cohen Act of 1996
- Homeland Security Act (HSA) of 2002
- Cyber Security Research and Development Act of 2002
- E-Government Act of 2002
- Federal Information Security Management Act (FISMA) of 2002 clarified

Process/Skill Questions

• How has cybersecurity influenced legislation?
• How will legislation influence family and consumer sciences, given heightened cybersecurity concerns?

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Professional Presentation

Public Policy Advocate

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Task Number 42

Define information assurance as it pertains to family and consumer sciences.

Definition

Definition should state that information assurance is the process that involves

• protecting family and consumer sciences information systems
• managing the risks to systems by protecting user data through measures of
  o confidentiality
  o integrity
  o availability
  o authenticity
  o nonrepudiation.

Process/Skill Questions

• Who is influenced by an organizational commitment to data integrity and assurance?
• How does the assurance of information influence routine practices?

FCCLA National Programs

Families First: Families Today
Task Number 43

Define risk as it pertains to family and consumer sciences.

Definition

Definition should state that

- risk is the likelihood that a vulnerability may exist
- the consequences are that the vulnerability may be exploited as a result.

Definition should also include examples of risks in family and consumer sciences.

Process/Skill Questions

- How is family and consumer science vulnerable to cybersecurity concerns?
- What aspects of family and consumer science are influenced with cybersecurity concerns?

FCCLA National Programs

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Families First: Meet the Challenge

Financial Fitness: Protecting

Power of One: A Better You

Power of One: Family Ties
Professional Presentation

Task Number 44

Identify the influence of cyberattacks on organizations.

Definition

Identification should include the following concepts:

- Organizational leadership
- Organizational reputation management strategy
  - damage to reputation
  - loss of goodwill
  - financial repercussions resulting from loss of goodwill
  - supply chain management

Resources:
National Integrated Cyber Education Research Center's Cyber Business Module: How Businesses Secure Information
Privacy Rights Clearinghouse

Task Number 45

Identify the concept of cybersecurity risk management.

Definition

Identification should include

- defining risk management as the process of identifying possible vulnerabilities and quantifying potential risk as it pertains to systems
- addressing risk-management strategies, including but not limited to
  - risk mitigation – reducing the likelihood of the risk
  - risk transfer – transferring the risk to another company, such as an insurance firm
  - risk avoidance – avoiding the possibility of the risk (e.g., not using a specific software program would avoid any known risks of that program)
  - risk acceptance – understanding and accepting the risks associated with use of a system or feature.

Process/Skill Questions
• What mechanisms are in place to manage cyber risk?
• How is risk assessment incorporating cyber issues?

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Interpersonal Communications

Professional Presentation

Public Policy Advocate

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Task Number 46

Explain data analytics and its effects on family and consumer sciences/businesses from a security perspective.

Definition

Explanation should include that data analytics is the pursuit of extracting meaning from raw data using specialized computer systems. These systems transform, organize, and model the data to draw conclusions and identify patterns.

Definition should also include

• target audience
• capabilities of vs. appropriation of
  o patterns
  o trends
  o predictions
  o purpose
• influences on family and consumer sciences.

Resource: Informatica
Process/Skill Questions

- What is data analytics?
- What is a target audience?

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Financial Fitness: Spending

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Professional Presentation

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**Task Number 47**

**Examine cybersecurity services provided to family and consumer sciences as they relate to privacy issues and protecting systems against unauthorized access.**

**Definition**

Examination should include the concepts that

- cybersecurity services provide the tools, methods, and procedures that an organization can use to protect their systems from unauthorized access to data, or the copying, transfer, or retrieval of data
- services can range from storing backups at remote sites, along with network monitoring of vulnerable software against intruders
- consequences can include loss of intellectual property, business/consumer data, and online fraud.

**Process/Skill Questions**

- How can intellectual property be compromised?
• How can business/consumer data be compromised in family and consumer sciences?
• What is online fraud?
• How can a consumer protect him or herself from online fraud of his/her bank accounts?

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Interpersonal Communications

Professional Presentation

Public Policy Advocate

Task Number 48

Examine why individuals need to protect themselves from cyber threats.

Definition

Examination should include

• individuals putting themselves at risk
• effect of cyberattacks effect of cyberattack on other areas of life (i.e., work, environment, community, etc.)
• steps taken when personal security is breached.

Process/Skill Questions

• What are some ways one can protect oneself from security breaches?
• How can a cyberattack affect the environment?

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Financial Fitness: Saving

Financial Fitness: Spending

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Entrepreneurship

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Task Number 49

Explain why organizations need to manage risk.

Definition

Explanation should include

• understanding that unmanaged risks can cause losses
• knowing that every organization is vulnerable to common and unique types of threats
• identifying vulnerable areas, along with the potential for actual threats, so they can plan operations to reduce the effect of those threats
• addressing responses to threats and plans for continuous business operations because all threats cannot be completely eliminated.

Process/Skill Questions

• How are organizations vulnerable to cyberattacks?
• How can an organization plan to respond to a cyberattack?

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Entrepreneurship
Task Number 50

Maintain separate development and testing environments from the production environment.

Definition

Maintaining separate environments should include

- putting access controls in place
- delegating separate duties to employees
- using different production data for testing or development
- changing control procedures related to security.

Process/Skill Questions

- What are some of the access controls an organization can put in place to maintain separate testing environments?
- What does it mean to delegate separate duties to employees?

Understanding Cyber Threats and Vulnerabilities in Family and Consumer Sciences

Task Number 51

Describe cybersecurity threats as they relate to family and consumer sciences.

Definition

Description should include

- intellectual property
- business and consumer data
- ethical and legal implications
• loss of data
• international implications
• contracts, legal implications, service level agreements.


Process/Skill Questions

• What is intellectual property, and why is it important?
• What information might be included in lost data?

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Families First: Meet the Challenge
Financial Fitness: Protecting
Power of One: A Better You
Power of One: Family Ties
STOP the Violence

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Interpersonal Communications

National Programs in Action

Professional Presentation

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Task Number 52

Describe the difference between a cyber threat and a vulnerability in family and consumer sciences.

Definition

Description should include defining
• **asset** (as it relates to a secure environment) – a person, structure, facility, information and records, information technology systems and resources, material, process, relationships, or reputation that has value

• **vulnerability** – a characteristic or specific weakness that renders an organization or asset (such as information or an information system) open to exploitation by a given threat or susceptible to a given hazard

• **exploit** – a technique to breach the security of a network or information system in violation of security policy

• **threat** – a circumstance or event that has or indicates the potential to exploit vulnerabilities and to adversely affect (create adverse consequences for) organizational operations, organizational assets (including information and information systems), individuals, other organizations, or society

• **attack vector** – a path or route used by the adversary to gain access to the target (asset)

• **threat agents** – an individual, group, organization, or government that conducts or has the intent to conduct detrimental activities

• **safeguards** – a practice, procedure, or mechanism that reduces risk.

Resources:

- National Initiative for Cybersecurity Careers and Studies (NICCS)
- Information System and Audit Control Association (ISACA)

**Process/Skill Questions**

• What is an attack vector?

• What is the difference between a cyber threat and a vulnerability?

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**Financial Fitness: Saving**

**Financial Fitness: Spending**

**Power of One: A Better You**

**Power of One: Family Ties**

**FCCLA: STAR Events (2019)**

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Task Number 53

Identify different types of threat agents.

Definition

Identification should include, but not be limited to:

- **script kiddies** – unskilled attackers who do not have the ability to discover new vulnerabilities or write exploit code and are dependent on the research and tools from others. Their goal is achievement. Their subgoals are to gain access and deface web pages.
- **hacktivists** – attackers with primary goals of bringing attention to a social or political cause or seeking vengeance for what they consider to be a political or societal wrongdoing; skills of hacktivists can range from script kiddies to professional and/or sophisticated hackers.
- **malicious insiders** – a disgruntled organization insider is a principal source of computer crime. Insiders may not need a great deal of knowledge about computer intrusions because their knowledge of a target system often allows them to gain unrestricted access to cause damage to the system or to steal system data. The insider threat also includes outsourcing vendors as well as employees who accidentally introduce malware into systems.
- **criminal enterprises** – attackers target systems for monetary gain. Specifically, organized crime groups use spam, phishing, and spyware/malware to commit identity theft and online fraud. International corporate spies and organized crime organizations also pose a threat to the United States through their ability to conduct industrial espionage and large-scale monetary theft and to hire or develop hacker talent.
- **competitors or rogue corporations** – organizations that engage in hacking against competitors with the intention of stealing intellectual property or gaining financial competitive advantages.
- **nation-state sponsored**
  - goal is to weaken, disrupt, or destroy the United States. Their subgoals include espionage for attack purposes, espionage for technology advancement, disruption of infrastructure to attack the U.S. economy, full-scale attack of the infrastructure when attacked by the United States, to damage the ability of the United States to continue its attacks.
  - ideological militants.


Process/Skill Questions

- What are some of the social causes to which hacktivist bring attention?
- What threat does an ideological militant pose?

FCCLA National Programs
Task Number 54

Describe types of cyber threats.

Definition

Description should include, but not be limited to

- steganography (embedded virus/Trojan/malware in pictures)
- attacks on authentication (e.g., password, biometrics, terrorism)
- acts of terrorism and how they present a threat
- pandemics and how they present a threat
- phishing scams
- hacking, spamming, malvertising
  - family and consumer sciences campaign hijacking
  - web vs. applications
- cross-site scripting attack (XSS)
- local file inclusions (LFI)
- SQL injection (SQLi)
- phishing attacks, spearphishing, and whaling
- denial of service (DoS)
- distributed denial of service – (DDoS), botnets, and smurf attacks
- malware (e.g., virus, worm, botnet, ransomware)
- infrastructure
- competitor-sponsored hacking
- nation-state-sponsored hacking
- dark web.

Process/Skill Questions
What is the difference between malware and a virus?
What is the dark web?

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National Programs in Action

Professional Presentation

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Task Number 55

Discuss the security and privacy implications of ubiquitous computing.

Definition

Discussion should include examples of security and privacy issues in ubiquitous computing, such as Internet of Things (IoT) in smart homes.

Process/Skill Questions

• What is ubiquitous computing?
• How can smart homes present security threats?

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Power of One: A Better You

STOP the Violence

FCCLA: STAR Events (2019)

Check the national FCCLA portal.
Protecting Family and Consumer Sciences Data

Task Number 56

Explain the concept of personally identifiable information.

Definition

Explanation should include defining the following:

- **Personally identifiable information (PII)** – any information about an individual, directly or indirectly, that suggests the identity of an individual (directly: name, address, Social Security number; indirectly: gender, race, birth date).
- **Personal financial information (PFI)** – any financial information a financial company shares with affiliates (part of a customer’s financial group) or non-affiliates (outside of financial group).
- **Non-public information (NPI)** – any PFI that a financial institution collects when providing a service to a customer. This does not include information that is accessible to the public.
- **Personal health information (PHI)** – any information about a person’s medical history collected by medical professionals (tests, lab results, insurance information, etc.).
- **Digital footprint** – data collected about a person based upon ones online activity. Data can include, but is not limited to
  - Internet protocol address
  - tweets
  - Facebook posts
  - browsers
  - websites visited
- **Digital traces** – defined by content (the message) and metadata (the context of the message).

Explanation also should include examples of digital footprints that occur in everyday life and analyzing digital footprint examples to interpret information about individuals.

Resources:

- U.S. Federal Trade Commission: [How To Comply with the Privacy of Consumer Financial Information Rule of the Gramm-Leach-Bliley Act](https://www.consumerfinance.gov/pdfs/privacycomplianceandsecurity/maintainingprivacyandreducingthetheriskoffinancialinformation.pdf)
Task Number 57

Explain how personal data is compiled, analyzed, and used to make decisions in family and consumer sciences.

Definition

Explanation should include

- defining big data and data mining (the process or techniques used to analyze large sets of existing information to discover previously unrevealed patterns or correlations)
- identifying where and how big data are stored and by whom
- identifying how big data is used
- explaining useful data that identifies and tracks individuals
- predicting how organizations customize communication with their target market based on an individual’s digital footprint.

Resource: National Integrated Cyber Education Research Center's Cyber Business Module: You are the Data
Process/Skill Questions

- What is the difference between big data and data mining?
- Why would an organization want to track an individual?

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Financial Fitness: Protecting

Power of One: A Better You

STOP the Violence

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National Programs in Action

Professional Presentation

Task Number 58

Identify the most common ways data is collected in the United States.

Definition

Identification should include

- defining the term data collection as the process of gathering pieces of information (active vs. passive, informed consent vs. no consent)
- describing the types of sources where data can be collected
- describing how family and consumer sciences provides a support system
- differentiating how data collection is governed on the local, state, national, and international level.

Process/Skill Questions

- What are the sources where data can be collected?
- How is data governed on the local, state national, and international level?

FCCLA National Programs

Families First: Meet the Challenge
Task Number 59

Identify best practices for personal cyber hygiene.

Definition

Identification should include

- using techniques to protect personal data (e.g., encryption, passwords, preferences on devices, location)
- distinguishing between acceptable and unacceptable data to share (e.g., social media, apps)
- comparing the risks and benefits of sharing data
- understanding privacy policies before installing and/or using applications
- understanding the differences between digital devices.

Resource: National Integrated Cyber Education Research Center's Cyber Business Module: You are the Data

Process/Skill Questions

- What is personal cyber hygiene?
- What are digital devices?
- What are the consequences of poor personal cyber hygiene?

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Families First: Families Today
Task Number 60

Identify the most common ways family and consumer sciences data is used.

Definition

Identification should include how to extract specific information from stored data. Examples could include data filtering, data queries (including SQL), data mining, and data analytics.

Process/Skill Questions

- What is data mining?
- What is data analysis?

FCCLA National Programs

Families First: Families Today

Financial Fitness: Earning

Financial Fitness: Protecting

Financial Fitness: Saving

Financial Fitness: Spending
Task Number 61

Identify ubiquitous computing.

Definition

Identification should include, but not limited to

- Internet of Things (IoT)
- unmanned systems
- artificial intelligence.

Process/Skill Questions

- What is the IoT?
- What is artificial intelligence?

FCCLA National Programs

Power of One: A Better You

STOP the Violence

FCCLA: STAR Events (2019)

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Professional Presentation
Task Number 62

Respond to breaches honestly.

Definition

Response should include

- acknowledging breach immediately (remediate with stakeholders first)
- identifying the breach and explain how it occurred
- identifying the remedy.

Process/Skill Questions

- Why is waiting too long to respond to a breach a dangerous approach for an organization?
- Why should an organization remediate with stakeholders first?

FCCLA National Programs

Families First: Meet the Challenge

Financial Fitness: Protecting

Power of One: A Better You

STOP the Violence

FCCLA: STAR Events (2019)

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Interpersonal Communications

Professional Presentation

Public Policy Advocate
Task Number 63

Act quickly to remedy a solution to the breach.

Definition

Acting quickly should include

- sharing information before the general public begins asking questions
- providing solutions immediately
- providing updates to the public constantly.

Process/Skill Questions

- How soon should an organization acknowledge a breach in security?
- How often should an organization provide updates concerning the remedy to the public?

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Families First: Meet the Challenge

Financial Fitness: Protecting

Power of One: A Better You

FCCLA: STAR Events (2019)

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Interpersonal Communications

Professional Presentation

Public Policy Advocate

Task Number 64

Review solutions applied.

Definition

Reviewing should include

- solutions that worked
solutions that did not work
solutions that can be improved.

**Process/Skill Questions**

- Why is reviewing solutions an important step?
- What can an organization learn from studying solutions that did not work?

**FCCLA National Programs**

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**Professional Presentation**

**Exploring Family and Consumer Sciences Careers**

**Task Number 65**

Explore the family and consumer sciences careers affected by current and emerging technology.

**Definition**

Exploration should include, but not be limited to, the following:

- Arts, Audio/Video Technology and Communications (e.g., fashion design, interior design)
- Education and Training (e.g., administration and administrative support, professional support services, teaching and training)
- Human Services (e.g., consumer services, counseling and mental health services, early childhood development and services, family and community services, personal care services)
- Hospitality and Tourism (e.g., restaurants and food/beverage services, lodging, travel and tourism, recreation, amusements and attractions)
- using online job research and job posting sites to locate entry-level cybersecurity and cyber forensics opportunities at the local, state, national, and international levels
  - [Virginia Employment Commission](#)
  - [CyberSeek](#)
Resource: Virginia Space Grant Consortium's free video series, Breaking the Code on a Career in Cybersecurity, which features interviews with cyber professionals about their career pathways.

Process/Skill Questions

- How are emerging technologies affecting careers?
- How do professionals stay current on emerging technologies?
- What are the FCS-related career clusters?
- What steps does one need to take to prepare for a career in cybersecurity?
- How might one compare job opportunities in career paths within cybersecurity industry?
- Why is early investigation into a variety of careers important?

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Power of One: A Better You

Power of One: Working on Working

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Entrepreneurship

Professional Presentation

Understanding Cybersecurity in Arts, A/V Technology & Communications

Task Number 66

Identify threats across the industry.

Definition
Identification should include

- malicious use of multimedia content
- proliferation of apps on communications devices
- copyright/branding infringement.

**Process/Skill Questions**

- How might copyright infringement affect a company or individual?
- When might it be wise to carefully choose your apps?

**FCCLA National Programs**

**Power of One: A Better You**

**FCCLA: STAR Events (2019)**

Check the national [FCCLA portal](#).

**Professional Presentation**

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**Task Number 67**

**Explain why fashion and interior design companies are hacked so frequently.**

**Definition**

Explanation could include

- dismissing/disciplining disgruntled or greedy employees
- allowing access to restricted data
- providing opportunities to steal designs
- committing copyright infringement.

**Process/Skill Questions**

- What is the fraud triangle? Give an example of each component.
- What do you think would cause a disgruntled or greedy employee to compromise cybersecurity?

**FCCLA National Programs**

**STOP the Violence**
Task Number 68

Explain the consequences of security breaches in the Arts, A/V Technology and Communications Career Cluster.

Definition

Explanation should include

- experiencing sales lost due to theft of intellectual property
- undergoing layoffs due to loss of business experiencing
- damage to the brand
- suffering suppressed creativity
- encountering loss of consumer confidence.

Process/Skill Questions

- What are the strengths and weaknesses of designing online?
- How may one protect designs/ideas when manufacturing the product?

FCCLA National Programs

STOP the Violence

FCCLA: STAR Events (2019)

Check the national FCCLA portal.
Understanding Cybersecurity in Training and Education

Task Number 69

Identify cybersecurity issues in the education setting.

Definition

Identification could include

- understanding that colleges and universities house innovation research
- knowing that educational institutions maintain sensitive student information
- knowing that universities sometimes have their own medical centers
- understanding that educational institutions are more vulnerable due to budget limitations
- recognizing the school systems are inherently vulnerable to unrelenting cyber attacks
- recognizing and valuing the education of acceptable use policies of the users of the institution.

Process/Skill Questions

- Why are educational institutions more vulnerable to cyber attacks?
- What are acceptable use policies?
- How would ignoring acceptable use policies affect institutions?

FCCLA National Programs

STOP the Violence

FCCLA: STAR Events (2019)

Check the national FCCLA portal.

Professional Presentation

Public Policy Advocate

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Task Number 70

Describe cybersecurity issues that arise in education and training.
Definition

Description could include

- understanding that classrooms, training centers, and testing protocols are online
- understanding that mobile learning leaves servers vulnerable
- understanding that email and websites allow hackers to embed malware
- understanding the need to protect personal privacy data under FERPA
- understanding data has moved from local control to the cloud.

Resource: Federal Education Rights and Privacy Act (FERPA)

Process/Skill Questions

- Why is it important to understand where or why you go to a web page?
- How does the cloud operate?
- What is FERPA?

FCCLA National Programs

STOP the Violence

FCCLA: STAR Events (2019)

Check the national FCCLA portal.

Professional Presentation

Public Policy Advocate

Task Number 71

Identify ways to keep education and training systems and data secure.

Definition

Identification could include

- ensuring employees use strong passwords and frequently update passwords
- guaranteeing employees use multifactor authentication
- ensuring that users have the least privilege to do their jobs
- allocating separation of duties
- providing frequent formalized training for staff and students.

Process/Skill Questions
• What is the difference between a strong and weak password?
• Why do students and staff need ongoing training for network access?
• Why is multifactor authentication important?
• What are the differences in duties relating to cybersecurity?

FCCLA National Programs

STOP the Violence

FCCLA: STAR Events (2019)

Check the national FCCLA portal.

Professional Presentation

Public Policy Advocate

Understanding Cybersecurity in Hospitality & Tourism

Task Number 72

Describe ways hospitality and tourism are vulnerable to cybersecurity.

Definition

Description could include

• describing the vulnerability of the chip card
• describing the issues found with the Europay-Mastercard-Visa (EMV)-compliant point-of-sale (POS) systems
• describing issues with mobile pay platforms
• identifying the exposure involved in orally relaying information to an agent
• identifying the contact, details, travel itinerary, birthdays, etc., information that these venues maintain
• describing issues with sharing personal data and travel services
• describing issues with compromise of rewards programs, third-party vendors data, affiliated companies
• understanding varying government identity requirements.
Process/Skill Questions

- What are some ways the chip card can be compromised?
- What are some of the consequences with using mobile pay platforms?
- Where might one look for various government identity requirements?
- What are the strengths and weaknesses of point-of-sale systems?
- What are some ways one shares personal data with travel services?

FCCLA National Programs

STOP the Violence

FCCLA: STAR Events (2019)

Check the national [FCCLA portal](#).

Professional Presentation

Public Policy Advocate

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**Task Number 73**

**Identify ways hospitality and tourism can protect their guests.**

**Definition**

Identification could include

- requiring stronger passwords and frequent password changes
- mandating data encryption
- providing employee training
- maintaining updated technology
- conducting security audits
- purchasing insurance.

**Process/Skill Questions**

- When might it be wise to conduct security audits?
- What type of topics might employee training cover?
- What are the consequences of not maintaining updated technology?
- Why would it make sense to purchase hospitality or tourism insurance?

FCCLA National Programs

STOP the Violence
Understanding Cybersecurity in Human Services

Task Number 74

Identify ways to protect counseling, personal care, and consumer services from security breaches.

Definition

Identification could include

- conducting a risk assessment
- continuing education
- monitoring devices
- enforcing strict policies
- enforcing strict third-party policies
- acquiring good legal counsel.

Process/Skill Questions

- How would one know that a security breach has occurred?
- What devices need to be protected from a security breach?

FCCLA National Programs

STOP the Violence
Task Number 75

Describe some cybersecurity threats to human services.

Definition

Description could include

- knowing that phishing is the most used form of hacking
- understanding that personal records are a common form of ransomware
- identifying patients as potential vulnerabilities in the form of smartphone applications.

Process/Skill Questions

- How can phishing harm an individual?
- How do smartphone apps make clients vulnerable?

FCCLA National Programs

Families First: Families Today

Families First: Meet the Challenge

Power of One: A Better You

Power of One: Family Ties

FCCLA: STAR Events (2019)

Check the national FCCLA portal.

Professional Presentation

Task Number 076

Educate clientele in human services.
Definition

Education should include

- differentiating instruction at all life cycles
- differentiating instruction on mental and emotional capacity of the learner.

Process/Skill Questions

- How are instructions about cybersecurity different for young children and senior citizens?
- What considerations are important when trying to prepare a learner with limited emotional capacity to avoid security breaches?

FCCLA National Programs

Community Service: Lead

Community Service: Learn

Community Service: Serve

Families First: Families Today

Families First: Meet the Challenge

Financial Fitness: Protecting

Power of One: A Better You

FCCLA: STAR Events (2019)

Check the national FCCLA portal.

Professional Presentation

SOL Correlation by Task

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>39</td>
<td>Contrast data, information, and knowledge.</td>
<td>10.5, 10.8, 11.5, 11.8, 12.5, 12.8</td>
</tr>
<tr>
<td>40</td>
<td>Describe cybersecurity in family and consumer sciences.</td>
<td>10.5, 11.5, 12.5</td>
</tr>
<tr>
<td>41</td>
<td>Examine legislative foundations that have shaped cybersecurity.</td>
<td>10.5, 10.8, 11.5, 11.8, 12.5, 12.8</td>
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</table>

History and Social Science: GOVT.12, VUS.14
|   | Define information assurance as it pertains to family and consumer sciences. | English: 10.3, 10.5, 11.3, 11.5, 12.3, 12.5  
History and Social Science: GOVT.16, VUS.1 |
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>43</td>
<td>Define risk as it pertains to family and consumer sciences.</td>
<td>English: 10.3, 10.5, 11.3, 11.5, 12.3, 12.5</td>
</tr>
<tr>
<td>44</td>
<td>Identify the influence of cyberattacks on organizations.</td>
<td>English: 10.5, 10.8, 11.5, 11.8, 12.5, 12.8</td>
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<tr>
<td>45</td>
<td>Identify the concept of cybersecurity risk management.</td>
<td>English: 10.3, 10.5, 11.3, 11.5, 12.3, 12.5</td>
</tr>
</tbody>
</table>
| 46 | Explain data analytics and its effects on family and consumer sciences/businesses from a security perspective. | English: 10.3, 10.5, 11.3, 11.5, 12.3, 12.5  
History and Social Science: WG.1, WHII.1 |
| 47 | Examine cybersecurity services provided to family and consumer sciences as they relate to privacy issues and protecting systems against unauthorized access. | English: 10.5, 11.5, 12.5 |
| 48 | Examine why individuals need to protect themselves from cyber threats. | English: 10.5, 11.5, 12.5 |
| 49 | Explain why organizations need to manage risk. | English: 10.5, 11.5, 12.5 |
| 50 | Maintain separate development and testing environments from the production environment. |   |
| 51 | Describe cybersecurity threats as they relate to family and consumer sciences. | English: 10.5, 10.8, 11.5, 11.8, 12.5, 12.8 |
| 52 | Describe the difference between a cyber threat and a vulnerability in family and consumer sciences. | English: 10.3, 10.5, 11.3, 11.5, 12.3, 12.5 |
| 53 | Identify different types of threat agents. | English: 10.5, 10.8, 11.5, 11.8, 12.5, 12.8 |
| 54 | Describe types of cyber threats. | English: 10.4, 10.5, 11.4, 11.5, 12.4, 12.5 |
| 55 | Discuss the security and privacy implications of ubiquitous computing. | English: 10.1, 11.1, 12.1 |
| 56 | Explain the concept of personally identifiable information. | English: 10.5, 10.8, 11.5, 11.8, 12.5, 12.8 |
| 57 | Explain how personal data is compiled, analyzed, and used to make decisions in family and consumer sciences. | English: 10.3, 10.5, 10.8, 11.3, 11.5, 11.8, 12.3, 12.5, 12.8 |
| 58 | Identify the most common ways data is collected in the United States. | English: 10.3, 10.5, 11.3, 11.5, 12.3, 12.5  
History and Social Science: WG.1, WHII.1 |
| 59 | Identify best practices for personal cyber hygiene. | English: 10.5, 10.8, 11.5, 11.8, 12.5, 12.8  
History and Social Science: GOVT.1, GOVT.6, GOVT.9, VUS.1, VUS.13, VUS.14 |
Identify the most common ways family and consumer sciences data is used.  

Identify ubiquitous computing.  

Respond to breaches honestly.  

Act quickly to remedy a solution to the breach.  

Review solutions applied.  

Explore the family and consumer sciences careers affected by current and emerging technology.  

Identify threats across the industry.  

Explain why fashion and interior design companies are hacked so frequently.  

Explain the consequences of security breaches in the Arts, A/V Technology and Communications Career Cluster.  

Identify cybersecurity issues in the education setting.  

Describe cybersecurity issues that arise in education and training.  

Identify ways to keep education and training systems and data secure.  

Describe ways hospitality and tourism are vulnerable to cybersecurity.  

Identify ways hospitality and tourism can protect their guests.  

Identify ways to protect counseling, personal care, and consumer services from security breaches.  

Describe some cybersecurity threats to human services.  

Educate clientele in human services.

Teacher Resource

AFA CyberPatriot is the National Youth Cyber Education Program created by the Air Force Association to inspire K-12 students toward careers in cybersecurity or other science, technology, engineering, and mathematics (STEM) disciplines critical to our nation's future. At the core of the program is the National Youth Cyber Defense Competition, the nation's largest cyber defense competition that puts high school and middle school students in charge of securing virtual networks.
Appendix: Credentials, Course Sequences, and Career Cluster Information

Industry Credentials: Only apply to 36-week courses

- Cloud Essentials Certification Examination
- IC3 Digital Literacy Certification Examination
- IT Fundamentals+ Certification Examination
- Microsoft Technology Associate (MTA) Examinations
- Security Pro Certification Examination
- Security+ Certification Examination

Concentration sequences: A combination of this course and those below, equivalent to two 36-week courses, is a concentration sequence. Students wishing to complete a specialization may take additional courses based on their career pathways. A program completer is a student who has met the requirements for a CTE concentration sequence and all other requirements for high school graduation or an approved alternative education program.

- Cybersecurity Fundamentals (6302/36 weeks)
- Cybersecurity in Family and Consumer Sciences, Advanced (8292/36 weeks)

Career Cluster: Arts, Audio/Video Technology and Communications

<table>
<thead>
<tr>
<th>Pathway</th>
<th>Occupations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual Arts</td>
<td>Costume Designer</td>
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<tr>
<td></td>
<td>Fashion Designer</td>
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<tr>
<td></td>
<td>Fashion Illustrator</td>
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<td></td>
<td>Interior Designer</td>
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<td></td>
<td>Textile Designer</td>
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</tbody>
</table>

Career Cluster: Education and Training

<table>
<thead>
<tr>
<th>Pathway</th>
<th>Occupations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration and Administrative Support</td>
<td>Instructional Coordinator</td>
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<tr>
<td></td>
<td>School Principal</td>
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<tr>
<td></td>
<td>School Superintendent</td>
</tr>
<tr>
<td></td>
<td>Training and Development Manager</td>
</tr>
<tr>
<td>Professional Support Services</td>
<td>Audiologist</td>
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<tr>
<td></td>
<td>Instructional Developer</td>
</tr>
<tr>
<td></td>
<td>Marriage and Family Therapist</td>
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<tr>
<td></td>
<td>Mental Health Counselor</td>
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<td></td>
<td>Speech-Language Pathologist</td>
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</table>
### Career Cluster: Education and Training

<table>
<thead>
<tr>
<th>Pathway</th>
<th>Occupations</th>
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</thead>
<tbody>
<tr>
<td>Teaching and Training</td>
<td>Child Care Worker</td>
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<tr>
<td></td>
<td>Coach, Secondary Level</td>
</tr>
<tr>
<td></td>
<td>Cyber Instructional Curriculum Developer</td>
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<tr>
<td></td>
<td>Cyber Instructor</td>
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<tr>
<td></td>
<td>Director, Early Childhood Education Center</td>
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<tr>
<td></td>
<td>Elementary School Teacher</td>
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<tr>
<td></td>
<td>Instructional Coordinator</td>
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<tr>
<td></td>
<td>Kindergarten Teacher</td>
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<tr>
<td></td>
<td>Owner, Early Childhood Center</td>
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<td></td>
<td>Secondary School Teacher</td>
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<tr>
<td></td>
<td>Special Education Teacher</td>
</tr>
<tr>
<td></td>
<td>Teacher Assistant</td>
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<tr>
<td></td>
<td>Training Consultant/Training Specialist</td>
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</table>

### Career Cluster: Hospitality and Tourism

<table>
<thead>
<tr>
<th>Pathway</th>
<th>Occupations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lodging</td>
<td>Bookkeeping, Accounting, or Auditing Clerk</td>
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<tr>
<td></td>
<td>Building Custodian</td>
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<td></td>
<td>Caterer</td>
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<td>Chief Engineer</td>
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<td></td>
<td>Concierge</td>
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<td></td>
<td>Environmental Specialist</td>
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<td></td>
<td>Executive Housekeeper</td>
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<td></td>
<td>Front Desk Clerk</td>
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<td></td>
<td>Front Office Manager</td>
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<td></td>
<td>Lodging Manager</td>
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<td></td>
<td>Maintenance Supervisor</td>
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<td></td>
<td>Marketing Manager</td>
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<td>Reservationist</td>
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<tr>
<td>Recreation, Amusements and Attractions</td>
<td>Advertising and Promotions Manager</td>
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<tr>
<td></td>
<td>Camp Counselor</td>
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<tr>
<td></td>
<td>Caterer</td>
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<tr>
<td></td>
<td>Meeting and Convention Planner</td>
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<td></td>
<td>Recreation Supervisor</td>
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<tr>
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<td>Recreation Worker</td>
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<td>Retail Manager</td>
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<td>Sports Promoter</td>
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<tr>
<td>Restaurants and Food and Beverage Services</td>
<td>Caterer</td>
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<tr>
<td></td>
<td>Cook</td>
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<td>Destination Manager</td>
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<td></td>
<td>Entrepreneur</td>
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<td>Executive Chef</td>
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<td>Facilities Manager</td>
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<td>Franchisee</td>
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<td>Host, Hostess</td>
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<td>Meeting and Convention Planner</td>
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<tr>
<td>Travel and Tourism</td>
<td>Director of Convention and Visitors Bureau</td>
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<td>Director of Tourism Development</td>
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<td>Human Resources Manager</td>
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### Career Cluster: Hospitality and Tourism

<table>
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<tr>
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<tbody>
<tr>
<td></td>
<td>Tour, Travel Guide</td>
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<tr>
<td></td>
<td>Travel Agent</td>
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### Career Cluster: Human Services

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<td>Consumer Services</td>
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<td>Debt Counselor</td>
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<td>Counseling and Mental Health Services</td>
<td>Career Counselor</td>
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<td>Dietitian, Nutritionist</td>
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<td>Educational/School Counselor</td>
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<td>Health Educator</td>
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<td>Marriage and Family Therapist</td>
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<td>Rehabilitation Counselor</td>
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<td>Substance Abuse and Behavioral Disorder Counselor</td>
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<td>Parent and Family Educator</td>
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<td>Preschool Teacher</td>
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<td>Family and Community Services</td>
<td>Adult Day Care Coordinator</td>
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<td>Medical, Public Health Social Worker</td>
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<td>Personal and Home Care Aide</td>
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<td>Nail Technician</td>
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<td>Personal and Home Care Aide</td>
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<td></td>
<td>Personal Trainer</td>
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