

# Chapter 17 - Careers in IT

Grading:

Notes: \_\_\_\_\_/20

Lesson Review: \_\_\_\_\_/20

EVERFI: Analyzing Influences: \_\_\_\_\_/50

EVERFI: Understanding and Managing emotions: \_\_\_\_\_/50

Total points: \_\_\_\_\_/140

## 17.1 - Career Fields in Information Technology

### Essential Question

- Why is the information technology field an important part of our economy?

### Section 17.1 Learning Goals

After completing this section, you will be able to:

- Identify areas of growth in the IT field.
- Describe employment areas affected by IT innovations.
- Explain various careers available in the IT field.

### Competencies:

- 6670.101 Complete self-assessments to help determine career development goals.
- 6670.102 Investigate careers, educational requirements, and certifications in the five information technology career pathways.
- 6670.103 Demonstrate project-management skills.

### Terms

- |                                   |                            |                      |
|-----------------------------------|----------------------------|----------------------|
| • chief information officer (CIO) | • computer systems analyst | • software developer |
| • cloud architects                | • database administrator   | • technical support  |
| • computer programmer             | • IT manager               | • virtualization     |
| • computer support technician     | • project management       | • web developer      |
|                                   | • security analyst         |                      |

### Areas of Growth

- Computer Forensics
  - Identifying, \_\_\_\_\_, preserving, and documenting evidence from computer devices
  - Biometrics
  - DHS and DoD
- Data Storage
  - First HDD \_\_\_\_\_ one ton and had 4.4 MB
  - SD card revolution
- Internet
  - Five \_\_\_\_\_ users by 2020
  - Always on
- Supercomputers
  - First developed in \_\_\_\_\_

- Catching up to science fiction

## Employment Areas Affected by IT Innovations

- All companies have IT needs
- \_\_\_\_\_ growing fields
  - Health care
  - Manufacturing and agriculture
  - \_\_\_\_\_ and governmental administration
  - Entertainment and hospitality
- \_\_\_\_\_ and Application Development
  - Analyze user needs and develop software solutions
  - Java, J2EE, C++, Visual Basic.net
- **Project Management**
  - Applying tools and skills to tasks in a project in order to meet the \_\_\_\_\_ of the project
  - Organized, leadership, follow up, attention to detail
- **Technical Support**
  - Providing assistance to others with setting up, running, or \_\_\_\_\_ technical systems
  - Build and implement systems
- Security
  - **Chief information officer (CIO)** is the person in \_\_\_\_\_ of data security for a company
  - Internet Crime Complaint Center
- Business Intelligence and Analytics
  - Evaluate \_\_\_\_\_ data
  - Technical skills, business knowledge, and a background in statistics and math
- Cloud Computing
  - Software solutions
  - **Cloud architects** are \_\_\_\_\_ in establishing cloud-computing solutions for a company
- **Virtualization**
  - Process that allows \_\_\_\_\_ operating systems to simultaneously share a processor's resources in a safe and efficient way
  - Must be more knowledgeable in \_\_\_\_\_ than hardware
- Networking
  - Exists in almost \_\_\_\_\_ businesses
  - Troubleshooting and problem-solving
- Mobile Applications
  - Smartphones and \_\_\_\_\_ are the new trend
  - Assess business needs and write apps to meet them
- Data Center
  - Houses computer systems and related hardware
  - Experience in \_\_\_\_\_ and data backup

## Careers Available in IT

- **Software Developer**
  - Writes specifications for \_\_\_\_\_, applications, and other software
  - Growth will expand
- **Computer Systems Analyst**
  - Makes \_\_\_\_\_ to organizations for the best systems to use
  - 24.5 percent employment growth
- **Web Developer**
  - Responsible for \_\_\_\_\_ websites

- 28,500 new jobs by 2022
- **Security Analyst**
  - Responsible for \_\_\_\_\_ the computer networks of a company, organization, or governmental agency
  - 27,400 new jobs by 2022
- **Database Administrator**
  - Sets up \_\_\_\_\_ to track a company's information and maintains those operations
  - 17,900 new jobs by 2022
- **IT Manager**
  - Coordinates technology-related matters, plans \_\_\_\_\_ of existing software or hardware, negotiates with service providers
  - Almost all organizations have IT managers
- **Computer Programmer**
  - Writes, rewrites, \_\_\_\_\_, maintains, and tests software
  - Common languages are C++ and Python
  - 28,400 new jobs by 2022
- **Computer Support Technician**
  - Must quickly diagnose and \_\_\_\_\_ computer issues for others
  - 123,000 new jobs by 2022

### 17.1 Review Questions

1. Which four areas of computer science are changing the most rapidly?
2. What are the duties and tasks of a chief information officer?
3. What would be a good search string to use when researching the job opportunities for a web developer?
4. Which IT career involves writing the code to create programs, applications, and other software?
5. What does a database administrator do?
6. Which of the following is the program used to create and send an e-mail message?
  - A. e-mail server
  - B. message header
  - C. e-mail client
  - D. ISP

### Projects:

You will be completing 2 EVERFI modules (Analyzing Influences, and Understanding and managing emotions)

- Character Playbook – If you have not registered for Character Playbook you will need to log in to your EVERFI account and add a course (top right-hand corner). If you have problems come see teacher.
  - **1<sup>st</sup> block – ca225f61**                      **2<sup>nd</sup> block - 1d251bdb**