

# Computer Science: Computer Hardware and Software Maintenance

Identify and explain motherboard components. [CHSM1](#)

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**1** Identify and explain motherboard components. [CHSM1](#)

Identify, install, configure, and upgrade personal computer components. [CHSM2](#)

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**2** Identify, install, configure, and upgrade personal computer components. [CHSM2](#)

Perform the following: device driver installation, scheduled maintenance, and memory and firmware updates [CHSM3](#)

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**3** Perform the following: device driver installation, scheduled maintenance, and memory and firmware updates [CHSM3](#)

Identify the following: common tools, basic diagnostic procedures, troubleshooting techniques, and preventative maintenance methods [CHSM4](#)

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**4** Identify the following: common tools, basic diagnostic procedures, troubleshooting techniques, and preventative maintenance methods [CHSM4](#)

Explain and apply the troubleshooting process to diagnose and repair common hardware and software problems. [CHSM5](#)

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**5** Explain and apply the troubleshooting process to diagnose and repair common hardware and software problems. [CHSM5](#)

Demonstrate and understanding of conversion between

**6** Demonstrate and understanding of conversion between binary, decimal, hexadecimal number systems [CHSM6](#)

binary, decimal,  
hexadecimal number  
systems [CHSM6](#)

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Compare and contrast  
client operating systems  
and their  
features. [CHSM7](#)

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Use multiple user  
interfaces, including  
command-line, to  
perform operating  
system management  
tasks, to configure,  
optimize and upgrade  
the current client  
operating system and to  
diagnose network  
connection issues [CHSM8](#)

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Use and manage file  
systems, operating  
system utilities, backup  
programs, and  
optimization  
tools. [CHSM9](#)

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Describe the process to  
install, configure, secure  
and troubleshoot a basic  
small or home office  
network. [CHSM10](#)

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Identify the  
fundamental principles  
of networking and  
security. [CHSM11](#)

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Describe and apply  
appropriate operational  
procedures including  
safety, environmental  
procedures, good  
communication skills,  
and professional  
behavior. [CHSM12](#)

**7** Compare and contrast client operating systems and their features. [CHSM7](#)

**8** Use multiple user interfaces, including command-line, to perform operating system management tasks, to configure, optimize and upgrade the current client operating system and to diagnose network connection issues [CHSM8](#)

**9** Use and manage file systems, operating system utilities, backup programs, and optimization tools. [CHSM9](#)

**10** Describe the process to install, configure, secure and troubleshoot a basic small or home office network. [CHSM10](#)

**11** Identify the fundamental principles of networking and security. [CHSM11](#)

**12** Describe and apply appropriate operational procedures including safety, environmental procedures, good communication skills, and professional behavior. [CHSM12](#)