Section 5: Computer Software Learning Companion

|  |  |  |
| --- | --- | --- |
|  | Application Software | Systems Software |
| Description |  |  |
| Examples |  |  |

What does an operating system do?

What are some of the basic tasks of the Operating System?

The 4 Categories of Operating Systems

What is a Network Operating Systems?

What is a Server Operating Systems?

What are Mobile Operating Systems?

What is a Personal Computer Operating Systems?

What are Desktop Operating Systems?

The 3 Most Common Operating Systems

|  |  |  |  |
| --- | --- | --- | --- |
|  | Windows | MacOs | Linux |
| Description |  |  |  |
| Open or Closed Sourced |  |  |  |
| What are they known for? |  |  |  |

Name some of the flavors of Linux.

Operating Systems for Mobile Devices

|  |  |  |
| --- | --- | --- |
|  | Google Android | Apple iOS |
| Description |  |  |
| Open or Close Sourced |  |  |

What is Utility Software and what are examples?

What is the Kernal?

What are some of the basic functions of the Kernal?

User Interfaces

|  |  |  |
| --- | --- | --- |
|  | Graphical User Interfaces (GUIs) | Command-line interfaces (CLIs) |
| Description |  |  |
| Examples |  |  |

What information are used on operating system user accounts?

Who establishes the end user accounts?

What do file managers do?

What is a directory path?

File Structure Differences

|  |  |  |
| --- | --- | --- |
|  | Windows | Linux |
| Directory path – uses a forward or backward slash |  |  |
| What is the root directory? |  |  |
| What is the home directory? |  |  |

What is memory management?

What is paging?

What is virtual memory?

What are device drivers?

Where are device drivers stored?

What are device drivers referred to as?

Give some examples of device drivers.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Productivity Software | Collaborative Software | Specialized Software |
| Description |  |  |  |
| Examples |  |  |  |

Software Architecture – Application Software

|  |  |  |  |
| --- | --- | --- | --- |
|  | Bespoke | Off-the-Shelf | Hybrid |
| Features/Purpose |  |  |  |
| Controlled By |  |  |  |
| Cost |  |  |  |
| Time |  |  |  |

What are Local Applications?

What are Cloud Applications?

Software Licensing

|  |  |  |  |
| --- | --- | --- | --- |
|  | Closed-Source | Open-Source |  |
| Description |  |  |  |
| Examples |  |  |  |
| Purpose |  |  |  |

Software Packaging

|  |  |  |  |
| --- | --- | --- | --- |
|  | Shareware | Freeware | Public Domain |
| Description |  |  |  |
| Protected by EULA (Yes or No) |  |  |  |
| Protected by Copyright (Yes or No) |  |  |  |
| Protected by Intellectual Property Protections (Yes or No) |  |  |  |

Which software packaging does the US give an author the ability to prevent unauthorized duplication for at least 35 years?

What is a copyright and examples?

What are patents?

What is a utility Patent and examples?

What is a design Patent and examples?

What is word programming?

What are the programs that instruct the computer to perform certain tasks?

Can computers understand human language?

How do we communicate now with computers?

What is source code or programming languages?

What is machine code or machine languages?

What two things do we use to translate our code into machine code?

Compiler vs. Interpreter

|  |  |  |
| --- | --- | --- |
|  | Compiler (Programming Language) | Interpreter (Scripted Language) |
| Description of how it works |  |  |
| When does it check the code for errors? |  |  |
| When does the error have to be resolved? |  |  |
| Disadvantage/Advantages |  |  |
| Examples |  |  |

What is an algorithm?

What is an algorithm used for?