Software And Algorithm

Tags: Software, Algorithm, Computer programs, Documentation, Application, Systems Software,

Software

Software is...

- indispensable for any computer system and the people using the system
- consist of computer programs that control workings of computer hardware
- **a collection of data or computer instructions that tell the computer how to work**
- includes computer programs. libraries and related non-executable data, such as online documentation or digital media

Note: Software expenditures exceed spending on hardware:

- *Software 26%*
- *Hardware 20%*
- *Outsourcing 20%*
- *Consulting 19%*
- *Communication equipment 15%*

Software is divided to 2 parts:

Computer Programs

sequence of instructions for the computer

Documentation

text that describes program functions to help the user operate the computer system
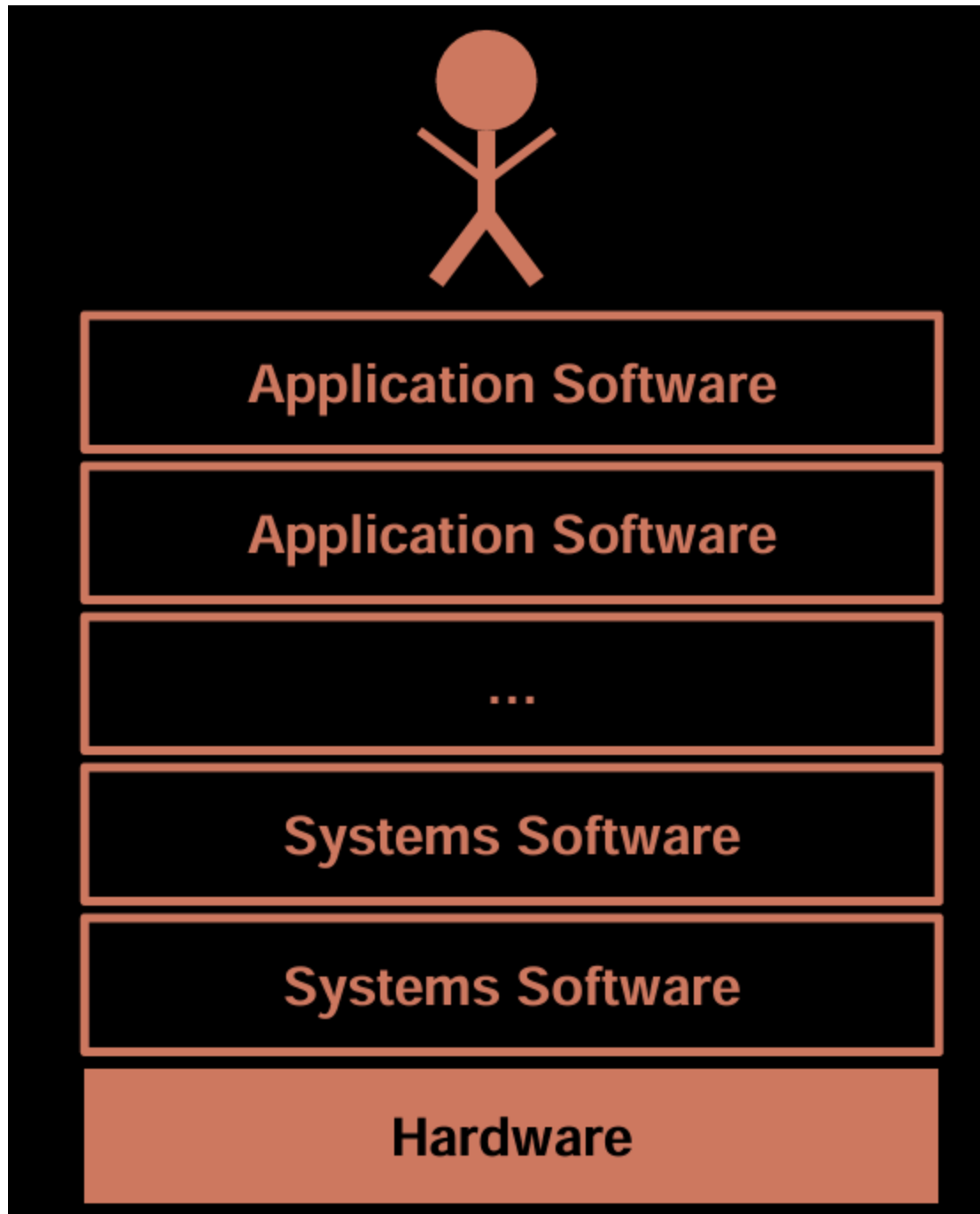
Algorithm

"An algorithm is a sequence of discrete actions that when followed, will result in achieving some goal or solving some problem"

Algorithm + Data Structures = Programs

Types of Software

**There are 2 types of Software:

- **Systems Software**
- **Application Software**

The Sandwich Model

Systems Software

The set of programs that coordinates the activities and functions of hardware and other programs

Computer System Platform

The combination of a hardware configuration and systems software.

Application Software

- A key to helping a user to achieve goals
- Helps users to solve particular problems
- In most cases resides on the computer hard disk (also can be in CDs, DVDs, on USB flash drives)

There are 3 types of application software

- personal only user
- workgroup/ small groups of people
- enterprise/ large organization

Personal

serves the needs of an individual user, helps to improve their personal effectiveness

Workgroup

helps groupwork members to attain their common goals

Enterprise

servers the needs of the firm in its interaction with its enviroment

Software	Personal	Workgroup	Enterprise
Systems software	Smartphone, tablet computer, personal computer, and workstation operating systems	Network operating systems	Server and mainframe operating systems
Application software	Word processing, spreadsheet, database, and graphics	Electronic mail, group scheduling, shared work, and collaboration	General ledger, order entry, payroll, and human resources