Basic Application Software

Chapter 3
Learning Outcomes

- Identify general-purpose applications
- Describe word processors, spreadsheets, presentation programs, and database management systems.
- Identify specialized applications.
- Describe graphics programs, web authoring programs, and other specialized professional applications.
- Describe mobile apps and app stores.
- Identify software suites.
- Describe office suites, cloud suites, specialized suites, and utility suites.
Introduction

• Not long ago, trained specialists were required to perform many of the operations you can now do with a personal computer.

• Competent end users need to understand the capabilities of basic application software including:
  • Word processors
  • Spreadsheets
  • Presentation programs
  • Database management systems
Application Software

- Application software
  - End user software
  - Accomplish a variety of tasks
- Three categories
  1. General Purpose Applications
  2. Specialized Applications
  3. Mobile Apps
User Interface

• Graphical User Interface (GUI) consists of:
  • Icons
  • Pointer
  • Windows
  • Menus
  • Toolbars
    • Buttons
  • Dialog Boxes
Common Features in Microsoft

• Ribbon GUI
  • Ribbons
  • Tabs
    • Groups
    • Contextual tabs
  • Galleries
• Spell checkers
• Alignment
• Font and Font Sizes
• Tables
• Reports
General Purpose Applications

- General purpose applications include:
  - Word processor programs
  - Spreadsheet programs
  - Presentation graphics programs
  - Database management systems
Word Processor Programs

• Create text-based documents
  • Memos, letters, and faxes
  • Newsletters, manuals, and brochures

• Word processing programs
  • Microsoft Word
    • Most popular
  • Apple Pages
  • Google Docs
  • Corel WordPerfect
  • OpenOffice Writer
Creating a Flyer

- Flyer Features
  - Spell Checker
  - Center-alignment
  - Grammar Checker
  - Fonts
  - Font Sizes
  - Word Wrap
  - Character Effects
Creating a Report

• Report Features
  • AutoCorrect
  • Footnote
  • Header or Footer
  • Captions and Cross References
  • Tables
Spreadsheet Programs

- Organize, analyze, and graph numeric data
- Spreadsheet programs
  - Microsoft Excel
    - Most widely used
  - Apple Numbers
  - OpenOffice Calc
  - Corel Quattro Pro
  - Google Sheets
Creating a Sales Forecast

- Features
  - Worksheets
  - Text entries
  - Functions
  - Cells
  - Formulas

Worksheets
Worksheets are used for a wide range of different applications. One of the most common uses is to create, analyze, and forecast budgets.

Functions
Functions are prewritten formulas. In this case, cell C22 (Total Expenses for February) contains the function \[ \text{SUM(C14:C21)} \] rather than the formula \[ =C14+C15+C16+C17+C18+C19+C20+C21 \]

Downtown Internet Café
First Quarter Forecast

<table>
<thead>
<tr>
<th>Sales</th>
<th>JAN</th>
<th>FEB</th>
<th>MAR</th>
<th>TOTAL</th>
<th>AVG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Espresso</td>
<td>$13,300</td>
<td>$13,600</td>
<td>$14,200</td>
<td>$41,100</td>
<td>$13,700</td>
</tr>
<tr>
<td>Drip Coffee</td>
<td>$5,800</td>
<td>$6,600</td>
<td>$6,200</td>
<td>$18,600</td>
<td>$6,000</td>
</tr>
<tr>
<td>Food/Beverage</td>
<td>$3,600</td>
<td>$3,800</td>
<td>$3,800</td>
<td>$11,200</td>
<td></td>
</tr>
<tr>
<td>Merchandise</td>
<td>$1,000</td>
<td>$1,100</td>
<td>$1,100</td>
<td>$3,200</td>
<td></td>
</tr>
<tr>
<td>Computer</td>
<td>$400</td>
<td>$400</td>
<td>$400</td>
<td>$1,200</td>
<td></td>
</tr>
<tr>
<td>Total Sales</td>
<td>$24,100</td>
<td>$24,900</td>
<td>$25,700</td>
<td>$74,700</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expenses</th>
<th>JAN</th>
<th>FEB</th>
<th>MAR</th>
<th>TOTAL</th>
<th>AVG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of Goods</td>
<td>$7,225</td>
<td>$7,480</td>
<td>$7,690</td>
<td>$22,395</td>
<td></td>
</tr>
<tr>
<td>Cost of Merchandise</td>
<td>$700</td>
<td>$770</td>
<td>$770</td>
<td>$2,240</td>
<td></td>
</tr>
<tr>
<td>Payroll</td>
<td>$9,000</td>
<td>$9,000</td>
<td>$9,000</td>
<td>$27,000</td>
<td>$9,000</td>
</tr>
<tr>
<td>Internet</td>
<td>$325</td>
<td>$325</td>
<td>$325</td>
<td>$975</td>
<td></td>
</tr>
<tr>
<td>Building</td>
<td>$2,100</td>
<td>$2,100</td>
<td>$2,100</td>
<td>$6,300</td>
<td></td>
</tr>
<tr>
<td>Advertising</td>
<td>$600</td>
<td>$600</td>
<td>$600</td>
<td>$1,800</td>
<td></td>
</tr>
<tr>
<td>Capital Assets</td>
<td>$1,500</td>
<td>$1,500</td>
<td>$1,500</td>
<td>$4,500</td>
<td></td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>$1,300</td>
<td>$1,300</td>
<td>$1,300</td>
<td>$3,900</td>
<td></td>
</tr>
<tr>
<td>Total Expenses</td>
<td>$22,175</td>
<td>$23,075</td>
<td>$23,285</td>
<td>$69,100</td>
<td></td>
</tr>
</tbody>
</table>

Income

<table>
<thead>
<tr>
<th>Income</th>
<th>JAN</th>
<th>FEB</th>
<th>MAR</th>
<th>TOTAL</th>
<th>AVG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Income</td>
<td>$1,350</td>
<td>$1,825</td>
<td>$4,146</td>
<td>$5,885</td>
<td></td>
</tr>
<tr>
<td>Profit Margin</td>
<td>5.60%</td>
<td>7.33%</td>
<td>9.40%</td>
<td>7.48%</td>
<td></td>
</tr>
</tbody>
</table>

Income Year-To-Date: $5,590

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Analyzing Your Data

- Analysis Features
- Workbook and worksheets
- What-if Analysis
Presentation Graphics Programs

- Combine a variety of visual objects to create visually interesting presentations
- Presentation programs
  - Microsoft PowerPoint
  - OpenOffice Impress
  - Apple Keynote
  - Google Slides
  - Corel Presentations
Creating a Presentation

- Presentation Features
  - Document Theme
  - Animation
  - Templates
Database Management Systems (DBMS)

• A collection of related data
• Electronic equivalent of a file cabinet
• Two most widely used systems
  • Microsoft Access
  • OpenOffice Base
  • Apple FileMaker
  • Google Obvibase
Creating a Database

First steps is to plan

- Database Features
  - Primary Key
  - Fields
  - Record
  - Table
  - Form

Fields are given field names that are displayed at the top of each table. You select the field names to describe their contents.

Table
Tables make up the basic structure of a relational database with columns containing field data and rows containing record information. This table records basic information about each employee, including name, address, and telephone number.

Primary Key
The primary key is the unique employee identification number. You considered using the last name field as the primary key but realized that more than one employee could have the same last name. Primary keys are often used to link tables.

Record
Each record contains information about one employee. A record often includes a combination of numeric, text, and object data types.

Form
Like printed paper forms, electronic forms should be designed to be easy to read and use. This form makes it easy to enter and view all employees’ data, including their photographs.
Specialized Applications

• Programs that more narrowly focused on specific disciplines and occupations
• Includes:
  • Graphics Programs
  • Web Authoring Programs
Graphics Programs

• Widely used in graphic arts
• Types of graphics programs are:
  • Desktop Publishing Programs
  • Image Editing Programs
  • Illustration Programs
  • Image Galleries
Desktop Publishing Programs

• Also known as Page Layout Programs
• Mix text and graphics to create brochures, newsletters, newspapers and textbooks
• Popular programs:
  • Adobe InDesign
  • Microsoft Publisher
  • QuarkXPress
Image Editors

- Also know as Photo Editors
- Editing or modifying digital photographs
- Photographs consist of thousands of pixels that form images known as bitmaps
- Popular image editors
  - Adobe Photoshop
  - Corel PaintShop Pro
  - GIMP (GNU Manipulation Program)
  - Windows Live Photo Gallery
Illustration Programs

- Drawing programs
- Create and edit vector images
  - Vector illustrations
- Geometric shapes or objects
- Created by connecting lines and curves
- Defined by mathematical equations

Popular Illustration Programs
- Adobe Illustrator
- CorelDraw
- Inkscape
Video Editors

- Edit videos to enhance quality and appearance
  - Can now use your smartphone to edit videos
- Well-known programs
  - Windows Live Movie Maker
  - Apple iMovie
  - YouTube Video Editor
Video Game Design Software

- Video Game Design Software helps
  - Organize thoughts
  - Guide user through game design process
    - Character development
    - Environmental design
  - Free / inexpensive video game design software
    - YoYo GameMaker
    - Stencyl
    - Unity
Web Authoring Programs

- Web authoring is the creation of a site
  - Design
  - Document file displaying website’s content
- Blog
  - Online diary/commentaries
- Web Authoring Programs
  - Typically used to create commercial sites
  - Web page editors or HTML editors
  - WYSIWYG (what you see is what you get)
- Most widely used programs
  - Adobe Dreamweaver
  - Microsoft Expression Web
Mobile Apps

- Mobile Applications or Mobile Apps
  - Add-on programs for a variety of mobile devices
  - Smartphones or tablets
- Apps
  - Breadth and scope are ever-expanding
  - 500,000 just for iPhone
  - Music, videos, social networking, shopping, games
App Stores

- App Stores
  - Provides access to mobile apps for downloads
    - Apple’s App Store
      - Apple Devices
      - www.apple.com/itunes/charts
    - Google Play
      - Andriod Devices
      - Play.google.com/store/apps
    - Appszoom
      - Andriod and Apple Devices
      - www.appszoom.com
Software Suites

- Collection of separate application programs
  - Bundled together – sold as group
- Four types of suites
  1. Office suites or office software suite / productivity suites
     - Microsoft Office
     - Apple iWork, OpenOffice
  2. Cloud suites or online office suites
     - Google Docs (Making IT Work for You), Zoho, Microsoft Office 365
Suites continued

• Specialized suites
  • Focus on specific applications
    • Corel Draw Graphics Suite X6
    • Moneyfree Software TOTAL Planning Suite

• Utility suites
  • Designed to make computing easier and safer
    • Norton Systems Works
    • Norton Internet Security suite
Making IT Work for You - Google Docs

- Tool to create and collaborate with others
- Creating /sharing documents
  - Free and easy to use
  - Free Google account
  - Free online storage
Careers In IT

• Software Engineers
  • Analyze users’ needs and create application software
• Attributes
  • Good communication and analytical skills
  • Programming experience
  • Detail oriented
  • Web application experience
  • Analytical skills
• Earning potential of $55,000 to $71,000 annually
A Look to the Future

Next-Generation User Interfaces

- Doubtful a single interface will serve everyone
- Must be comfortable to use
  - Touch / interactive screen
  - Voice recognition
  - Gestures
  - Augmented Reality
1. Explain the difference between general-purpose and specialized applications. Also discuss the common features of application programs, including those with traditional and ribbon graphical user interfaces.

2. Discuss general-purpose applications including word processors, spreadsheets, database management systems, and presentation graphics.
3. Discuss specialized applications, including graphics programs, video game design software, web authoring programs, and other professional specialized applications.

4. Describe mobile apps, including popular apps and app stores.

5. Describe software suites, including office suites, cloud suites, specialized suites, and utility suites.