

Information Communication Technologies

Lecture 7. Application Software

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Agenda

- 1 Software Basics
- 2 Using Software Systems
- 3 Advanced Command-Line Functions
- 4 Batch File Commands
- 5 Batch Script Files

Software Basics

- A **computer program** is a set of detailed, step-by-step instructions that tells a computer how to solve a problem or carry out a task.



Adobe® Photoshop® CS



Software Basics (continued)

- Programs are written in a language which the computer can interpret and process.
- **Software comprises of the following:**
 - *set of one or more programs to be used directly or indirectly in a computer to perform a certain task.*
 - *associated data for the instructions.*





Copyrighted Software

- Software is protected by copyright
- A *copyright* is a form of legal protection that grants the copyright owner exclusive rights to copy the software, to distribute and sell it, and to modify it.
- Purchase of software give the right to use the software but not to copy or distribute it.

Copyrighted Software (continued)

- ***Software pirates*** are people who illegally copy distribute software or modify software
- **Pirated Software:** illegal copies of software (appz, warez).
- Software without copyright notice is also protected by **Copyright Laws.**

Pirate Bay



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Все Аудио Видео Программы Игры Другое

Пиратский Поиск

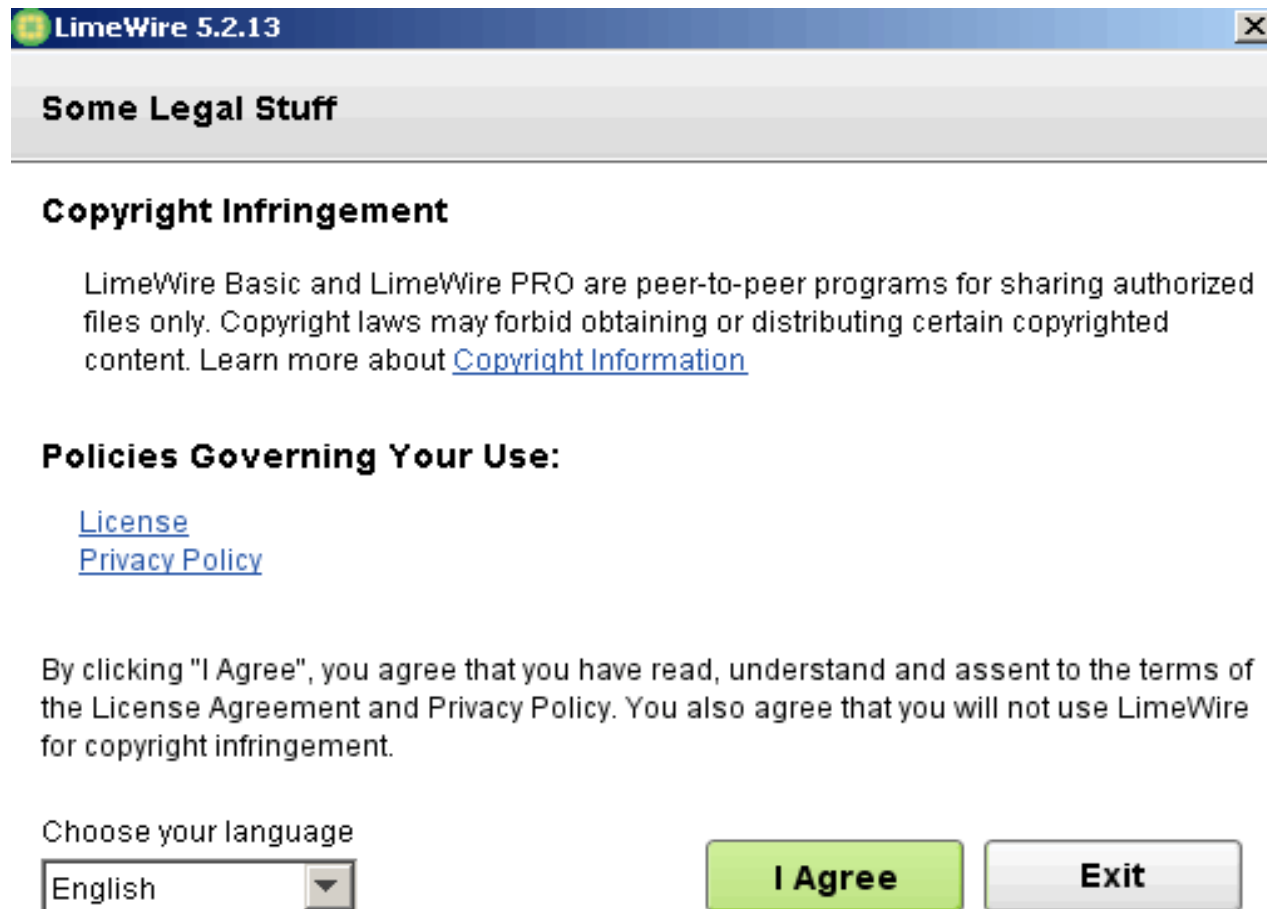
Мне повезёт!

Как мне скачивать?

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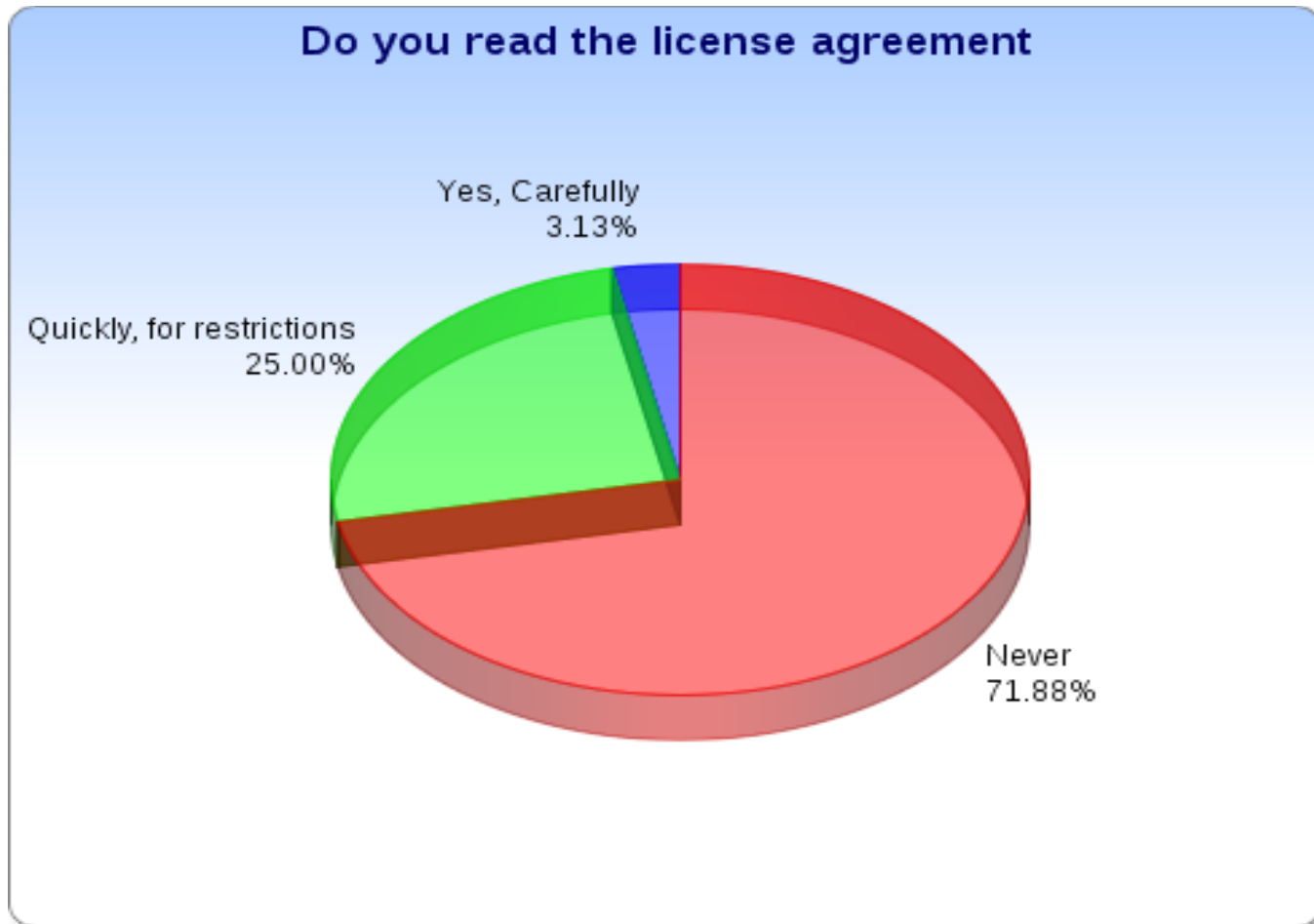
Software license

- When installing software, do you read the licensing agreement before clicking the **I Accept** button?



Software license

- 280 people participated on the test



Different Types of Licenses

- **Software License: Legal contract which defines what ways the software has to be used.**
- Microcomputer Software has license on the outside package, on a separate card inside package or on CD packaging.
- Mainframe computer licenses are separate legal document, negotiated between the software publisher and a corporate buyer.



Legislation of Kazakhstan

- Законодательство Казахстана по охране прав авторов базируется на множестве документов:
 - Бернская конвенция об охране литературных и художественных произведений
 - Всемирная Женевская Конвенция об авторском праве
 - Договор ВОИС по авторскому праву в отношении охраны отдельных прав на некоторые виды произведений
 - Конституция РК
 - Гражданский Кодекс РК
 - Закон РК «Об авторском праве и смежных правах»
 - Кодекс РК « Об административных правонарушениях»
 - Уголовный кодекс РК

Different Types of Licenses (continued)

- **Shrink-Wrap Licenses**: Floppies, CD-ROM and DVD in the package are usually sealed in an envelope or plastic shrink wrapping and the opening the wraps indicates that your agreement to the license.



Licenses for More than One User

- **Single User License**: Most commercial Software limits the license to one user at a time.
- **Multiple-user License**:
 - allows more than one person to use a software.
 - Beneficial when more users wants to have a personalized version of the software.
 - For example: **Electronic mail program** where multiple users require their own mailbox

Licenses for More than One User (continued)

Concurrent License:

- software licensing model based on the number of users accessing the program simultaneously.

Site License:

- License for software using at certain site corporate office or university campus.

Shareware Licenses

- **Shareware**: software used freely for a trial period and pay a registration fee after the trial period.
- Licenses offered for shareware:
 - Allowed to make copies and distribute the copies
 - Not permitted to modify the software.
 - Provides low cost marketing and distribution channel.

Shareware Licenses

iSpring Pro Registration ✕



**iSpring Pro 3.5
Registration**

To activate your **iSpring Pro** copy you should enter your Trial License or Full License information.

[Purchase a full license](#) [Get a free trial license](#)

If you have already got a license please enter your registration name and serial number into the fields below.

Registration name:

Serial number:

[Register](#) [Cancel](#)

Public Domain Software

- Author of the software abandons all the right to the software.
- Places it in public domain making them available to the public.
- Owned by the public rather than by the author.
- Freely copied, distributed and even resold.

Software Categories

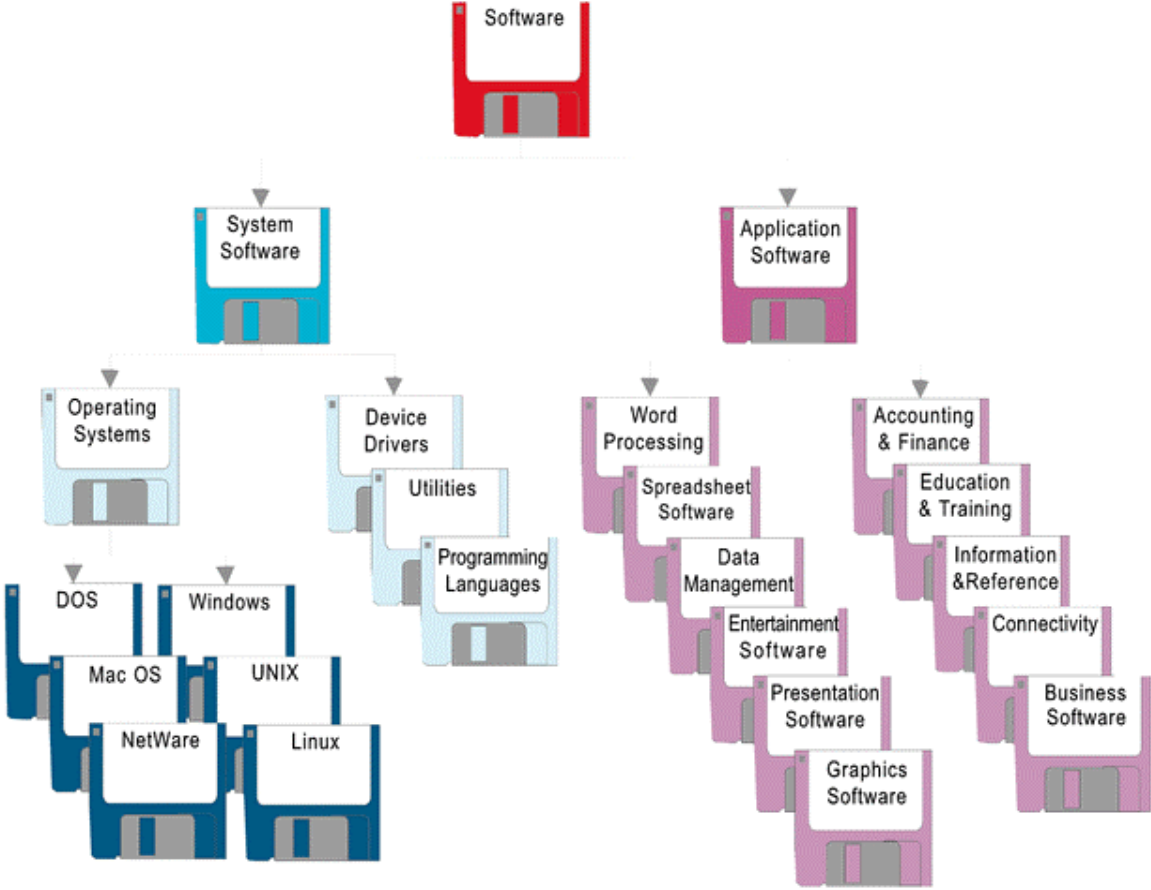
- Classified into two major categories.
 - **System Software**
 - **Application Software.**
- **System Software**
 - helps computer do basic operating tasks.
 - Required only when a computer is available
 - **Examples :**
 - **Device drivers** - **Operating systems**
 - **Utilities** - **Programming languages**

Software Categories (continued)

- **Application Software:**

- helps the human computerize a specific task.
- Computerizes the task which can be done without a computer.
- For example, **word processing software** used to prepare documents and reports which can be done without a computer.

Software Categories (continued)



Software Compatibility

- To be compatible, software must be:
 - written for the type of computer you use
 - written for your computer's operating system
- **System requirements** specify operating system and minimum hardware capacity
 - listed outside software package

SYSTEM REQUIREMENTS	
OS	Windows® Vista, XP, or 2000
CPU	3.0 GHz P4, Dual Core 2.0 or AMD64X2 (or higher)
RAM	1 GB for XP / 2GB for Vista
DISC DRIVE	DVD-ROM Drive
HARD DRIVE	At least 7.5 GB of free space
VIDEO	DirectX 9 compatible video card (See right)
SOUND	DirectX 9.0c compatible sound card

Video card must be 256 MB or more and should be a DirectX 9-compatible with support for pixel shader 2.0

Determine Compatibility

- Make sure software is written for PC or Macintosh.
- Make sure software will work with your operating system.
 - higher number = more recent version
 - version verses revision
- Operating systems are ***downward compatible***, meaning you can use software designed for earlier versions of the software, but not later.

Software Setup

- Software ships on:
 - floppy disks
 - CDs
 - DVDs
- **Installation process** copies software to your computer system's hard disk.
- **Setup program** ushers you through installation process.

Computer Programming Languages

- Series of instructions a computer follows to perform a task.
- Allows programmer instructions using English like language.
- Programming instructions are translated to electrical signals that the computer manipulate and process.
- Examples:
 - COBOL
 - C, C++, JAVA
 - BASIC

Installing Software

- Software should be compatible with the operating system in your computer.
- Same Software is available for different type of computer.
- For example **MS word is available for both PC and MAC but different version.**

Software Setup

- Software are shipped on floppies, CDs and DVDs.
- Software are installed in the hard disc following certain instructions
- *Installing instructions for command line operating systems such as DOS are not consistent and carefully followed.*
- *Windows Operating systems use a consistent setup program for installing.*

Software Setup (continued)

- Non multimedia applications copies the program modules in to the hard disc and do not need CD-ROM to use the program.
- Multimedia applications require lot of space due to sound, video, animations and it can be used by inserting the CD-ROM for accessing the images, sound etc.

Different Types of Software

- Document Production Software
- Graphics Software
- Presentation software
- Spreadsheet and statistical software
- Data management Software
- Information and Reference Software

Different Types of Software (continued)



Connectivity Software



Education and Training Software



Entertainment Software



Accounting and Finance Software



Business Software

Documentation Software

- **Word Processing Software**

- Used for composing, editing, designing documents, reports, letters and printing in electronic format.
- Different types of document software.



Documentation of Software (continued)

- **Web authoring Software:**

- design, develop customized web pages to publish it in internet.
- Helps non technical users to create web pages
- Microsoft FrontPage, Macromedia Dreamweaver.



Documentation Software (continued)

- **Desktop Publishing Software:**

- Provides graphic design techniques to enhance the formatting and appearance of the document
- Used for Newsletters, Newspapers and magazines, brochures.



Welcome. In this, our third issue, we're celebrating World Rural Women's Day, with stories about this important part of our work. Concern Universal supports some of the most disadvantaged women in poor societies, around the world.

It's a staggering fact that rural women living in poverty, mainly subsistence farmers, represent more than a quarter of the world's total population. And yet, they are so often discriminated against, with sole responsibility for feeding their families but no rights to their land.

These facts help to explain why gender equality is so central to our work, and why in countries such as Brazil and Colombia – where the incidence of abuse and discrimination is so high – our projects focus almost exclusively on promoting the rights of women and children. In this issue we tell the real-life stories of six remarkable women who have challenged traditional prejudice to change the lives, not only of their families, but also their local communities.

Many of the women that we work with are leading human rights activists in their countries. This is certainly true of our next visitor to the UK, Dr Milon Akposo, who has worked tirelessly to promote sexual awareness and health amongst young women in Nigeria. If you would like to support Milon and other pioneering women like her, please do have a look at our new website.

Thank you so much for your continuing support and I look forward to being in touch again soon.

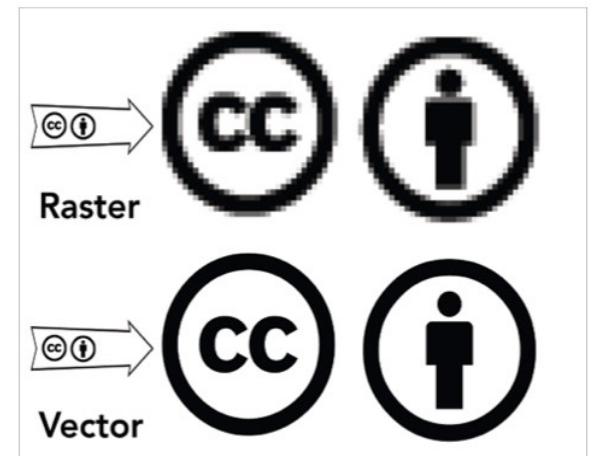
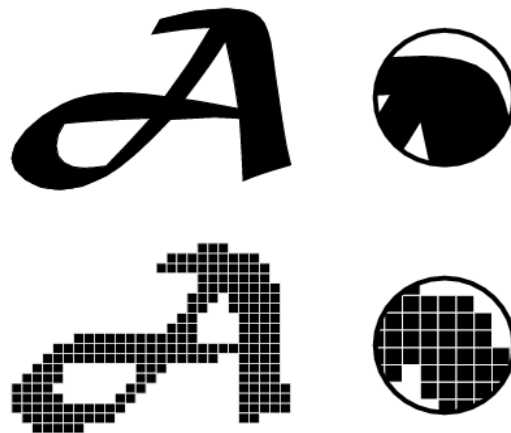
Ian Williams

Dr Ian Williams
Executive Director



Graphics Software

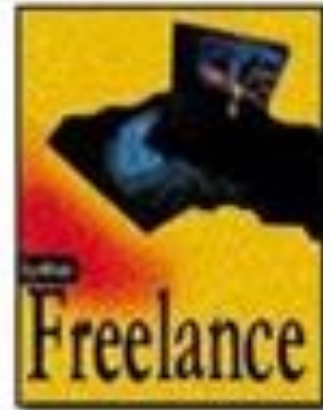
- Helps you create, edit and manipulate images.
- **Bitmap images** are stored as form of dots example photos (Paint, Photoshop)
- **Vector graphics** are filled by lines and shapes and suitable for corporate logos, schematics etc.
- *3-D graphics*



Presentation, Spreadsheet, and Statistical Software

- **Presentation Software:**

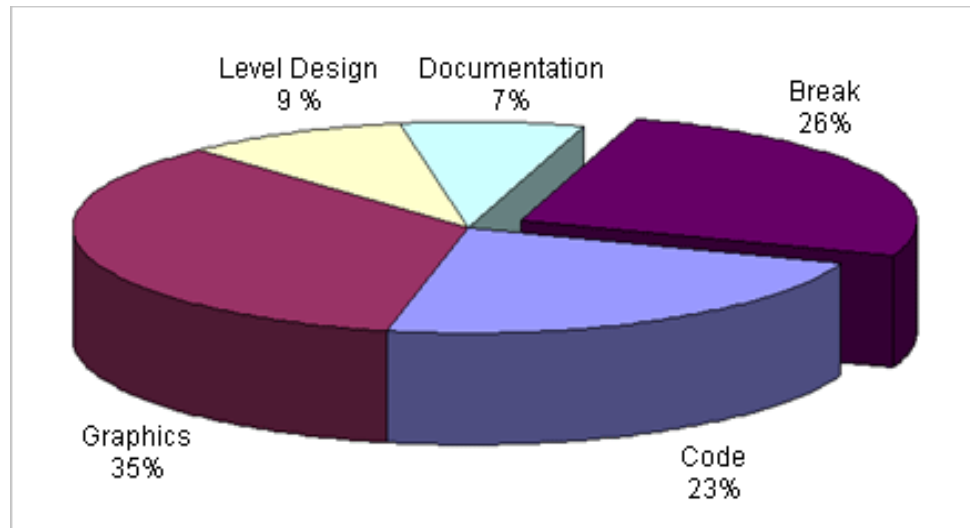
- Software used to create collection of electronic slides of text, animation, graphs and sound capabilities.
- Microsoft PowerPoint, Lotus Freelance Graphics.



Presentation, Spreadsheet, and Statistical Software (continued)

- **Spreadsheet and Statistical software:**

- Used for calculations based on numbers and formulas.
- Used for transforming complex data into meaningful graphs.



Data Management Software (continued)

- **Database** is a collection of related files.
- **Database Management Software(DBMS):** used to organize, join, summarize and search sorted data in files.
- Frequently used in business, government and education.
- **Microsoft Access, Lotus approach and Claris** software are examples of database software for microcomputers.

Information and Reference Software

- Provides collection of information and a way to access the information.
- Spans a wide range of applications of **encyclopedias**, **medical references**, **map software**, **trip planners** and other topics.



Information and Reference Software (continued)

- Software Publishers placed on their reference materials on web sites.
- Contains text, animation, graphics, audio and video on a wide range of topics.
- Microsoft Encarta, Britannica CD, Compton encyclopedia are famous software available.



Connectivity Software

- Provides connections to network or to internet.
 - used to dial connection for internet, provide web browsers for viewing web pages.
 - Web browsers like Internet Explorer, Firefox.
- **Remote control software** are used connect computers in home and office.
- **E-mail software** manages the computer mailbox



Education and Training Software

- Software used to teach, learn and practice new skills **(Edutainment)**
- Presented in the form of games the children can play and the levels of games are adapted to the child's age.
- GMAT, SAT, LSAT.



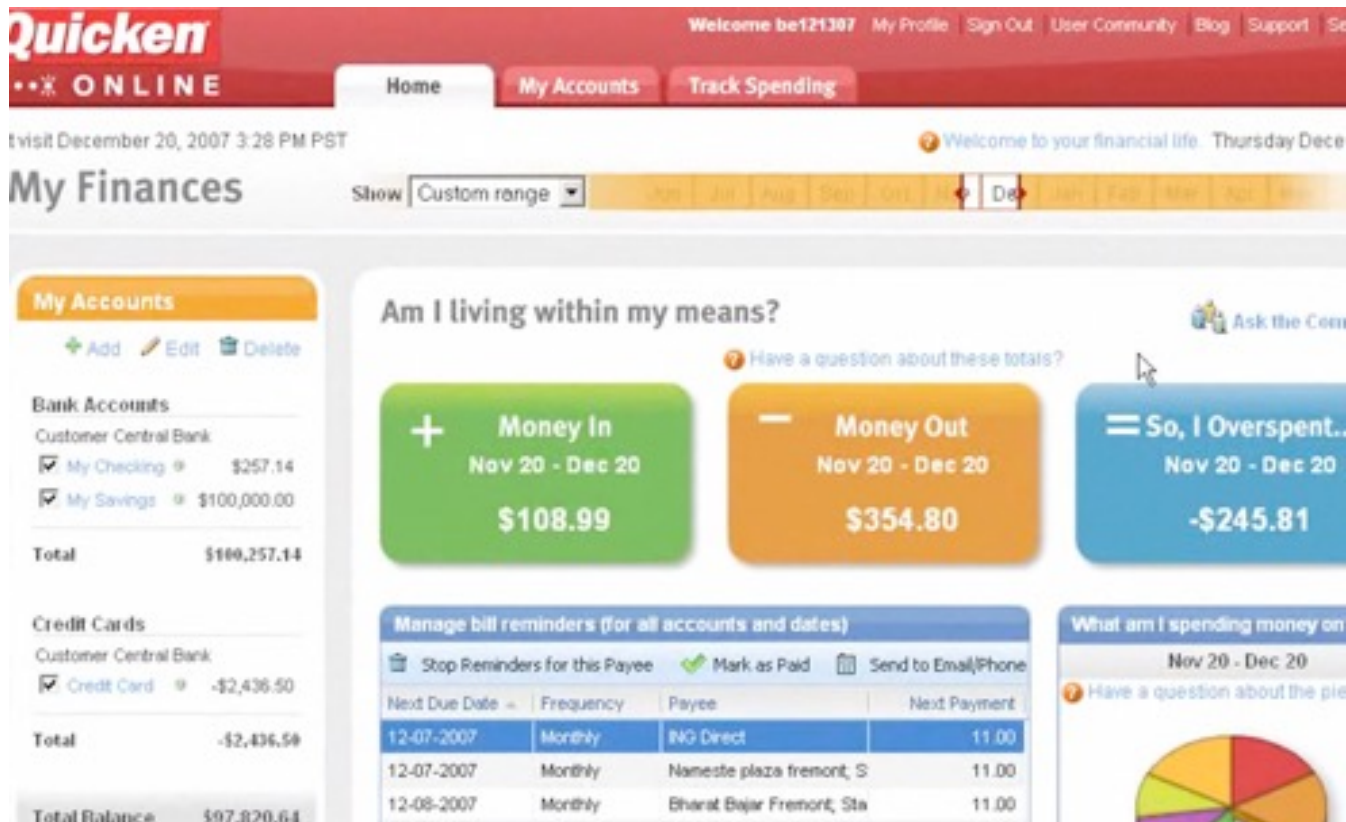
Entertainment Software

- Includes games of all sorts, simulations software toys and software designed to help you enjoy hobbies and leisure activities.
- Adventure and role playing software contains 3-D graphics.



Accounting and Finance Software

- Keeps track of transactions and investments.
- Personal Finance software suitable for tracking credit card balances, bills, bank accounts.
- Online Banking

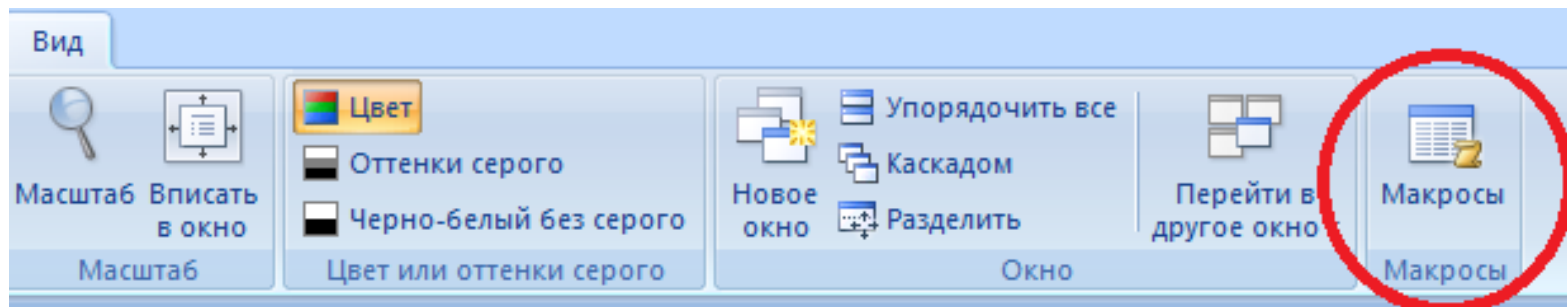


Business Software

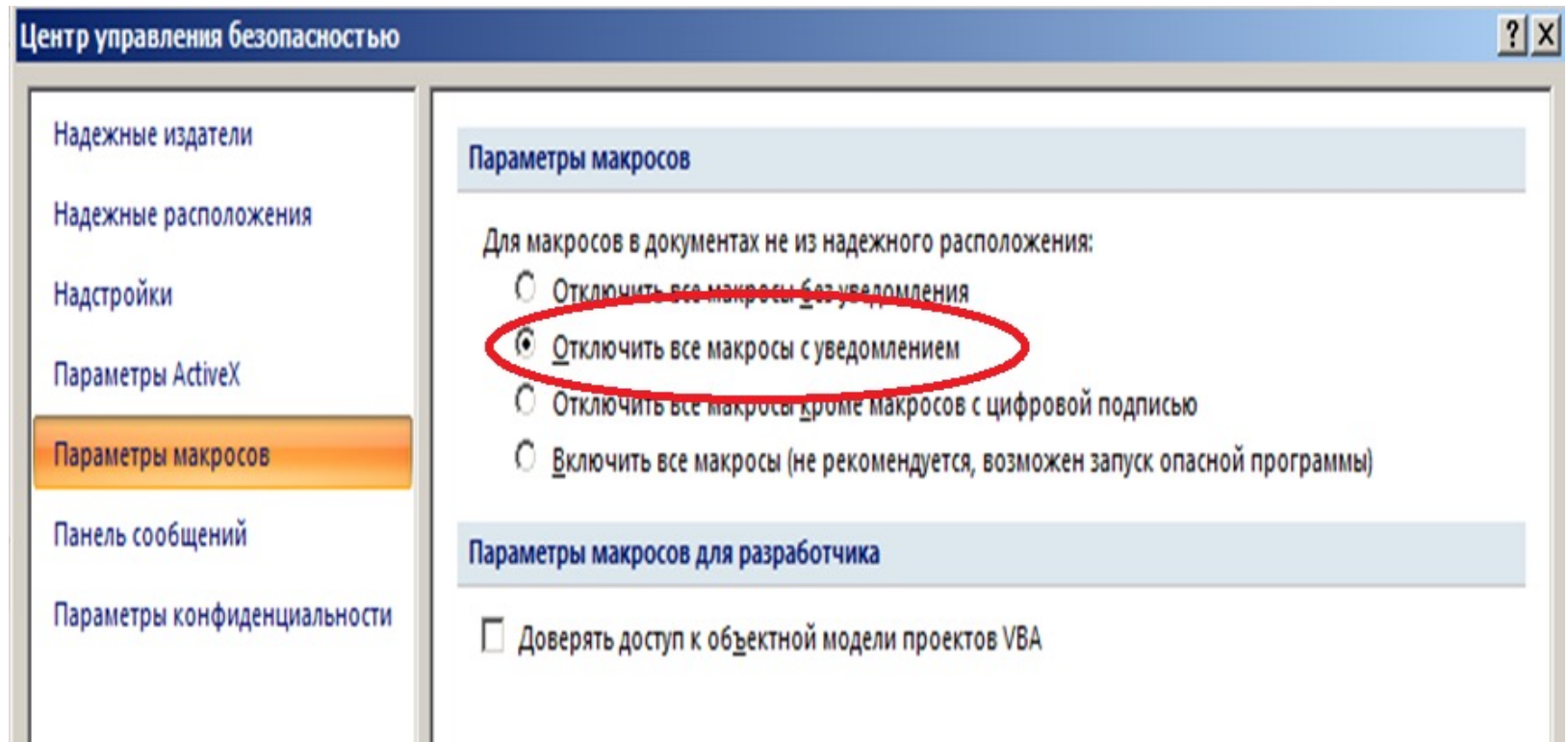
- Allows accomplish routine tasks for businesses
- Horizontal market Software:
 - generic software package that can be used by any type of businesses.
 - For example: **Payroll software** which is common in all organizations.
- Vertical market software:
 - used to automate specialized tasks in a specific market such as health insurance, car sales, construction.

Macros

- A **macro** is a **recorded sequence of keyboard and/or mouse clicks within an application**
- The application must support macros
- It can simplify a complicated set of instructions, so that other people can perform the operation without having to understand all of the details involved with the application interface



Macros



Object Linking and Embedding

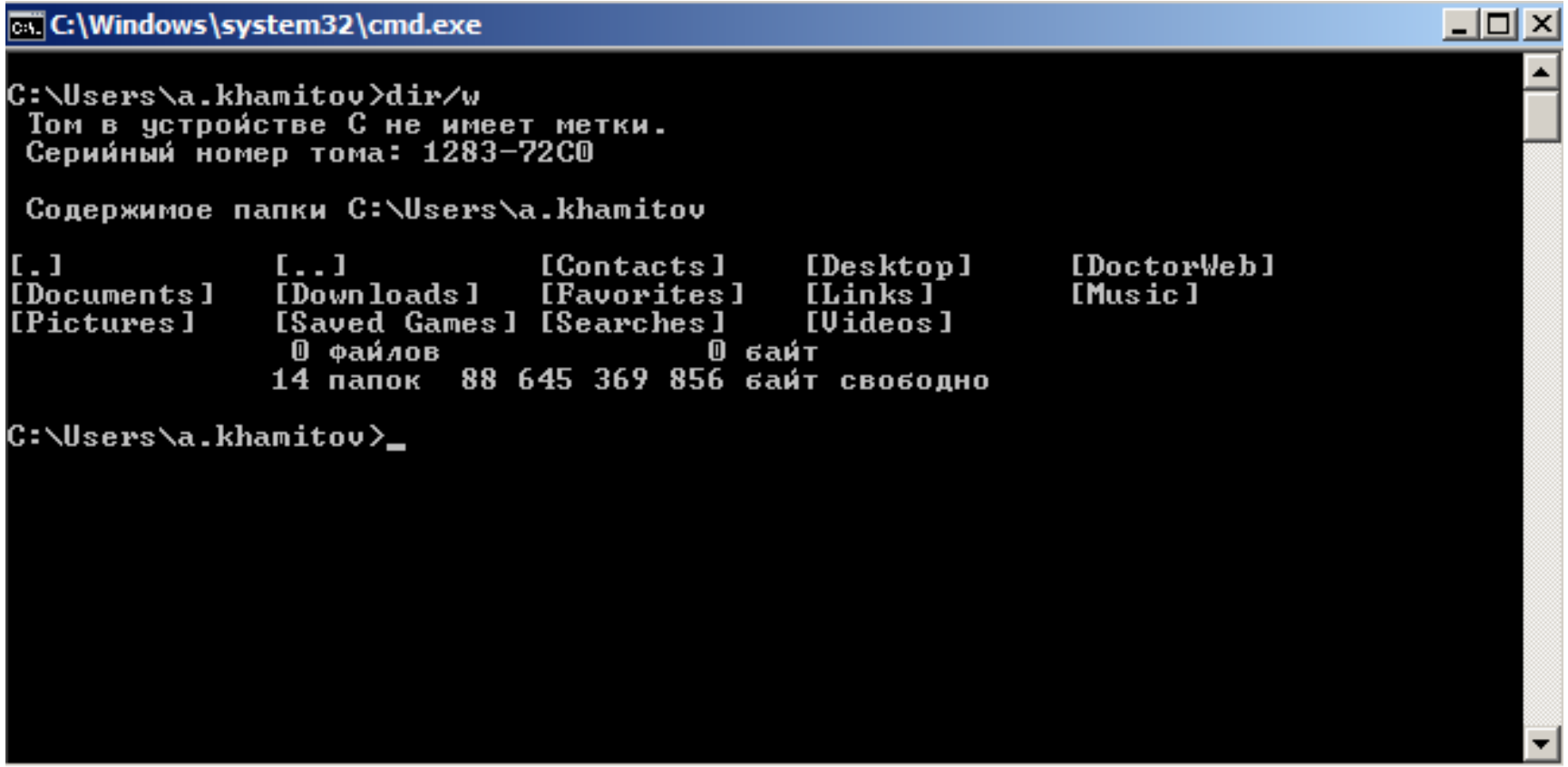
- Object Linking and Embedding (OLE) allows data that has been created by a different application to be combined into one document (graphics or spreadsheets)
- **Embedding** data – import data whose changes are saved as part of the host document (no affect on the original document that was the source of the data)
- **Linking** allows the embedded data to be updated when the original data is changed.

Microsoft command line

- **DOS Command Syntax**

- Syntax – the rules of DOS (**not case-sensitive**)
- Commands can have one or more **switches**
 - Written as a slash / ex: **dir /w**
 - Switches can have **parameters** using a colon : ex: **dir /o:s**
- Commands can take **arguments** such as file names or paths
ex: **dir /w c:**
- **dir /o:-g** - put directories at the end of the listing instead of at the beginning

DOS commands



```
C:\Windows\system32\cmd.exe
C:\Users\a.khamitov>dir/w
Том в устройстве C не имеет метки.
Серийный номер тома: 1283-72C0

Содержимое папки C:\Users\a.khamitov

[.]          [..]        [Contacts]   [Desktop]    [DoctorWeb]
[Documents] [Downloads] [Favorites]  [Links]      [Music]
[Pictures]  [Saved Games] [Searches]  [Videos]
             0 файлов             0 байт
             14 папок  88 645 369 856 байт свободно

C:\Users\a.khamitov>_
```

DOS Commands (continued)

cd	Change working directory
md	Make new directory
rd	Remove an existing empty directory
deltree	Remove an existing directory & contents
attrib	Change a files attributes, read, system
copy	Make a copy of a file
xcopy	Make a copy of files & subdirectories
ren	Rename a file within a directory
move	Move a file from one directory/drive
del	Delete files
dir	List files in a directory
type	Display contents of a text file

DOS Commands

- "C:\Windows>" – working directory
- *del filename ...* - any number of files could be deleted at the same time
- Root folder indicator (\)

Ex: C:\> *del \mydir\hello.txt*

```
C:\> del/?
```

```
Deletes one or more files.
```

```
DEL [drive:][path]filename [/P]
```

```
ERASE [drive:][path]filename [/P]
```

```
[drive:][path]filename Specifies the file(s) to delete. Specify multiple  
files by using wildcards.
```

```
/P Prompts for confirmation before deleting each file.
```

DOS Commands

- **Wildcard** is an asterisk (*) that can match any number of characters in a file

example:

- `dir c:\n*`
- `dir c:*n`
- `dir c:*n*`
- `dir c:*.doc`
- `dir c:*`

DOS Commands

- **del c:\w*** and **del c:\w *** **What happens?**

- **question mark (?)**

del c:*.*

del c:\?????????.????

Variant One	Variant Two	With Wildcard
Andersen	Anderson	Anders?n
Tim	Tom	T?m

- dir file?

Batch Files

- Can record actions you perform with a mouse for later playback using OS's command line interface
- Batch files in UNIX OS is called **script** files.
- Example of a batch file:

```
@ECHO OFF
```

```
REM Student Name
```

```
if EXIST %1 goto ERRORMSG
```

```
dir %2 c:\ > %1
```

```
goto END
```

```
:ERRORMSG
```

```
ECHO The %1 already exists, aborting EXDIR
```

```
:END
```

END of Lecture 7
