Файлове и потоци

File – something (a resource) that stores information

* Located on a storage device
* Has name, size, extension and contents
* Stores information as series of bytes

Two file types – text and binary

Text files contain text information

* Store text differently according to the **encoding**. E.g.:
  + in ASCII a character is represented by 1 byte,
  + in UTF8 a character is represented by 1-4 bytes

Binary files – store raw sequence of bytes

* can contain any data (images, sounds, multimedia, etc.)
* not human-readable

Stream – the natural way to transfer data in the computer world

Streams are ordered sequences of bytes – provide consecutive access to its elements

По default повечето хард дискове четат по 4 kB наведнъж (на операция), така че 4 kB е оптималния вариант при четене на байтове

Different types of streams are available to access different data sources – file access, network access, memory streams and others

Base streams:

FileStream – чете и пише във файлове

MemoryStream – чете и пише в паметта

NetworkStream – чете и пише по мрежата

.NET supports special streams

* they work just like normal streams but provide additional functionality. E.g.:
  + CryptoStream – encrypts when writing, decrypts when reading
  + GzipStream – compresses, decompresses data

**File** is a static class that provides methods for quick and easy manipulation of files

Празните файлове и папки не заемат никава памет на твърдия диск. Заемат памет само във файловата система