***Digital basics***

**Digital revolution**

In the first phase computers were huge, complex and expensive devices. They existed in limited numbers, primarily housed in big corporations and government agencies. Computers and data processing became crucial tools for effective business operations. The second stage was presented by personal computing which is characterized by small, standalone computers powered by local software. Local software refers to any software that is installed on a computer`s hard disk. The third phase of the digital revolution materialized as computers became networked and when the Internet was opened to public use. Cloud computing characterize the fourth phase of the digital revolution. Cloud computing provides access to information, applications, communications and storage over the Internet.

**Data and Information**

Data is raw material. Information is processed data. Data is the input to the processing, information is the output.

Data refers to the symbols that represent people, events, things, and ideas. In everyday conversation people use the terms data and information interchangeably. Data becomes information when it is presented in a format that people can understand and use. Data is used by machines, such as computers, information is used by humans. Information may be data that has a particular meaning within a specific context. Information may be data that has been processed in some way.

**Data representation**

Data representation refers to the form in which data is stored, processed, and transmitted. For example, devices such as smartphones, tablets, and computer store numbers, text, music, photos, and videos in formats that can be handled by electronic circuitry. Those formats are data representations. Data can be represented using digital or analog methods. The term to digitize means to convert raw, analog data into digital format represented by 0s and 1s.

**Data processing**

When we speak of data processing, the input is data, the output is useful information. So, data processing is a series of actions or operations that convert data into useful information.

**The Issues of Fair Use**

Fair use is a concept that allows non-profit usage of copyrighted material for purposes such as education, analysis, parody etc. Until 1970s there were no lows that prohibited copying and distribution of music or films, but eventually big corporations saw that they could earn additional money from people for copyright infringement. Time and format shifting are examples of fair use.

The first term refers to the practice of recording a program to view it at a later time. The second one means that you can, for example, rip tracks from a music disk that you own to play them on your phone of computer .