Multimedia Notes - Audio

There are two main types of audio or sound file used in multimedia. One involves the use of actual recorded sound (samples) and the other involves the use of computer hardware and software (synthesizers) to produce sounds.

Analogue

Recorded sound in its raw state is an analogue or wave signal. Most of the popular music on the internet is in a compressed analogue type known as mp3. Compression is the process of removing sound that is deemed unnecessary, for example pitches beyond human hearing, from a sound recording. This decreases the size of a sound file without significant reduction in quality for most people. Sound enthusiasts will argue that removing these pitches decreases the quality of a sound recording because hearing is not the only way that we experience sound. It is a popular understanding that the composer Beethoven was profoundly death in his later years and that his experience of his own music was predominately through vibration. How would mp3 versions of his music sounded to him?

DJ's make their living mixing and remixing sound samples from a variety of sources. Drag and drop sample software such as Acid Music Studio and Magix Music Maker allow end users to mix samples in tracks to create their own music. It can be seen as painting with blocks of sound.

Digital/Synthesizer

Synthesizers mimic the sounds of traditional instruments as well as creating new sounds. These sounds don't rely on the vibrations of strings, air or percussion but on variations in electronic pulses.

In order to input and output these types of sound a system was developed called the Musical Instrument Digital Interface or Midi. Notation software such as Anvil Studio and Musescore allow users to create and play musical scores (notes) and change instrumentation.

As midi files are not raw analogue sound files but rather digital coding that simply needs to be decoded by the computers sound software the file sizes are dramatically smaller. For this reason most background music for older games is in this format.