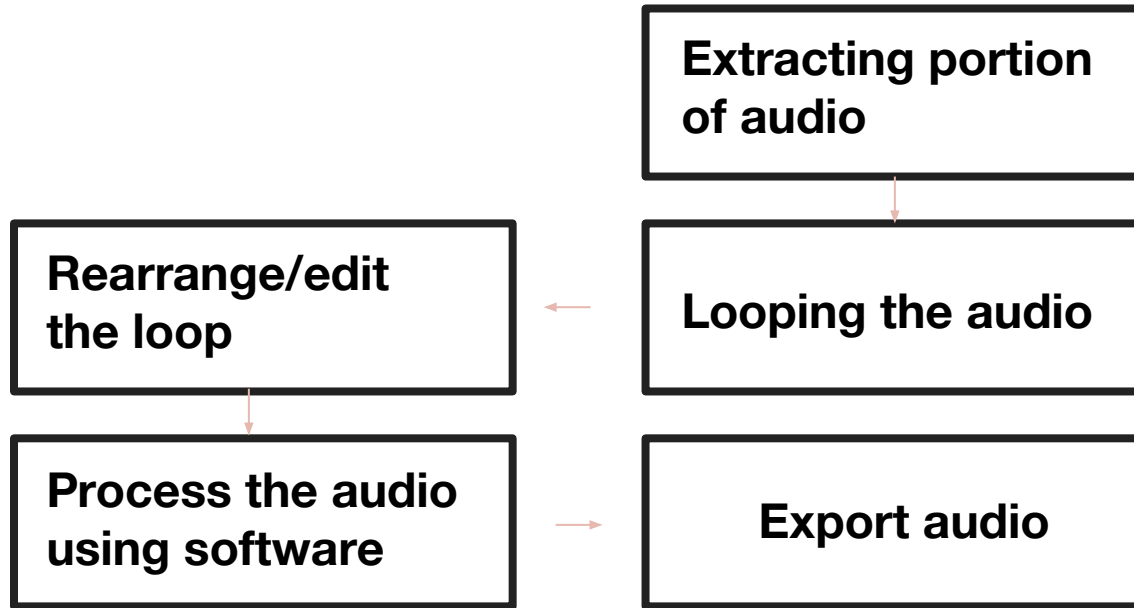SAMPLING

What is Sampling?

Sampling is the reuse of a portion of a sound recording in another recording. The samples are integrated by means of hardware/software such as digital audio workstations (DAW).

Sampling workflow diagram

Extracting portion of audio

Looping the audio

Rearrange/edit the loop

Process the audio using software

Export audio

CSound

What is CSound?

- **SOUND AND MUSIC SYNTHESIS SYSTEM**, providing facilities for **composition** and **performance** over a wide range of platforms
- can be seen as a **SOUND COMPILAR** meaning it takes source code and converts it into object code (stream of numbers representing audio)
- In order to hear the audio it is played back through a **DAC** (Digital to Analogue Converter)

What is CSound?

- not restricted to any style of music, has been used for many years in a variety of genres, including classical, pop, techno, and ambient
- completely **modular** and **extensible** by the user
- guarantee **backwards compatibility**

Language History

- written at MIT by **Barry Vercoe** in 1985
- based on **Music11** (his earlier project which was based on Music-N by Max Mathews at the Bell Labs)
- was continually developed through the 1990s - 2000s by John Fitch at University of Bath
- Many different collaborating programmers contributed to it over the years

Application Fields
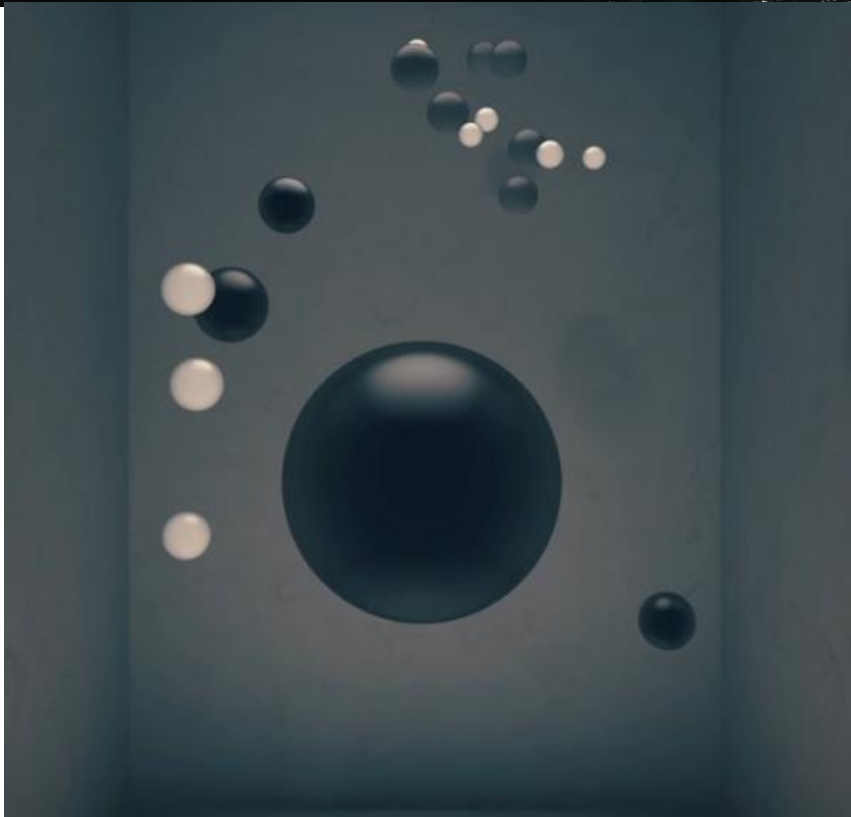
- used as a **live performance** tool

Practical Example

live.csound.com

Practical Example

- The sound installation "**VLBI Music**"
- Norwegian Mapping authority's headquarters in Hønefoss.
- VLBI (Verly Long Baseline Interferometry)
- raw data as material for the live running composition.
- Øyvind Brandtsegg

Sound from **10:16**

Practical Example

- Flyndre (Flounder)
- sculpture by Norwegian sculptor Nils Aas
- environmental conditions like temperature, light, tidal water, moon phases, seasons of the year and more
- raw data as material for the live running composition.
- Øyvind Brandtsegg

Sound **here**

Yay!