

**i. What is the difference between an attack and an onset?**

An onset is a *moment* when a sound begins.

An attack is a *duration*, which spans from a sound's onset to the moment when the sound's amplitude stops rising.

**ii. Why is preprocessing typically done to the signal?**

Preprocessing creates a new signal that is better suited for the later stages of onset detection.

**iii. What is the purpose of reduction?**

Reduction transforms an audio signal into a new, greatly simplified signal, which represents the transients of the original signal.

**iv. What is the role of peak picking?**

Peak-picking eliminates certain peaks produced by reduction, hopefully retaining only the peaks that correspond with onsets of the original audio signal.