Music composition, as all other creative activities, requires original inspiration, which can also come from melodies generated by a computer. This thesis describes generation of music tracks represented by tree structures with pluggable modules that create or alter individual musical motives. The trees can subsequently be combined by a crossbreeding algorithm driven by user ratings. This results in music tracks evolving on multiple levels, such as the selected instruments or musical motives, rhythm and overall structure. Appropriate settings of parameters for the generator and constituent modules can then produce varied tracks for inspiration or relaxation. The thesis is accompanied by a complete application using these techniques for music generation and a user study of satisfaction with the resulting tracks.