Electronically generated music has taken the world by a storm. It has never been more popular, having permanently penetrated the music industry, To make electronic music and virtual sounds, Digital Audio Workstations(DAWs) are widely used. However for the amateur newbie who just wants to try to see if he can make some beats and melodies, these softwares can be extremely overwhelming. This fact led me to the problem that **there are no music synthesis softwares are designed for newbies that provide a very basic introductory experience into the world of electronic music.**

To solve this problem I intend to create a basic music synthesis software, which will give the user a feel of what its like to use a DAW, acting as a stepping stone. To do this I will create an environment with the most essential features of such software, making sure that the experience is straightforward. The main feature of this program will be melody and beats creation using a piano roll and mouse. The piano roll will be used for multiple instruments, all available separately. Multiple instruments will allow the user to delve into combinational music which can be very powerful. A basic volume control for each instrument will be provided instead of the generally complex mixer.

This environment will be generated using the **pygame module** in python. I will be heavily using the submodule pymixer in my project. I will use pygame to create an interactive GUI and the environment. I will also used to to output sounds using pymixer. I chose to use pygame as it is extremely powerful, moreover, it allows for sound output which was missing in tkinter. I will also be using recorded notes of instruments to generate music files. These notes are mapped to specific keyboard keys, depending on the instrument. Furthermore the user can generate sound by clicking on the respective note/time spot in piano roll grid. This will be the main form of interaction with the user. The user will be able to switch between the various instruments and also output the sound of all of them together or separately if he/she wishes to do so. Also the user will be able to load an existing track in WAV format, which could contain recorded vocals for instance, my software will be able to incorporate that as a separate track/instrument.