

Our Architecture consists of a desktop and the option of two interfaces to interact with the app: a MIDI Keyboard and a Mouse. The users will use these devices to respond to whatever is being displayed on the desktop (Windows OS) screen. Our application code will then process whatever input the user provides and then update the screen to reflect changes. Our class diagram is divided into three sections: Measure Generation, Setup and Game Core. Measure generation contains classes responsible for modelling and generating measures of music. For example, a measure may contain 4 quarter A notes in succession. Instance variables on the MeasureGenerator class will enable us to dynamically create questions of different difficulties to display to the user. The Game Core subsection contains classes related to the running of the game. The view classes handle displaying results to the user and receiving input. The processor classes handle parsing the input. The GameController and TutorialController manage the flow of a level start, measures being generated and checking user answers for correctness. The setup subsystem contains classes that display the level select screen to the user and handle the setup of the midi keyboard. All controller classes also contain a field which indicates whether the view should be rendered in dark mode or light mode.