|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case UC-1:** | | | **Config** |
| **Related Requirements:** | | | REQ1, REQ2, REQ6, REQ7 & REQ9 |
| **Initiating Actor:** | | | User |
| **Actor’s Goal:** | | | To configure the tonality and the style so as to get the generated melody. Or to specify the first piece of music to generate melody. |
| **Participating Actors:** | | | Visualizer, Generator |
| **Preconditions:** | | | The software always displays the list of available tonality, style and duration. |
| **Postconditions:** | | | The melody is generated according to decision the user made. |
| **Flow of Events for Main Success Scenario:** | | | |
| → | 1. | **User** selects the options from the tonality, duration and style lists. | |
| ← | 2. | **System** (a) saves the choices made by the **User** and (b) sends the data to the **Generator** to generate music. | |
| **Flow of Events for Extensions (Alternative Scenarios):** | | | |
| → | 1. | **User** (a) clicks “Import” button to import the first piece of melody from MIDI file, or (b) notes the melody using numbered musical notations. | |
| ← | 2. | **Visualizer** displays the user’s input. | |
| ← | 3. | **System** (a) saves the file made by the **User** and (b) sends the data to the **Generator** to generate music. | |

|  |  |
| --- | --- |
| **Responsibility Description** | **Concept Name** |
| Rs1. Accept choices that what the tonality, duration and the style to be. | Recorder |
| Rs2. Send the choice to generator. | Sender |
| Rs3. Load the music data from MIDI file. | Loader |
| Rs4. Translate the MIDI data to become the numbered musical notations. | Translator |
| Rs5. Graphical interface allowing the user to edit the numbered musical notations. | Editor |

|  |  |  |
| --- | --- | --- |
| **Concept pair** | **Association description** | **Association name** |
| Recorder ↔ Sender | Recorder passes the user’s choice to Sender to store the data. | provides data |
| Loader ↔ Translator | Loader passes the MIDI data to Translator. | provides MIDI data |
| Translator ↔ Editor | Translator passes the musical notations to Editor. | provides musical notations |
| Editor ↔ Sender | Editor passes the final edition MIDI data to Sender. | provides data |

|  |  |  |
| --- | --- | --- |
| **Concept** | **Attributes** | **Attribute Description** |
| Recorder | default configuration | The possible tonality, duration and the musical style settings are defaulted. |
| archiver | User’s choices are archived. |
| Sender | pass data | The configuration is passed from Recorder to Generator. |
| Loader | MIDI data | MIDI data loaded from files. |
| Editor | Notations data | User’s noted musical notations. |