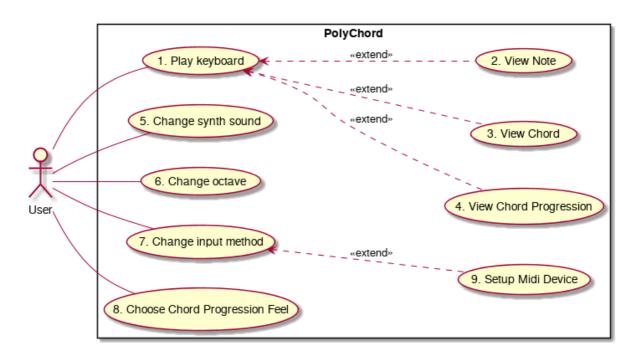
# **Use Case Models and Use Case Descriptions**

# **Use Case Models**

# Piano Keyboard Input

#### **Use Case model:**



# **Use Case Descriptions:**

## Play Keyboard:

• Use Case ID: 1

• Relevant User Story IDs: 1,2

• Actors: User

• Preconditions: None

• Post-conditions: None

• Exceptions handled: None

# **Steps:**

## **User Actions**

# System Responses

- User plays notes on the piano - System plays the corresponding sounds for the notes

## View Note:

• Use Case ID: 2

• Relevant User Story IDs: 31

- Actors: User
- Preconditions: User Plays Piano
- Post-conditions: None
- Exceptions handled: None

## **Steps:**

#### ### User Actions

#### ### System Responses

- User plays notes on the Piano System plays the corresponding sounds for the notes
- User views notes as they play System displays each note as it is played

#### View Chord:

- Use Case ID: 3
- Relevant User Story IDs: 1, 4
- · Actors: User
- Preconditions: User Plays Piano, notes played form a valid chord
- · Post-conditions: None
- Exceptions handled: If the notes aren't a chord, nothing is displayed

#### **Steps:**

#### ### User Actions

#### ### System Responses

- User plays notes on the Piano System plays the corresponding sounds for the notes
- User views chords as they play System displays the chord name

#### **View Chord Progression:**

- Use Case ID: 4
- Relevant User Story IDs: 28, 30
- Actors: User
- Preconditions: User Plays Piano, notes played form valid chord
- Post-conditions: None
- Exceptions handled: If the notes aren't a chord, nothing is displayed

## **Steps:**

## ### User Actions

# ### System Responses

- User plays notes on the Piano System plays the corresponding sounds for the notes
- User views notes as they play System displays chord progression suggestion

# **Change Synth Sound:**

- Use Case ID: 5
- Relevant User Story IDs: 9, 22
- Actors: User
- · Preconditions: None

• Post-conditions: None

· Exceptions handled: None

## **Steps:**

#### ### User Actions

#### ### System Responses

- User changes Synth sound selection - System changes the sound profile that is played by piano

## Change octave:

• Use Case ID: 6

• Relevant User Story IDs: 17

· Actors: User

• Preconditions: None

· Post-conditions: None

• Exceptions handled: None

#### **Steps:**

## ### User Actions

## ### System Responses

- User changes octave - System changes the octave that is played by piano

#### Change input method:

• Change Input Method: 7

• Relevant User Story IDs: 7, 31

• Actors: User

• Preconditions: In order for the Midi input to be selected, a Midi device must be set up

• Post-conditions: None

• Exceptions handled: If no Midi device is set up, the system must prompt the user to set one up, or leave the input on 'keyboard'

#### **Steps:**

#### ### User Actions

## ### System Responses

- User changes from Keyboard to MIDI or MIDI to keyboard input

- System accepts piano input only from the selected input

## **Choose Chord Progression Feel:**

• Change Input Method: 8

• Relevant User Story IDs: 16

· Actors: User

• Preconditions: None

• Post-conditions: None

• Exceptions handled: None

#### **Steps:**

#### ### User Actions

#### ### System Responses

- User chooses desired chord progression feel
- System prioritizes the user's desired feel when suggesting chord progressions

#### Setup Midi device:

- Change Input Method: 9
- Relevant User Story IDs: 7, 31
- Actors: User
- Preconditions:
- Post-conditions: Input can be changed to Midi
- Exceptions handled: If no Midi device can be detected for setup, the system must present an error to the user

# **Steps:**

#### ### User Actions

## ### System Responses

- User sets up Midi device - System attempts to detect Midi device - System sets up detected Midi device

# Piano Keyboard

#### Use Case model:

<UML image>

# **Use Case Descriptions:**

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- Use Case ID:
- Relevant User Story IDs:
- Actors:
- Preconditions
- User/System steps:
  - Step 1:
- · Post-conditions
- Exceptions handled: