## GUI Component

The Graphical User Interface (GUI) provides an interactive and visual indication for the user. During the process of obtaining user input, the tip text area shows the relative command syntax for user reference. Upon user’s task creation, GUI will show the corresponding status and update two main panels – task list and overview accordingly. *Figure 2* shows the class diagram of the GUI component and its dependency.



*Figure X. GUI component class diagram*

* 1. User interaction sequence diagram

A sequence diagram depicted in *Figure 3* demonstrates the interaction between the user and the GUI. Before the Enter key hit, the command tips will be displayed accordingly. If the *UP/DOWN* *key* being pressed, the input will be processed by *CommandHistory* class to generate previous commands.

 *Figure X. GUI component sequence diagram*

In additional, hotkeys such as *Ctrl + Z* (Undo) and *Ctrl + Y* (Redo) send the input to the Logic component to process.

* 1. GUI Class

GUI is implemented with the MVC (Model-View-Controller) pattern in mind. The component is solely responsible for the view portion. Part of the controller (UI events) is also implemented by the GUI component. All other parts such as data processing and storage of data are handled by other backend components.

* + 1. Task List Panel

The task list panel displays tasks according to their due dates. The tasks are shown up to maximum three categories (*Overdue*, two nearest due dates and Others). Each task creates a TaskPanel to be added to the task list. The *TaskPanel* class is responsible for the display of the details of each task.

* + 1. Overview Panel

Overview panel consist of two parts: one part is the label that holds the overall tasks statistics and the other part is to serve as hover display. The computation of the overall task statistics is based on a full working list which are different from that of Task List Panel.

* + 1. Command Tips

The Command Tips provides command syntax utilising the *CommandTips* class. The generation process is illustrated in Figure x.

*Figure X. Command Tips Activity Diagram*