PDF++ is a desktop application that targets students who are looking for a file manager in organising their PDF files. This application integrates both Command Line Interface (CLI) and Graphical User Interface (GUI) to provide an unique experience for you. All supported features can be performed via the CLI and relevant feedback, based on your command, will be shown via the GUI.

In terms of timing and frequency, there are two general approaches to integration: *late and one-time*, *early and frequent*.

Late and one-time: wait till all components are completed and integrate all finished components near the end of the project.

This approach is not recommended because integration often causes many component incompatibilities (due to previous miscommunications and misunderstandings) to surface which can lead to delivery delays i.e. Late integration  $\rightarrow$  incompatibilities found  $\rightarrow$  major rework required  $\rightarrow$  cannot meet the delivery date.

**Early and frequent**: integrate early and evolve each part in parallel, in small steps, re-integrating frequently.

A walking skeleton can be written first. This can be done by one developer, possibly the one in charge of integration. After that, all developers can flesh out the skeleton in parallel, adding one feature at a time. After each feature is done, simply integrate the new code to the main system.