User Manual

Download & Installation

Source code

The source code of ArchPrime can be downloaded in two ways:

- MMS submission
- Github clone: https://github.com/El15ande/CS4099_SHProject.git

Server installation

In the */server* directory:

1. Install Node.js dependencies if not installed: *npm install express cors*
2. Start server process: *node server.js*
3. The server will be hosted at localhost:20804

Client installation

In the */code/src* directory:

1. Install Node.js dependencies if not installed: *npm install*
2. An all-in-one running script has been prepared for users, the client can be started by: *npm run dev*
3. The client will be hosted at localhost:8080. Users can open their web browsers and access *localhost:8080*.
4. The server must be started before the client starts, otherwise files cannot be read.

Application Introduction

Dashboard

When both server and client are started, ArchPrime will be started defaultly at the dashboard page (figure 1).

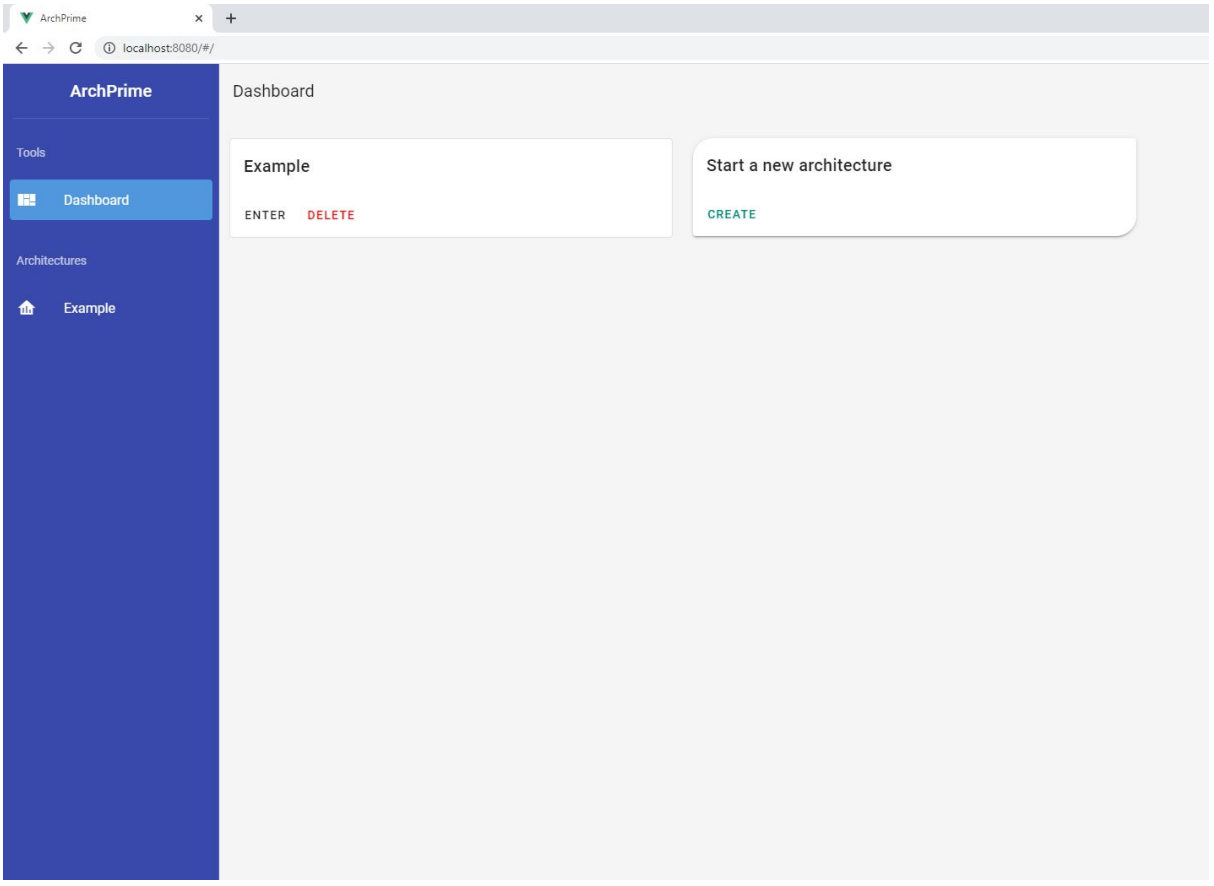

Figure 1. Dashboard

- Each dashboard card corresponds to an entry on the left navigation drawer. Clicking either ‘Enter’ button on the card or the drawer entry will direct the users to the graphical workbench.
- All files can be deleted by clicking the ‘Delete’ button on the card.
- ArchPrime provides a default ‘Example’ file to illustrate examples for users.
- The users can create a new architecture description file by clicking the ‘Create’ button and entering the file name.

Workbench & Top application bar

The workbench layout is displayed in figure 2. Each architecture description file starts from top-level configuration (i.e. first level).

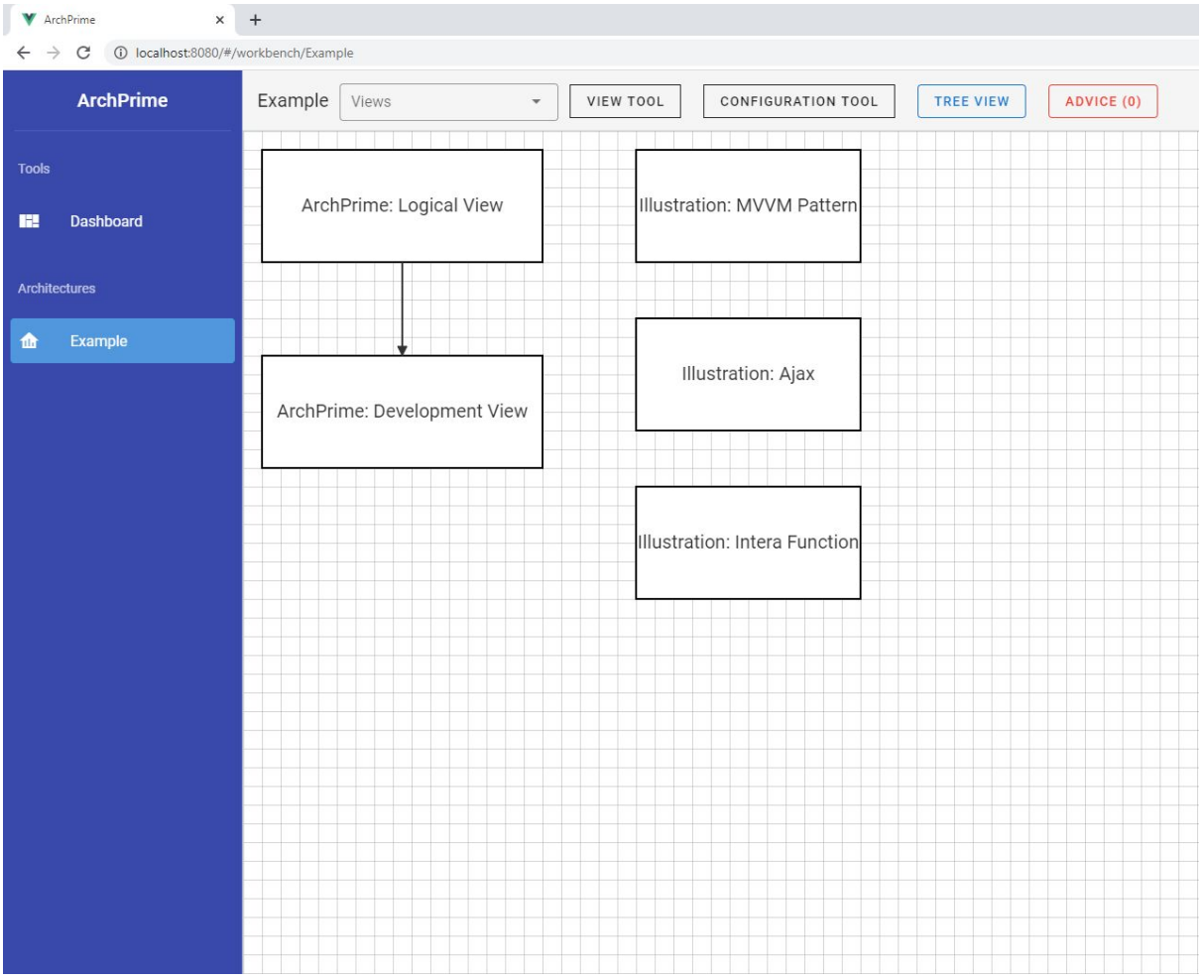

Figure 2. Workbench

- On the workbench page, the users can return back to the dashboard by clicking the ‘Dashboard’ entry.

The top application bar function:

- Views drop-down list: it displays all views (top-level components) of this architecture description. The users can access the view by clicking the list item (figure 3).
- View tool: it provides 3 functions for all views: returning to the first level, creating a new view and deleting the selected view (figure 4).
- Configuration tool: it provides 3 functions for all non-top-level (i.e. second level, third level, ...) configurations: returning to the previous level and creating a new component at the current level (figure 5).
- Tree view menu: it displays the hierarchical structure of a view. The user can access the entries at different levels by clicking on the icons (figure 6).
- Constraint checker: it displays the checking result from constraint checker. The user can access the test result from unit checkers (figure 7).

Figure 3. View drop-down list

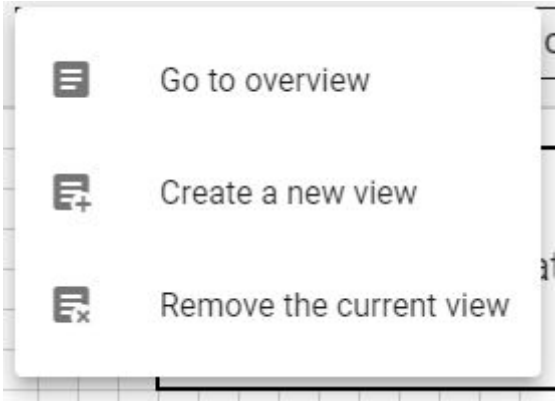

Figure 4. View tool

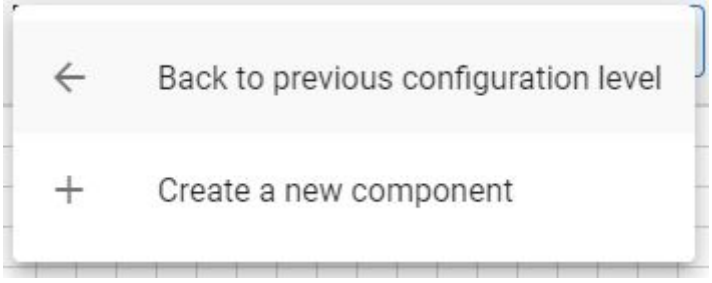

Figure 5. Configuration tool

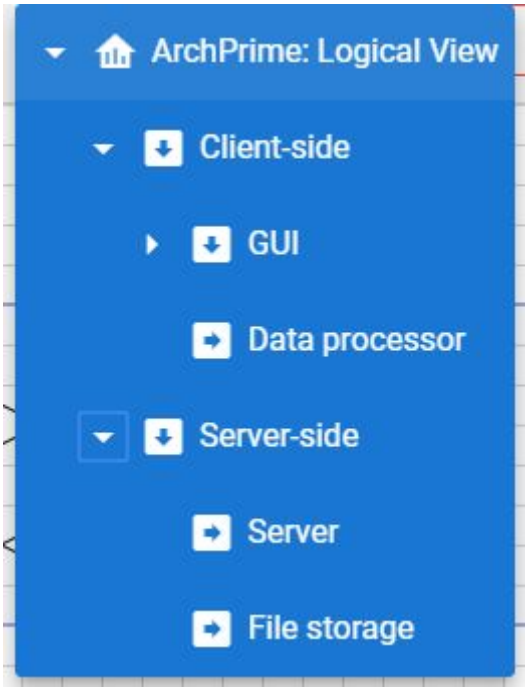

Figure 6. Tree view menu

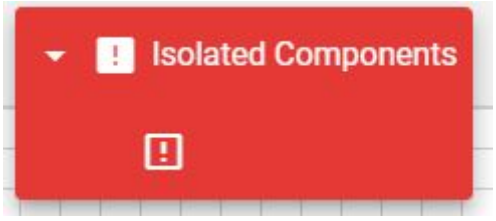

Figure 7. Constraint checker

Workbench terminologies & operations
Views model: the top level (1st level) configuration.

View: the top level component.

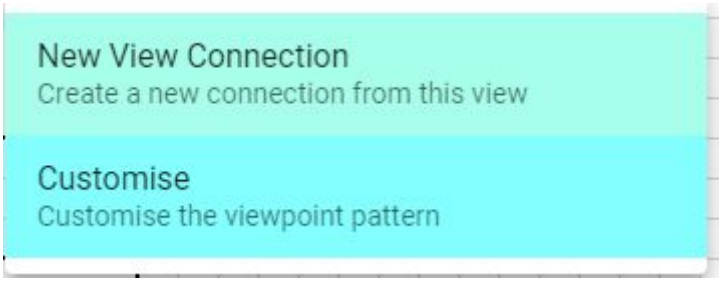

Figure 8. View right-clicking menu

View connection: the top level connector.

Figure 9. View connection right-clicking menu

Configuration: the hierarchical levels (2nd, 3rd, 4th levels...) configuration.

Component: the hierarchical levels component.

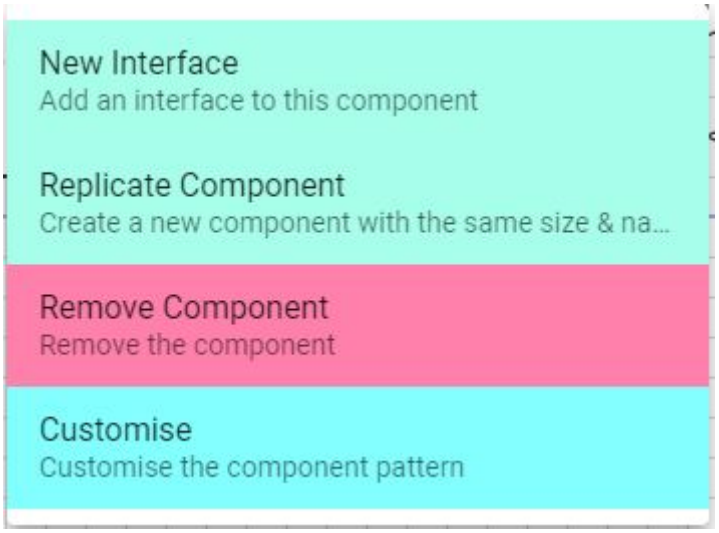

Figure 10. Component right-clicking menu

Connector: the hierarchical levels connector.

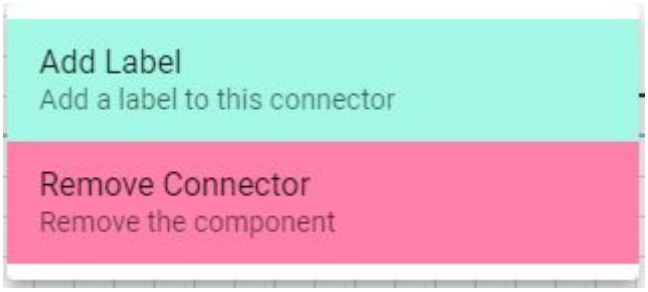

Figure 11. Connector right-clicking menu

Interface: the interface attached on components

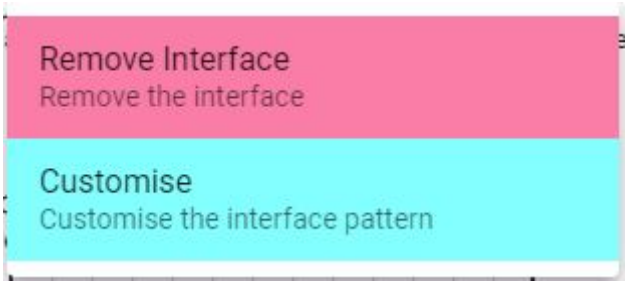

Figure 12. Interface right-clicking menu