COS 301 Main Project

Flowchart Simulation Tool User Manual

ThinkTech

Stakeholders

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1 General Information

1.1 System Overview

Flowchart Simulation Tool is an application which allows for designing and executing flowchart diagrams. This application is intended for academic purposes for students with basic knowledge of programming design and implementation. This is a platform where the students can construct their own flowcharts, test and use them as they would like.

Furthermore, the system can be used in the commercial industry for various purposes.

2 System Summary

2.1 System Configuration

The flowchart tool is intended to operate on any Linux distribution. However, it can also be used on Windows and Mac OS. It is not a very sophisticated software, not so many configurations required.

Any version of Java should be installed to allow for successful execution of the program.

2.2 System Installation

This system is a "plug-and-play" type of application, for which the executable file can be found from the University of Pretoria (Computer Science) website.

3 Getting Started

For one to get to use the system, that particular user must be registered at the University of Pretoria, and have access to the Linux platform which is granted by the Department of Computer Science. From Linux, the user must be able to access the application, without any further installation or signing-up required.

3.1 Running Software

The application will not require any installation. To run the application the user will only require the executable file which will be provided via the online University of Pretoria (Computer Science) website. With the executable file the user will only need to double click on the file, then the system will star-up.

3.2 Software Layout

The layout is composed of the canvas, flowchart tools and menu options. The figure below depicts the general layout of the entire system.

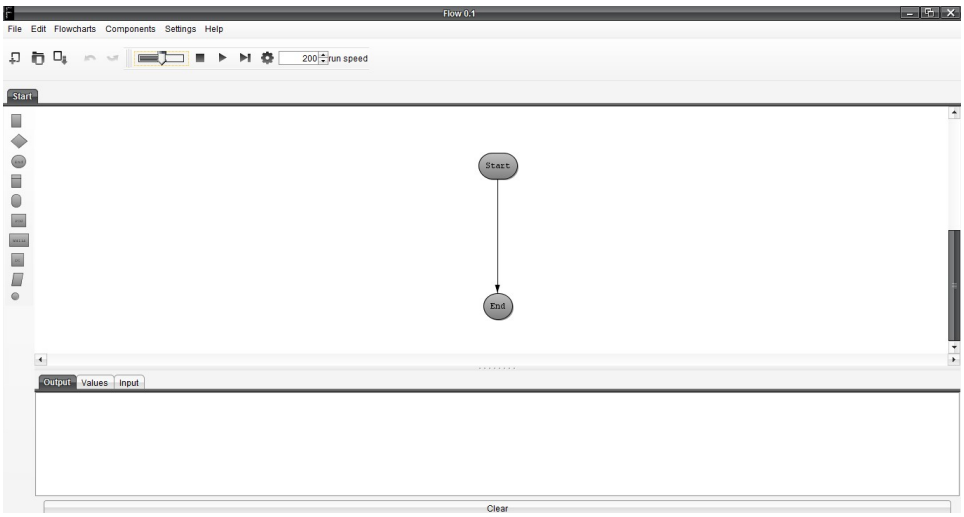

Figure: The General System Layout.

- **Canvas:** This space is provided to design a well-formed flowchart. Components will be dragged from the flowchart tools menu consisting of available components and dropped onto the canvas. See figure below.
  There are components which are already implemented at start of the system, the 'start' and 'end' blocks are initialised by default on the canvas.

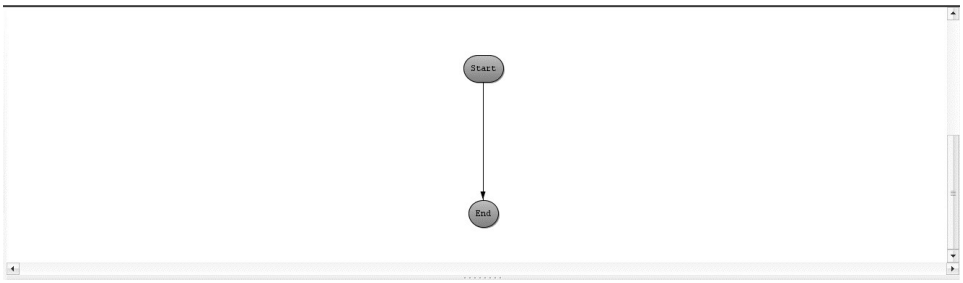

Figure: The Canvas.

- **Flowchart Tools:** This contains all the tools required to construct the flowchart. All the components will be dragged and dropped onto the canvas. Flowchart Tools also includes buttons to run the simulation step-by-step and start-to-end. See figure below.

- **Menu Options -** The menu option provides options of creating, saving, deleting and loading projects onto the canvas. See figure below.

4 Using the System

4.1 Creating New Project

To create a new project select "File" in the menu bar and a drop down menu will appear. Select the "Create New Project" option, a pop-up window will appear requesting the desired file name for the project.

4.2 Adding Components to Canvas

Adding a component to the canvas is a simple as dragging and dropping a component from the Flowchart Tools. Select the component that you wish to add to the canvas and then drag it to the desired location on the canvas and then drop it.

4.3 Editing Component

Editing the component entails manipulation of the features and adding code inside the component. To edit the component double-click on the component and the a pop-up window will appear with the options of changing features or adding code.

4.4 Removing Components from Canvas

To remove any component from the canvas right-click on the component and select delete component. To remove multiple components hold the "SHIFT" key and select the components and then right-click and select delete component.

4.5 Saving Project

To save your current progress go to "File" in the menu bar, in the drop down menu select "Save". Enter the name of the file and then the project will be saved in a directory for flowchart projects.

4.6 Run Simulation

To run the flowchart select the "Run" icon on the flowchart tools window and the the whole flowchart will execute. To run the flowchart step-by-step select the "Step" icon.

4.7 Opening Existing Project

To open an existing project go to the menu bar and select the "File" option and then select the "Open Project" menu item. Search for an existing flowchart project with the valid extention. The flowchart project will now be loaded onto the canvas and should be able to be updated.

5 Troubleshooting

This system is not connected to any other external systems, this reduces the amount of errors that might usually breakdown the system.