

# **HirokIDE Documentation**

Cmpt440L

by Richard Liao

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## How to Use

### The Language:

HirokIDE lexes any input that follows the language shown below. While it is a simple language, there are a couple of nuances that a user must take note of. Firstly, white space is important; the input 'print ( x )' is valid, but 'print(x)' fails on 3 levels. Secondly, IntExpr's can continue forever and can only have a different type for the last expression. This means that 'x = 1 + 1 + 1 + 1' and 'x = 1 + 1 + " hello "' are valid, but 'x = " hello " + 1' and subsequently 'x = y + 1' are not valid. Lastly, comments may only be charLists. As a result, comments may not have any special characters, digits, or capital letters.

Statement	PrintStatement
	AssignmentStatement
	VarDeclaration
PrintStatement	print ( Expression )
AssignmentStatement	Identifier = Expression (here = means assignment)
VarDeclaration	var Identifier
Expression	IntExpr
	StringExpr
	Identifier
IntExpr	digit intop Expression
	digit
StringExpr	" CharList "
Identifier	char
CharList	char CharList
	space CharList
Comment	*- CharList -*
char	a, b, c, ..., z
space	the space character
digit	0, 1, 2, 3, 4, 5, 6, 7, 8, 9
intop	+

### The Setup:

**Step 1:** go to <https://github.com/RichardLiao321/Cmpt440L-Formal-Languages/tree/master/final%20project> and download all of the files.

**Step 2:** compile the 3 java files through the command line or in your IDE of choice.

**Step 3:** run gui.java

**Step 4:** Enjoy lexing your programs.

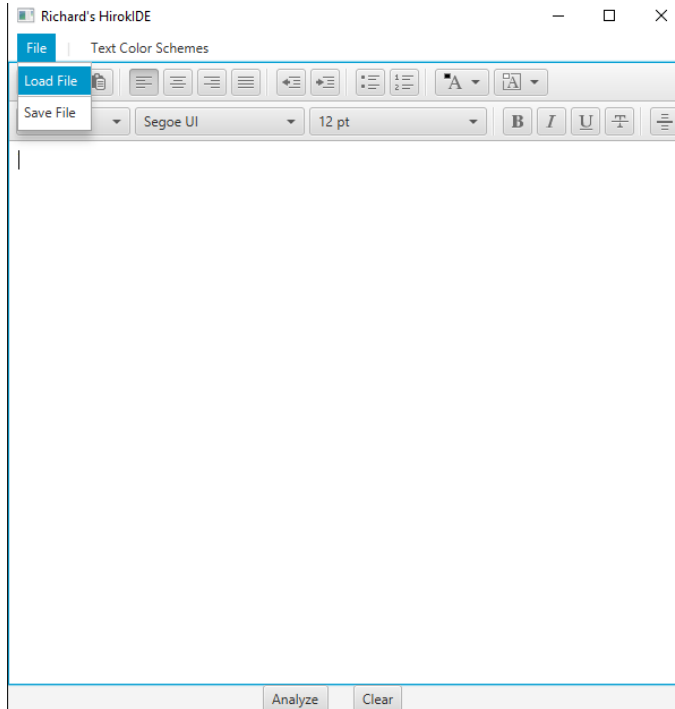
### Usage:

Once you have created a program in the language shown, you can click the button labeled "Analyze" to run the IDE and check the validity of your program. If you wish to start over, click the button labeled "Clear" to delete everything in the IDE's textarea.

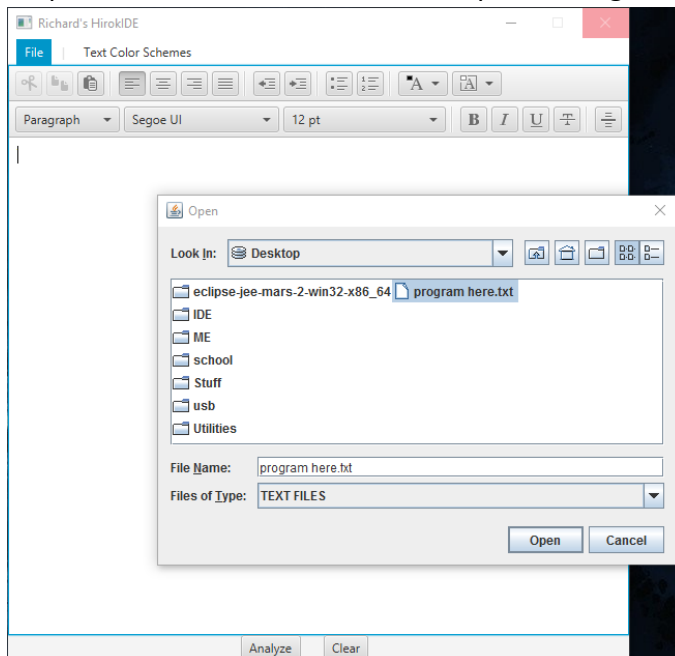
# Features

## Loading files:

Step 1: click File -> Load File

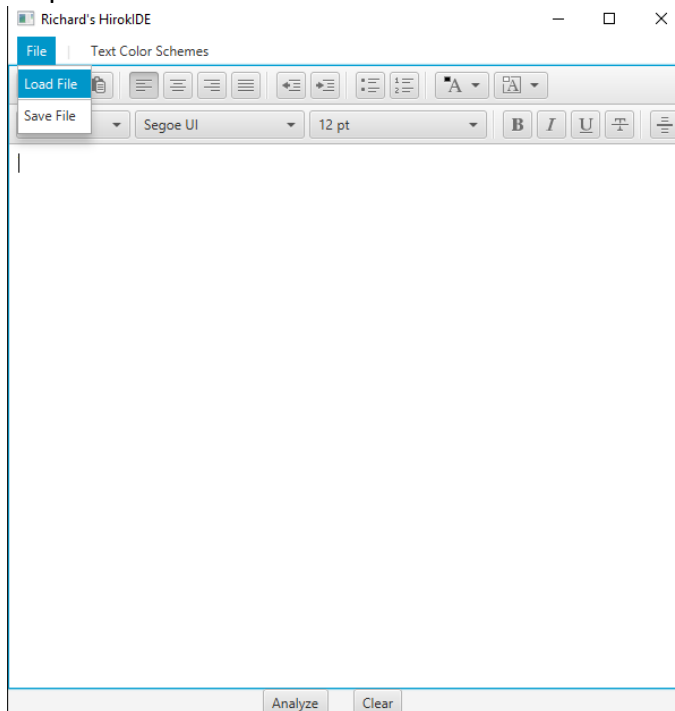


Step 2: after the selection window opens, navigate to your txt file of choice.

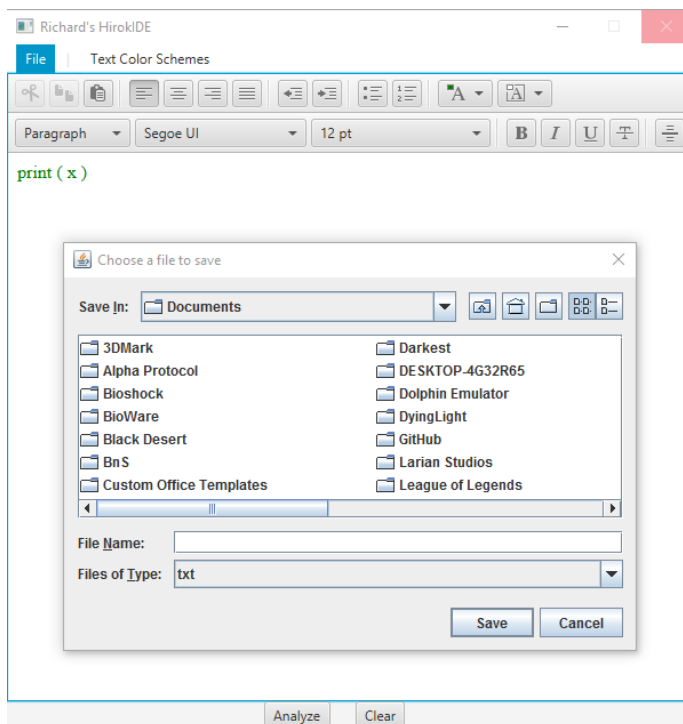


## Saving Files:

## Step 1: click File -> Save File



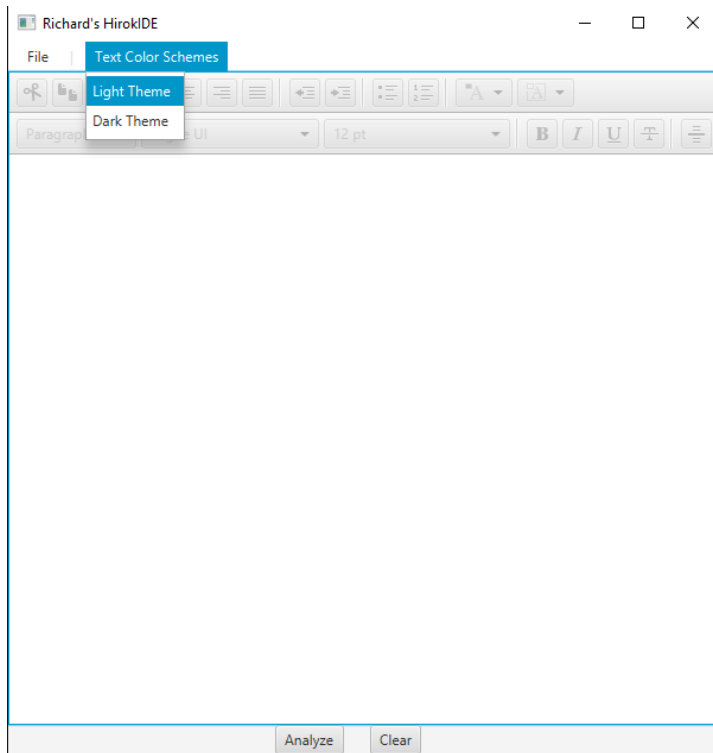
## Step 2: after the save window opens, make a name and choose a location for your file.



## Themes:

HirokIDE comes with two preset themes: the light theme and the dark theme.

Step 1: click Text Color Schemes and select the theme of your choice.



## Known Issues

- 1.) Depending on the new line character used, HirokIDE may or may not accept it. It will still lex properly, however the formatting will be broken.
- 2.) The formatting bars will format the output, but upon clicking the “Analyze” button, the output will no longer have any formatting.
- 3.) HirokIDE will only accept txt files.