CS179E

Guiquan Li

**Phase 3 Register Allocation**

Main File:

V2VM.java

Purpose: translating Vapor to Vapor-M

// Parse the Vapor source file to get AST

Graphical user interface, text, application, email

Description automatically generated

// Print data segments

Graphical user interface, text, application

Description automatically generated

Text

Description automatically generated

// Print functions

Text

Description automatically generated

// Construct CFG for a function

Text

Description automatically generated

// Set the variables defined and used for the node

A picture containing table

Description automatically generated

Other files:

**CFG.java** add node and edge; Finding a node and get a node.

**LinearScanner.java:** Find all caller-saved variables store them to class fields; Sort the intervals by start points Return current available register. Also, insert element to active and stored by end points. Expire old intervals.

**Node.java:** Return the node.

**NodeList.java:** Add node to list and compare two nodeLists.

**VarMap.java:** set the mark of callee-saved, addd node to def set. Return the size and start point.

**Test Result**

Text

Description automatically generated