FootPrint

Motivation

New programmers

- Have difficulties in setting breakpoints
- Are not familiar with the data structures

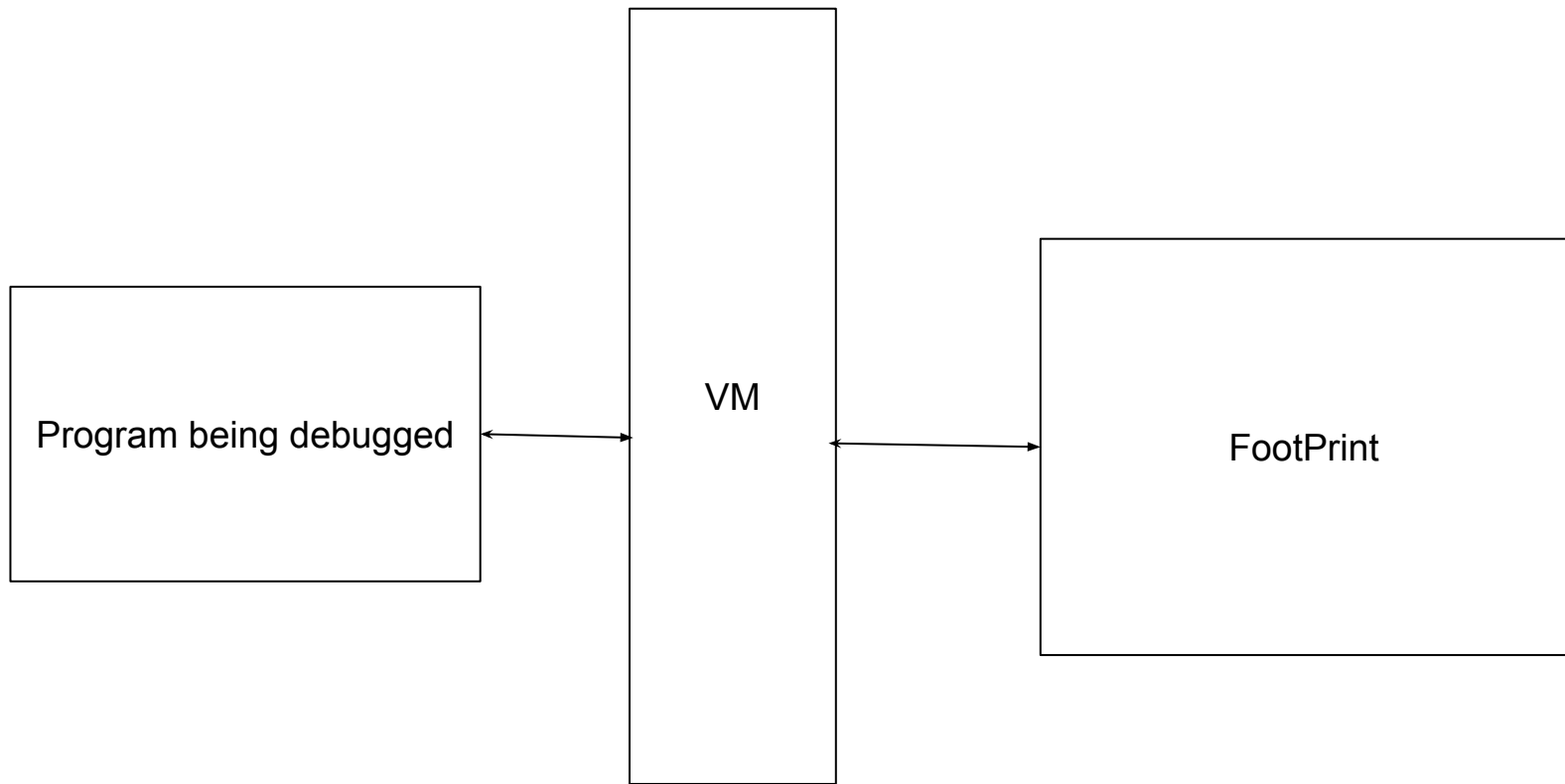Watchpoints are annoying when dealing with many variables.

This is why we are creating FootPrint: An **interactive**, **light-weight**, and **simple** plugin for Java developers to view the history of their variables.

Related Work

Recording:

- Userspace - UndoDB
- Full System - QEMU
- VM-Specific - Chronon

Architecture

Approach

Users can set a breakpoint at the lines and FootPrint will record the changes happen to the variables

```
int a=0, b=0;
for(int i=0; i<5; i++){
    a+=i;
    b+=2;
}
System.out.println(a);
System.out.println(b);


history of "a" and "b"

a--> 0 -> 1 -> 3 -> 6 -> 10
b--> 0 -> 2 -> 4 -> 6 -> 8
```
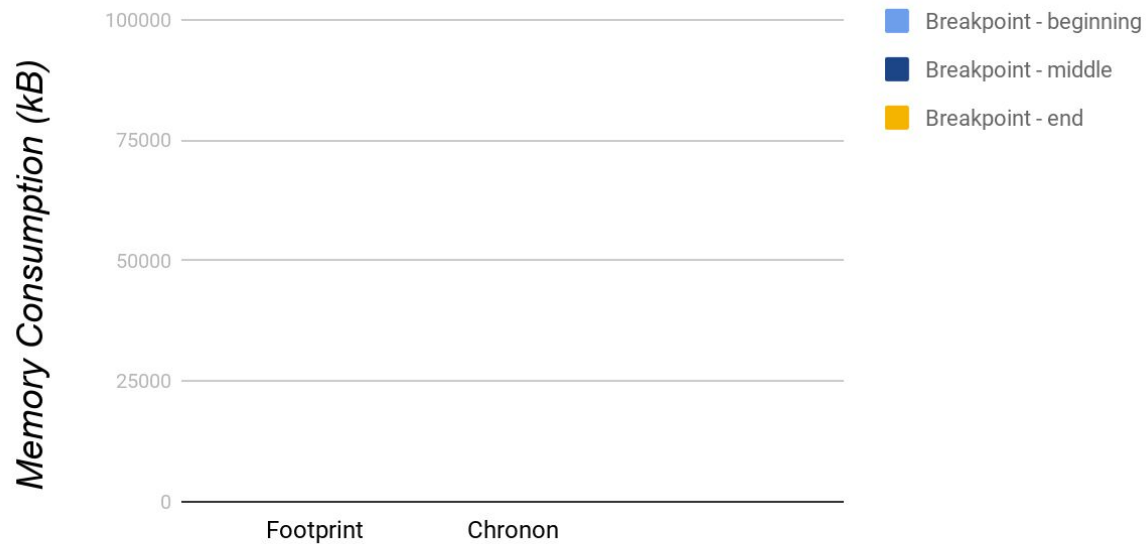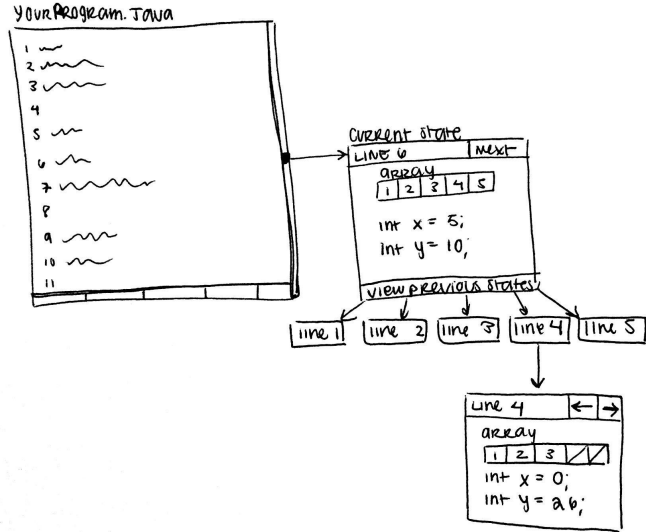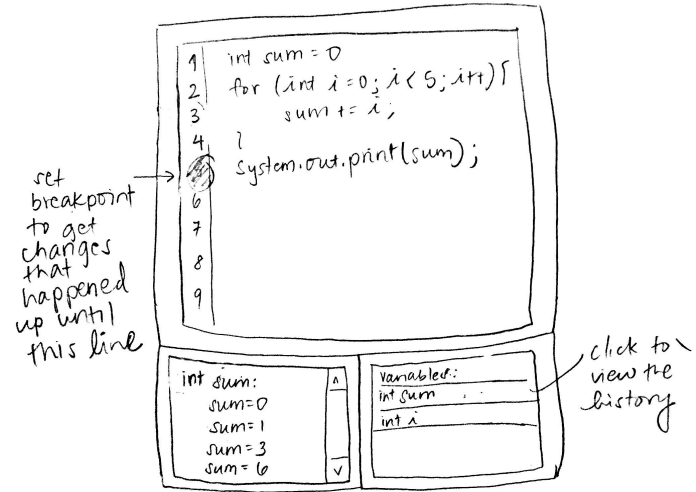
Research Questions

Memory Usage

	Breakpoint - beginning
	Breakpoint - middle
	Breakpoint - end

Research Questions

Interactive GUI

Text-based GUI

Preliminary Results

- IntelliJ has no documentation
- Prototype

Questions?