Calc-Net

CECS 545: Software Architecture - Calc Net

Usage Requirements

- Supports systems of equations with at most 5 unique variables
- Supported Operators: +, *, ^
- At least 1 equation per unique variable
- At least $n-1$ variables explicitly set
- Only same case variables across input(s)

Running

To start calculating load factory.html into a web browser and input the statements that need to be calculated. Ensure that all setup statements are processed first by placing them before the more complex inputs. Inputs are processed one at a time and their results can be seen in the table on Machine D. Once all inputs are processed the user will be prompted to refresh the page before processing more inputs.

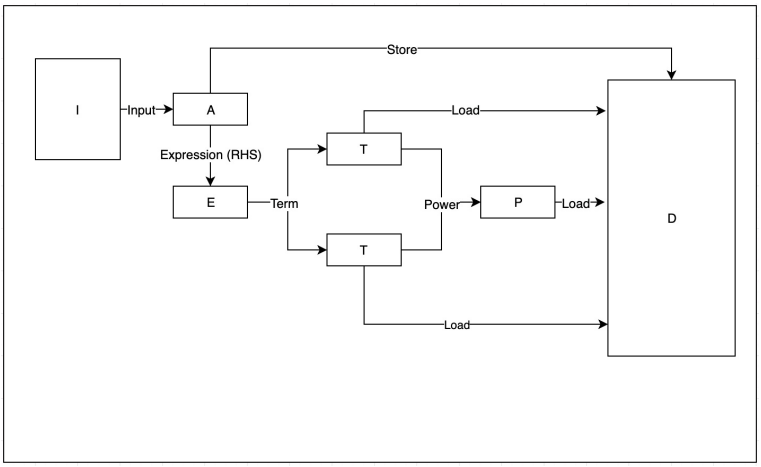
Third Party Referrences

- Bootstrap for styling HTML

Sample equation system

```
1. X=4
2. Y=5
3. Z=X^2+4*Y
```

Message Direction

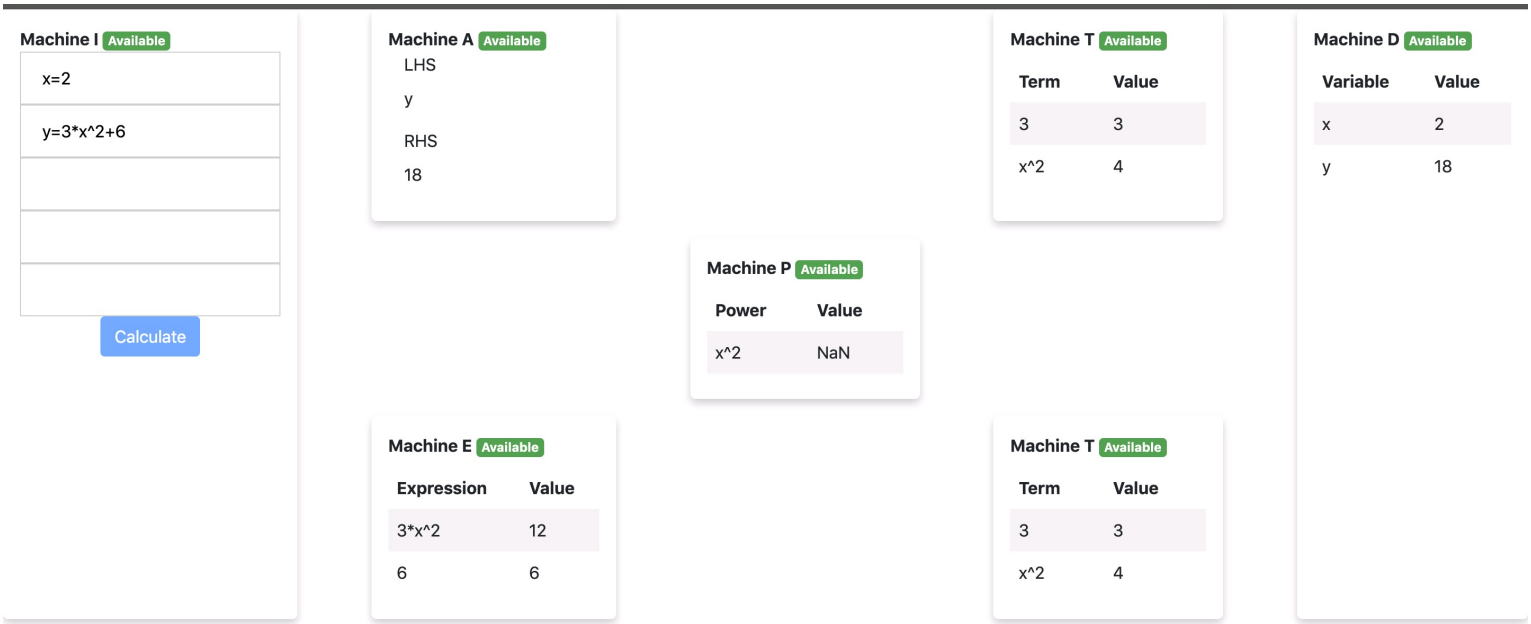


Sample Messsage Passing Between Machines (Can be executed from browser console)

```
/**
 * Machine I - Input Message
 */
sendMessage('I', new Message('INPUT', { value: [
    'x=2',
    'y=x^2+2*x+1'
  ] }), result => {
    console.log(result);
});

/**
 * Machine A - Assignment Message
 */
sendMessage('A', new Message('ASSIGNMENT', { value: 'y=2*x^2+2' }), result => {
    console.log(result);
});

/**
 * Machine E - Expression Message
 */
sendMessage('E', new Message('EXPRESSION', { value: '2*x^2+2' }), result => {
    console.log(result);
});

/**
 * Machine T - Term Message
 */
sendMessage('T', new Message('TERM', { value: '2*x^2' }), result => {
    console.log(result);
});

/**
 * Machine P - Power Message
 */
sendMessage('P', new Message('POWER', { value: 'x^2'}), result => {
    console.log(result);
});

/**
 * Machine D - Store Message
 */
sendMessage('D', new Message('STORE', { key: 'x', value: 2 }), result => {
    console.log(result);
});
```

```
/**
 * Machine D - Load Message
 */
sendMessage('D', new Message('LOAD', { key: 'x' }), result => {
    console.log(result);
});
```

Sample Run



Known Issues

Please submit issue reports under Issues