

RUMBLE



TEAM MAXIMUM CAPSLOCK

What is Rumble?

Rumble is a scripting language for creating simulation environments and their dynamic participants.



The Wrestling Simulation

Environment
Participants
Simulation



wrestlingenvironment.rue

```
//Environment File - wrestling.rue
```

```
environment name "Wrestling Environment";
```

```
global {  
    int moves;  
}
```

```
attributes {  
    int health {n >= 0};  
    int strength {n >= 0};  
}
```

```
def required_step() {  
    moves += 1;  
  
    int i;  
    i = $last_part + 1;  
    if (i >= $num_parts){  
        i = 0;  
    }  
  
    $part[i].step();  
}
```

```
.....▶ //continued...
```

```
def action_punch(participant enemy) {  
    set(enemy.health, enemy.health - 2);  
    set(me.strength, me.strength - 3);  
}
```

```
def action_kick(participant enemy) {  
    set(enemy.health, enemy.health - 1);  
    set(me.strength, me.strength - 1);  
}
```

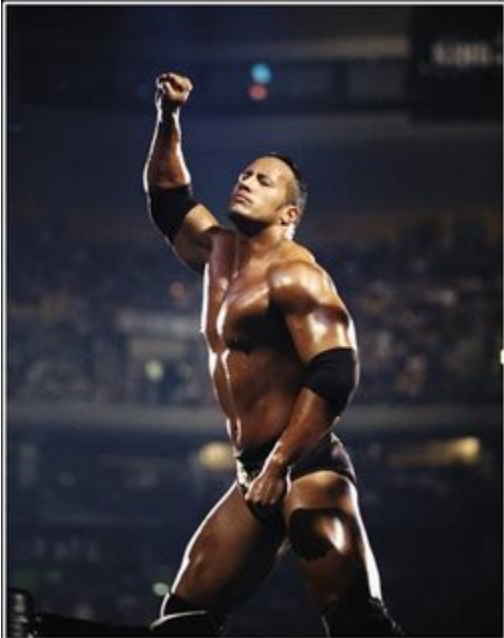
```
def action_polish_hammer(participant enemy)  
{  
    int i;  
    i = $randi;  
  
    if ((i % 10) >= 8) {  
        set(enemy.health, enemy.health - 10);  
        set(me.strength, me.strength - 2);  
    }  
    else {  
        set(me.strength, me.strength - 1);  
    }  
}
```

hulkhogan.rup

```
//Participant Hulk Hogan hulkhogan.rup  
participant name "Hulk Hogan";  
  
def required step() {  
    polish_hammer($part[0]);  
}
```



therock.rup



```
//Participant The Rock therock.rup  
  
participant name "The Rock";  
  
def required step() {  
    int i;  
    i = randi;  
    if(randi % 2 == 0){  
        kick($part[0]);  
    }  
    else {  
        punch($part[0]);  
    }  
}
```


wrestlingsimulation.rus

```
//Simulation File wrestlingsimulation.rus

simulation name "Wrestling Simulation";

environment "wrestlingenvironment.rue" {
    moves = 0;
}

participant "hulkhogan.rup" hulk_hogan {
    strength = 20;
    health = 30;
}

participant "therock.rup" the_rock {
    strength = 30;
    health = 20;
}

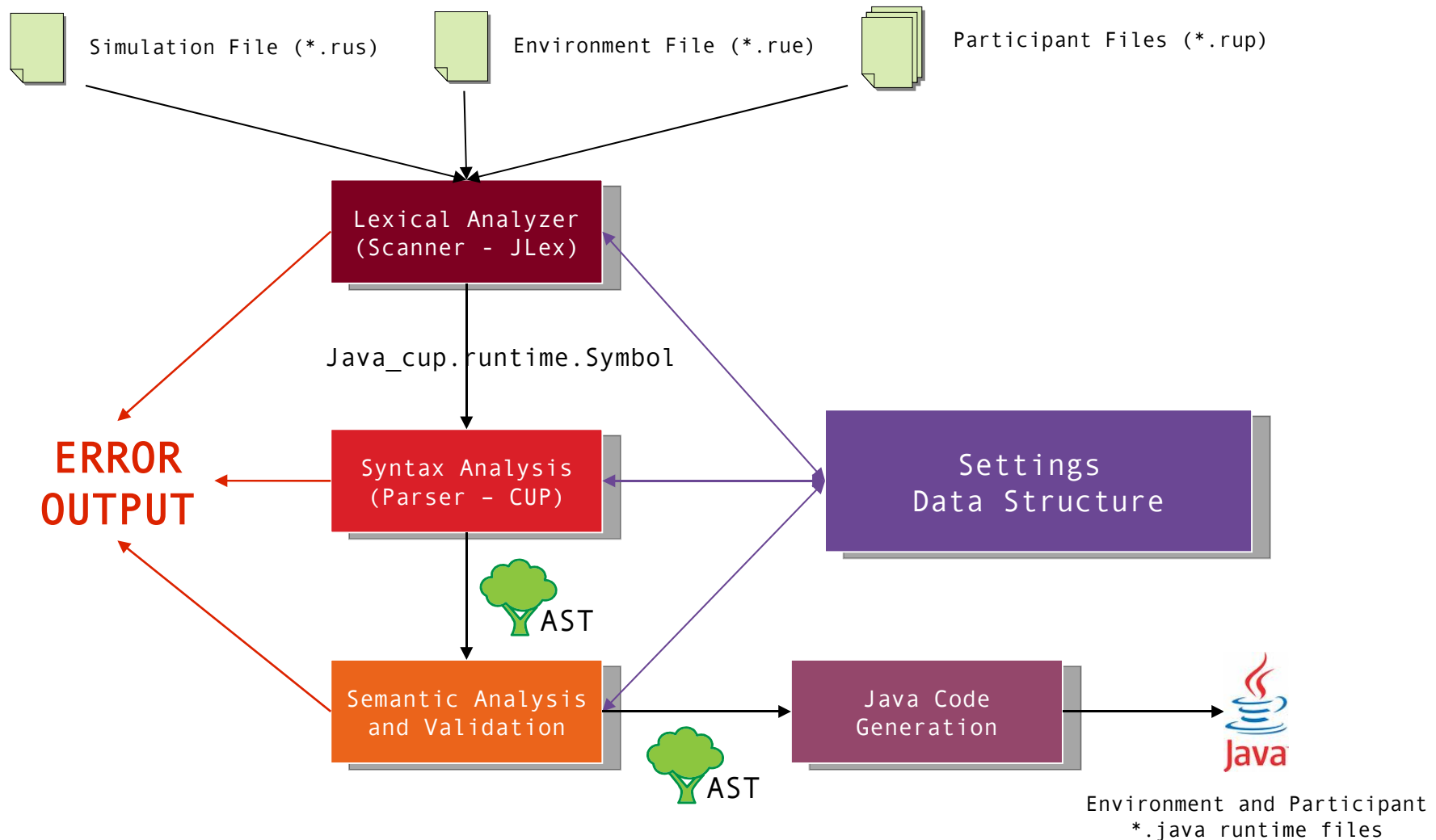
def required end () {
    return ($part.hulk_hogan.health <= 0 || $part.hulk_hogan.strength
    <= 0 || $part.the_rock.health <= 0 || $part.the_rock.strength <= 0);
}
```



Example Output

Compilation Environment

```
$ RumbleCompiler wrestlingenvironment.rus
```



Tools

The Prisoners' Dilemma

Closing Remarks

GET READY TO RUMBLE!