

# 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 {  
}
```

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

```
def required step() {  
  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);  
}
```

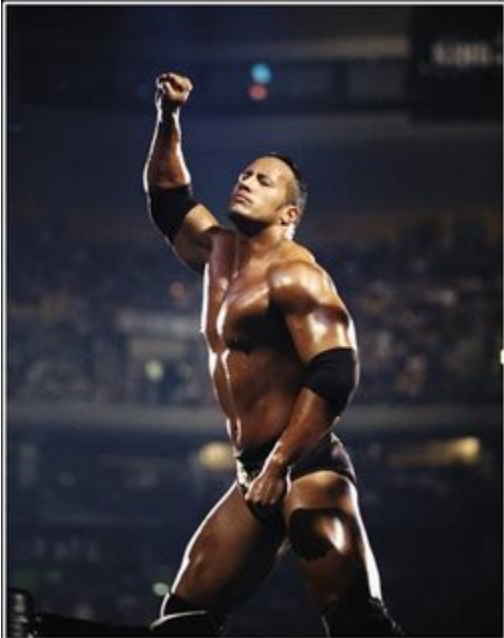
```
def action polish_hammer(participant  
enemy){  
  if (($randi % 10) >= 8) {  
    set(enemy.health, enemy.health - 10);  
    set(me.strength, me.strength - 2);  
  }  
  else {  
    set(me.strength, me.strength - 1);  
  }  
}
```

# 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() {  
    if($randi % 2 == 0){  
        kick($part[0]);  
    }  
    else {  
        punch($part[0]);  
    }  
}
```

# wrestlingsimulation.rus

```
//Simulation File wrestlingsimulation.rus
```

```
simulation name "Wrestling Simulation";
```

```
environment "wrestlingenvironment.rue" {  
}
```

```
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);  
}
```





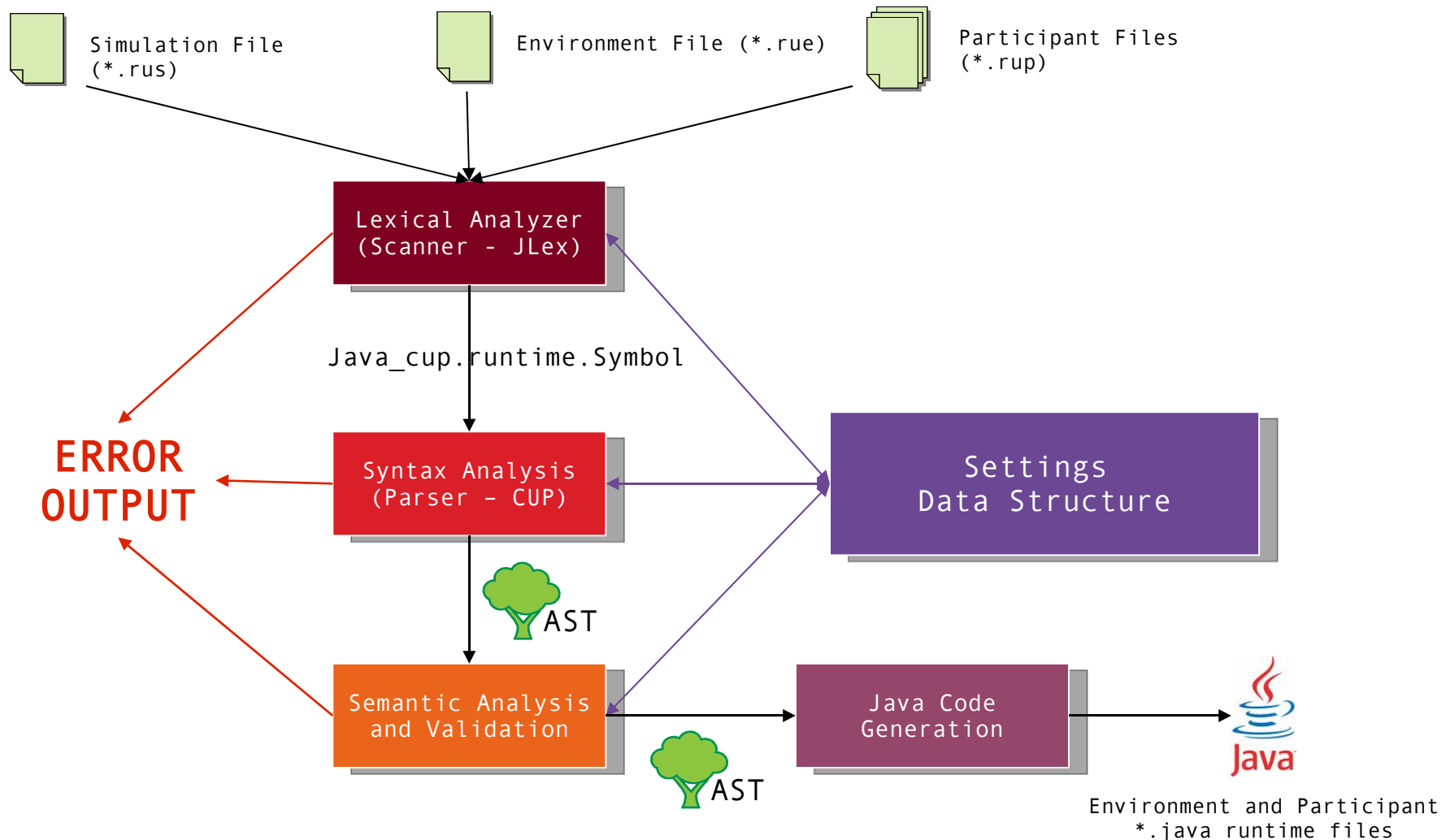
# Example Output

```
{
  action : "'Hulk Hogan' did 'the polish hammer'",
}
{
  environment : "Wrestling Environment",
  participants :
  [
    {
      participant : "Hulk Hogan",
      health : 13,
      strength: 10,
    },
    {
      participant: "The Rock",
      health : 0,
      strength : 8,
    },
  ],
}
```



# Compilation Environment

```
$ RumbleCompiler wrestlingenvironment.rus
```



# Tools

# **The Prisoners' Dilemma**

# Closing Remarks

**GET READY TO RUMBLE!**