

Ruby Tuesdays

RTanque Tournament

by Jimmy Ngu

What is RTanque

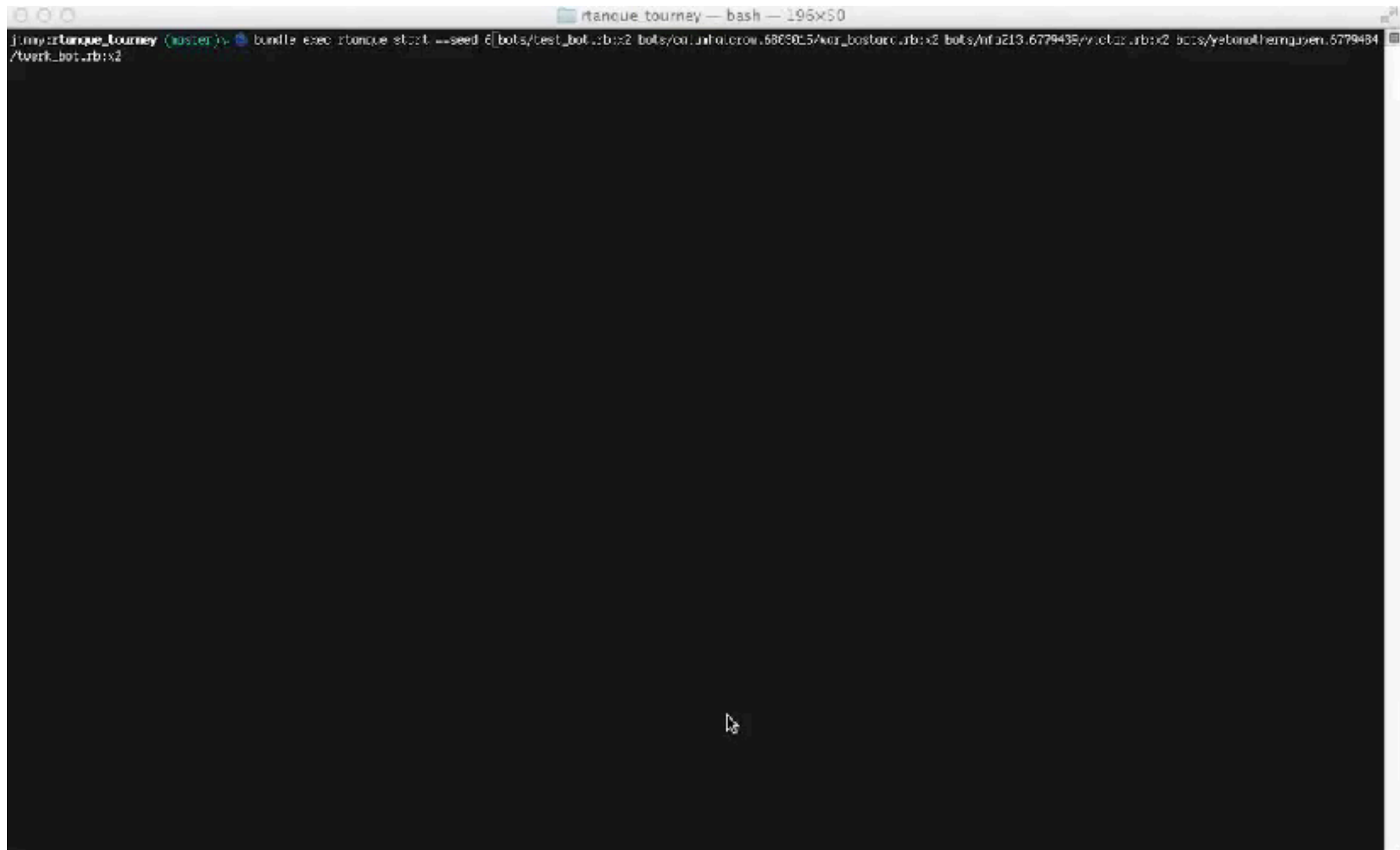
RTanque

/R taNGk/ 

noun

A game for (*Ruby*) programmers. Players program the brain of a tank and then send their tank+brain into battle with other tanks. All tanks are otherwise equal.

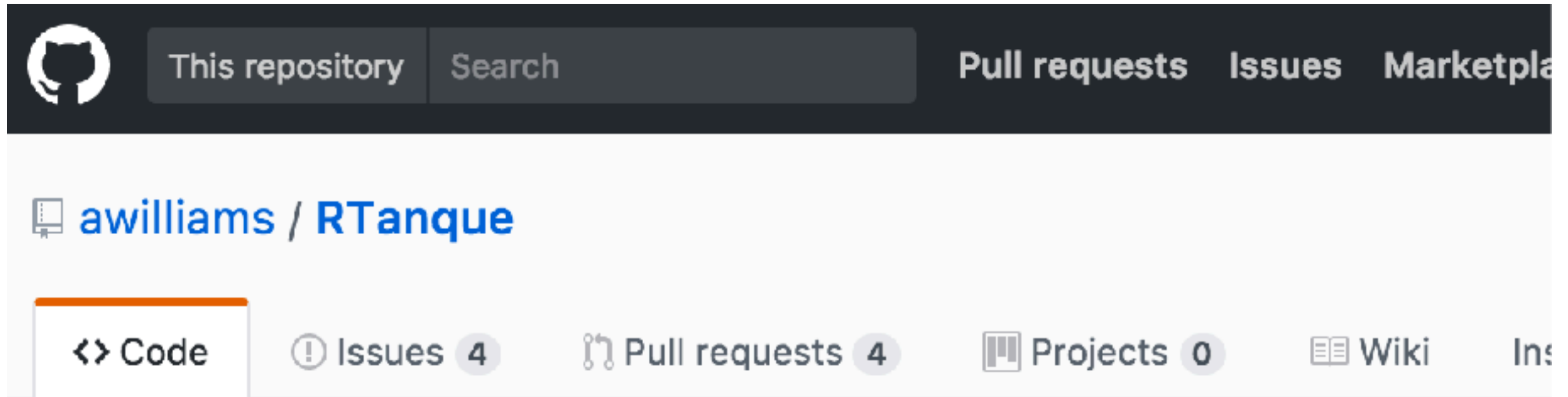
What is RTanque

A screenshot of a terminal window titled 'rtanque_tourney — bash — 195x50'. The prompt is 'jimmy@rtanque_tourney (master):'. The command entered is 'bundle exec rtanque start --seed 6[bots/test_bot.rb:2 bots/columbiatorow.68690154kor_bostard.rb:2 bots/mf0213.6779435/victor.rb:2 bots/yetanothernguyen.6779484/twerk_bot.rb:2]'. The terminal background is black, and the text is white. A mouse cursor is visible near the bottom center of the terminal area.

```
jimmy@rtanque_tourney (master): bundle exec rtanque start --seed 6[bots/test_bot.rb:2 bots/columbiatorow.68690154kor_bostard.rb:2 bots/mf0213.6779435/victor.rb:2 bots/yetanothernguyen.6779484/twerk_bot.rb:2]
```

<https://youtu.be/fGAhPUGWVbo>

<https://github.com/awilliams/RTanque>



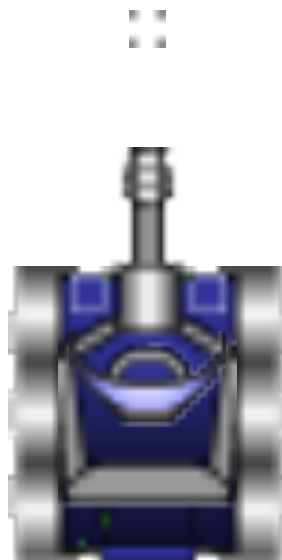
The screenshot shows the GitHub interface for the repository 'awilliams / RTanque'. At the top, there is a dark navigation bar with the GitHub logo, a search bar, and links for 'Pull requests', 'Issues', and 'Marketplace'. Below this, the repository name 'awilliams / RTanque' is displayed. A horizontal menu contains tabs for 'Code' (highlighted with an orange bar), 'Issues' (with a count of 4), 'Pull requests' (with a count of 4), 'Projects' (with a count of 0), 'Wiki', and 'Insights'.

RTanque is a game for (Ruby) programmers. Players program the brain of a tank to battle against other tanks. <http://awilliams.github.com/RTanque/>

<http://www.rubydoc.info/github/awilliams/RTanque>

or

Google “rubydoc RTanque”



bullet



turret



radar



tank body

RTanque::Bot::Brain

```
1 class MyTank < RTanque::Bot::Brain
2   ·· include RTanque::Bot::BrainHelper
3   ↵
4   ·· NAME = 'MyTank'
5   ·· ↵
6   ·· def tick!
7   ·· |·· # Do tank things ...
8   ·· end
9 end
```

RTanque::Bot::Sensor

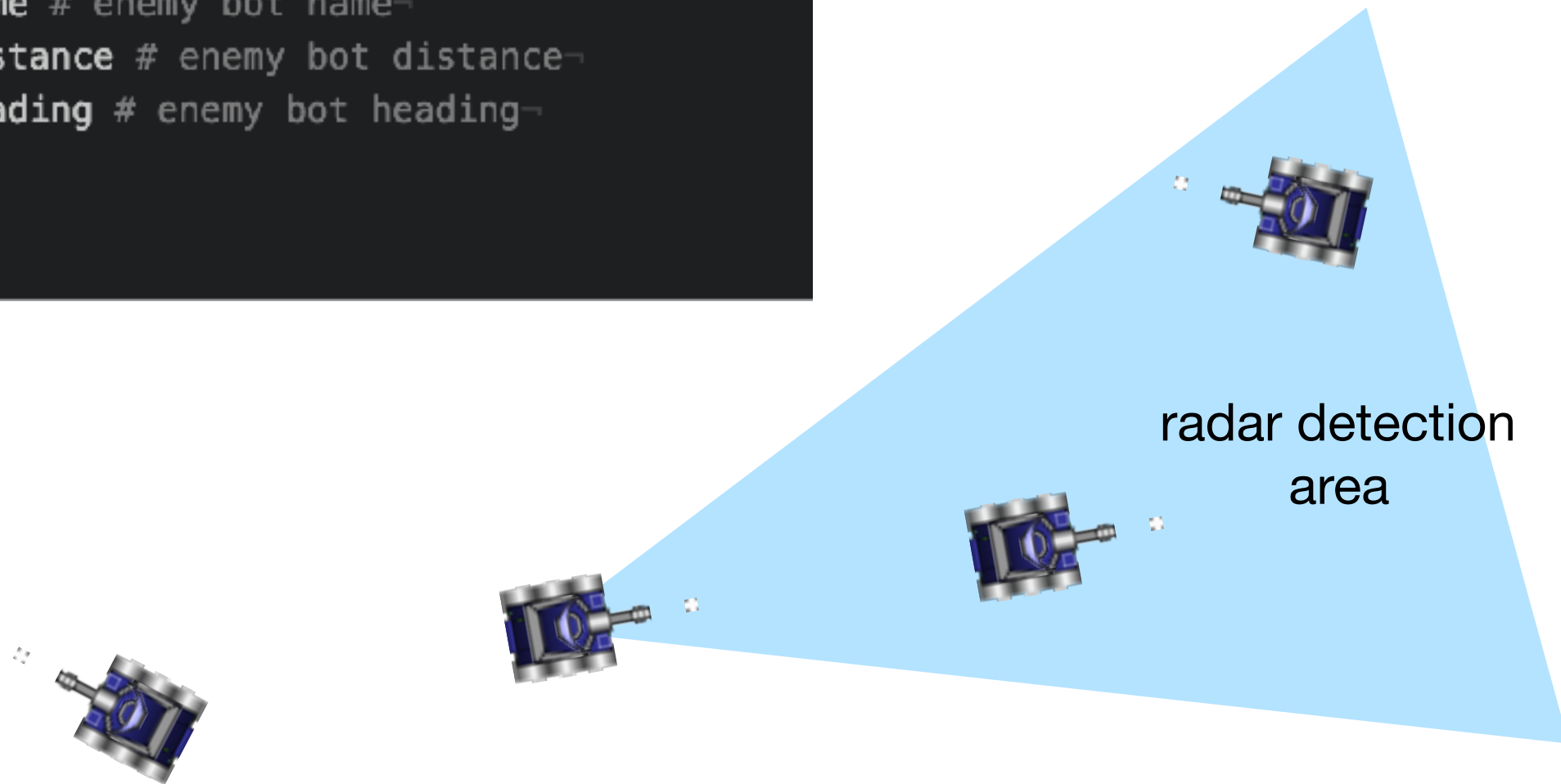
```
def sensor_stuffs
  sensor.gun_energy # energy of cannon.
  sensor.heading # The current value of heading, yielding RTanque::Heading
  sensor.health # health of bot.
  sensor.position # The current value of position, yielding RTanque::Point
  sensor.radar # enumerates all bots scanned by the radar, yielding Radar::Reflection
  sensor.radar_heading # The current value of radar_heading, yielding RTanque::Heading
  sensor.speed # The current value of speed.
  sensor.ticks # number of ticks, starts at 0.
  sensor.turret_heading # The current value of turret_heading, yielding RTanque::Heading
end
```


RTanque::Bot::Command

```
def command_stuffs
  command.fire_power = 1.0 # Float, nil
  command.heading = 1.0 # Float, RTanque::Heading
  command.radar_heading = 1.0 # Float, RTanque::Heading
  command.speed = 1.0 # Float
  command.turret_heading = 1.0 # Float, RTanque::Heading
end
```

RTanque::Radar::Reflection

```
def radar_reflection_stuffs~  
  sensor.radar.each do |reflection|~  
    reflection.class # Radar::Reflection~  
    reflection.name # enemy bot name~  
    reflection.distance # enemy bot distance~  
    reflection.heading # enemy bot heading~  
  end~  
end~
```



RTanque::Heading

```
def heading_stuffs
  heading = RTanque::Heading.new(Math::PI) # 1.0 pi rad / 180 degrees
  heading2 = heading + (Math::PI / 2) # add 90 degrees = 270 degrees
  heading_deg = heading_rad.to_degrees # 180.0
  ...
  RTanque::Heading.new_between_points(RTanque::Point.new(0,0), RTanque::Point.new(2,3))
  # => <RTanque::Heading: 0.1871670418109988rad 33.690067525979785deg>
end
```

Step 1 - setup locally :-

```
clone https://github.com/awilliams/RTanque  
bundle install
```

Step 2 - Build & Test your tank :-

```
bundle exec rtanque new_bot my_super_bot  
bundle exec rtanque start bots/**/*.*rb
```

Step 3 - Upload your tank to Gist

Step 4 - Join the #RTRT channel in RubyMY Slack

http://rubybrigade.my/slack_invite/

Step 5 - Post your Gist Link

Let the Battle Begin !!!