**Purpose:** To move the robot around on the field. Navigation recieves “event data” from the task controller. The data received (contained inside an object) will include data like target coordinates/angles and max speed. Navigation will also have to deal with reflecting coordinates and angles depending on which alliance we are on, due to how the field is symmetrical over a center line instead of rotationally symmetrical (like in previous years).

|  |  |
| --- | --- |
| **Priority:** Medium-High | **Reason:** The Actions class will not be able to score much if the robot can’t move, and Navigation alone can get some points, but the EPS class needs to be created first. |

**Primary Programmers:**

1. Eamonn R

**Public Constants (public static final):**

* <required type if any> <NAME>
  + Purpose: <1-4 sentences> Lorem ipsum dolor sit amet, consectetur adipiscing elit. Pellentesque in turpis posuere, pretium velit in, tempor turpis.
* public static final int MAX\_MOTOR\_POWER
  + Purpose: The maximum value for motor power. Should be used in algorithms like motor scaling and course correction.

**Constructors (called when an object instance is created):**

* public <Class Name>(<#> arguments)
  + Must Initialize: <Minimum initialization it must preform>
  + Arguments:
    - <required type if applicable> <arg1>
      * <purpose>

**Interface Instance Methods (used on an instance of this class):**

* public <other tags> <return type> <method name>(<#> arguments)
  + Purpose: <1-4 sentences> Lorem ipsum dolor sit amet, consectetur adipiscing elit. Pellentesque in turpis posuere, pretium velit in, tempor turpis.
  + Priority: <Same options as the class priority> (<reason>)
  + Arguments:
    - <type> <arg1>
      * What to put there (see also: <something else in this file>)
  + Returns: (<type>) <what data is returned>
    - <Can go onto a separate bullet(s) if it would be cleaner>
* public synchronized void setPower(1 argument)
  + Purpose: Adjust the motor power, and start or stop it when necessary.
  + Priority: Very High (cannot start the motor without it)
  + Arguments:
    - int power
      * The power to set the motor to (see also: MAX\_MOTOR\_POWER)
  + Returns: N/A
* public synchronized void stopMotor(0 arguments)
  + Purpose: Stop the motor, syntactically equivalent to ‘setPower(0)’.
  + Priority: Medium (only a shortcut method, but all it needs to do is call setPower(0))
  + Arguments: N/A
  + Returns: N/A

**Interface Static Methods (used without an instance of a class):**

* public static synchronized long getCurrentTime(1 argument)
  + Purpose: Get how much time has elapsed, syntactically equivalent to ‘System.currentTimeMillis() - someothertime’
  + Priority: Low (prevents other programmers from having to do this manually every time)
  + Arguments:
    - long start
      * when this ‘timer’ started (specify 0 to get an initial start time)
  + Returns: (long) the current system time in milliseconds