**Stepper Motor**

The requirements of the project demands that the stepper motor spins with great accuracy and degree; the stepper motor must be able to turn an exact round both clockwise and anti-clockwise direction. The functions described below are created with in mind of the project and where the implementer uses the functions manually or automatically.

**File name:** Motor.h / c

void startMotor ()

This function contains all the necessary things to initialize the registers that are required to operate the Stepper Motor.

void stopMotor ()

This function clears the bits connected to the motor to stop the motor from spinning.

void spinMotor (int rate, int direction)

This function causes the motor to spin at a high rate.

The rate controls how fast the motor spins; lower values spins faster

The direction denoted by 0|1 spins the motor in clockwise or anti-clockwise direction respectively.

void oscillateMotor(int rate, int step)

This function causes the motor to oscillate back and forth (spins 1 round clockwise, 1 round anti-clockwise). The rate controls how fast the motor spins; lower values spins faster

The step sets how many degrees the motor will spin, with 1.8 degree / step.

void rinse (int cycle)

This function is a standard function to turn the motor to oscillate for a set amount of cycle.

The cycle can be set for how many times should the motor do the said function.

void wash (int cycle)

This function is a standard function which will turn the motor in a certain direction for a set amount of cycles. The cycle can be set for how many times should the motor do the said function.

void dry (int cycle)

This function will spin the motor in a certain direction at a much faster rate so that the centrifugal force created may dry the clothes faster. The cycle can be set for how many times should the motor do the said function.

void normalWashMode ()

This function does the rinse, wash, dry sequence. Can be used for testing purposes or as a one function call.

void quickWashMode ()

This function does the rinse, wash, dry sequence. Can be used for testing purposes or as a one function call. All the cycles are shorter and faster. Also uses the turboDry sequence instead.

void turboDry (int cycle)

This function uses the spin motor function but spins at the fastest rate possible for the stepper motor. The cycle can be set for how many times should the motor do the said function. Use with precaution.