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| **File Name** | **Person working on it** | **What addition/changes made** |
| MECHENG706.h (PinAllocation.h) | Yameizhen LI | File name changed for use |
| MecanumWheel706.h and .cpp (RobotBase.h) | Vinuli | Add strafing  Base on our specific wheel motions |
| LightTracker.h (DetermineDirection.h) | Yameizhen | Public fields methods:   * void scan\_while\_rotate() * bool exist |
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Code Structure:

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| **File name** | **Purpose** | **Functions** | **Implementation DONE?** |
| PinAllocation | Set up all pins |  | Processing…  (need to update the pin ) |
| LightDetect  # include Phototransistor | Flag on if detect light | bool detect\_front() | done |
| Find out which direction is brighter (veryLeft = -2, left = -1, ok = 0, right = 1, veryRight = 2) | int detect\_dir() | done |
| Motions:  #include RobotBase.h  #include LIghtDetect | During rotation of 360 deg, if light is detected, stop | rotate\_while\_scan() |  |
| Go to the brightest direction | void go\_target() |  |
| Firefighting | Keep the fan on when light is detected | void fan\_start() |  |
| RobotBase | Setup servos. |  |  |
| Basic movements like turning CW/CCW, approx. straight motion, strafe, normalise and contrain | Turn(LEFT/RIGHT, int speed),  Straight(int speed), Strafe(LEFT/RIGHT),  norm |  |
| IRSensor | Constructor detailing mid/long range type |  |  |
| Read the IR sensors |  |  |
| UltrasonicSensor | Read ultrasonic sensor | float ReadUltrasonic | yes |
| Gyroscope | Setup gyroscope calibration  Read gyroscope values | float GyroscopeCalibrate(void);     float GyroRead(void);     float GyroRawRead(void); | yes |
| Phototransistors | Read phototransistors | output: brightness, lager value → brighter  float getRawReading()  float getAverageReading() | yes |