* Input should be: [joy axis 0, -joy axis 1, joy axis 2] ----> [x, -y, z]

Left Front = y + z + x

Left Rear = y + z - x

Right Front = y - z - x

Right Rear = y - z + x

* Notice that y is positive for all wheels because it’s for driving forward (input = output)
* Notice that z is positive for the left wheels and negative for the right wheels, for turning (like tank drive)
* Notice that x is the same for the wheels at opposite corners (Ex.: strafing right causes right wheels to turn inward and the left wheels turn outward)
* Also, use the left front wheel as a reference, since:

driving forward -------> LF wheel turns forward

rotating clockwise ---> LF wheel turns forward

strafing right ---------> LF wheel turns forward

**10% Deadband Code in ArcadeShift:**

void ArcadeShift(double x, double y, double z)

{

double lf = 0, lr = 0, rf = 0, rr = 0;

double deadband = 0.1;

double max = 0;

if (fabs(y) >= deadband)

{

lf += y;

lr += y;

rf += y;

rr += y;

}

if (fabs(z) >= deadband)

{

lf += z;

lr += z;

rf -= z;

rr -= z;

}

if (fabs(x) >= deadband)

{

lf += x;

lr -= x;

rf -= x;

rr += x;

}

//find the max value, divide max from all values if max > 1, then assign motor speeds

}