<?php

$input['CO2']= 1002;

$input['Temp'] = 25;

$input['CO'] = 0;

$input['Noise'] = 55;

$input['Wind'] = 330;

$input['Press']= 25;

$input['Visib'] = 0;

$input['Humid'] = 30;

$want = array('CO2','CO','Temp', 'Wind', 'Press');

//function ranges

//Takes as input the value we have of some parameter

//As well as the smallest value for each range

//We classify the value in some range, and give it a percentage accordingly

//Ranges are classified by decreasing order

//Note: first value should be 0 (or minimum value)

function ranges($val,$arr)

{

foreach( $arr as $ind => $grd )

{

if($val < $ind)

{break;}

//leave once we found the ideal range

else

$result = $grd; //Assign the grade to the result

}

return $result;

}

//function error

//Takes the value and the standard condition

//Calculates the error and returns a percentage of quality of life accordingly

//Can take into acc if we need the value to only bigger/smaller

//param = 0- two sided error

//param = 1- only bigger error

//param = -1 - only smaller error

function error($val,$stdval, $param)

{

$go = ($param == 1 && $val > $stdval) || ($param == -1 && $val < $stdval);

if ($param == 0 || $go) {

$perc = abs($val - $stdval)/$stdval;

}

else

$perc = 0;

return 1 - $perc;

}

//Use range function

$ra = array('CO2', 'CO','Noise');

//Use error function

$err['Wind'] = 1;

$err['Temp']= 0;

$err['Press']= 1;

$err['Visib'] = -1;

$err['Humid'] = 0;

//array of ranges to use for range function

$range['CO2'] = array(0=>100,1000=>60,2000=>40);

$range['CO'] = array (0=>90,10=>50);

$range['Noise'] = array(0=>100,90=>50,140=>0);

$stdval['Wind'] = 300;

$stdval['Temp']= 25;

$stdval['Press']= 25;

$stdval['Visib'] = 5;

$stdval['Humid'] = 30;

//Calculate the percentage of the field

//first for those in $ra

//then for those in $err

$val = $input;

foreach ($ra as $temp)

{

$val[$temp] = ranges($input[$temp],$range[$temp]); //Calculate the range of each parameter that

//needs it

}

foreach ($err as $temp=>$tat)

{

$val[$temp] = error($input[$temp],$stdval[$temp], $tat)\*100; //Calculate error according to stdval

}

//Coefficient of values

//0 or 1/N

//N the number of yes we want

$N = sizeOf($want);

foreach($val as $tat=>$temp)

{

if(in\_array($tat,$want))

$coef[$tat] = 1/$N;

else

$coef[$tat] = 0;

}

//$coef['CO2'] = 1/3;

//$coef['Temp'] = 1/3;

//$coef['CO'] = 1/3;

//$coef['Noise'] = 0;

//$coef['Wind'] = 0;

//$coef['Press']= 0;

//$coef['Visib'] = 0;

//$coef['Humid'] = 0;

$avg = 0;

//Calculate the weighted average

foreach( $val as $key => $value ){

$avg = $avg + $coef[$key]\*$value;

//echo $key."\t=>\t".$value."\n";

}

echo $avg;

?>