## Conrad Ege ECE 331 templogger

```
header("Content-type: image/png");
// 24 hours of data @ 1 point a minute
$points=1440;
// #pixels between each plotted point
span = 1;
// Image dimensions
yspan = 1200;
\$xlast = 60;
\$ylast = 0;
// generate plot image
$img = @ImageCreateTrueColor($xspan, $yspan) or die ("ImageCreate failed");
// various colors
$back = ImageColorAllocate($img, 0, 0, 0);
$red=imagecolorallocate($img, 255, 0, 0);
$white=imagecolorallocate($img, 255, 255, 255);
$gray=imagecolorallocate($img, 20, 20, 20);
try {
    // Create horizontal grid lines
   for ($y=50; $y<=$yspan; $y+=(5*10)) {
       imagestring($img,5,5,($yspan-$y-20),($y/10),$white);
       imageline($img, ($x+20), $y, ($xspan-20), $y, $gray);
    // Attempt to open SQL temperature database
    $log = new PDO('sqlite:/var/log/temperature.db')
         or die ("Couldn't access data");
    $query = $log->query('SELECT * FROM (SELECT * FROM temp ORDER BY time DESC
                                                                                     lim
it '.$points.') as r ORDER BY r.time ASC');
    foreach ($query as $result){
       // Shifts contents of averaging window
        // and inserts latest temperature
       for (\$i = 29; \$i > 0; \$i--)
           \ $\psi \ndow[\$i] = \$\psi \ndow[\$i-1];
       $window[0] = $result[0];
       for (\$i = 0; \$i < 30; \$i++){
           $sum += $window[$i];
       $t = (\$sum / 30);
       x = xlast + span;
       y = (yspan - (10*$t));
       // Set up time
       $time = new DateTime($result[1]);
        $time->setTimezone(new DateTimeZone('America/New_York'));
       $min = $time->format('i:s');
        // print vertical line on every hour
       if (\$ min == 0){
           imageline($img, $x, $yspan-10, $x, 10, $gray);
           $hour = $time->format('H:i');
           imagestring($img, 5, $x-21, $yspan-20, $hour, $white);
        }
        // generate line between points
        imageline($img, $x, $y, $xlast, $ylast, $red);
```

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```
// Update variables
    $sum = 0;
    $xlast = $x;
    $ylast = $y;
}

catch(Exception $e) {
    print $e->getMessage();
}

// Label axes
imagestring($img, 5, 5, 5, "Temp, F", $white);
imagestring($img, 5, $xspan-50, $yspan-35, "Time", $white);
imagestring($img, 5, 550, 5, "ECE 331 Project 2", $white);
imagepng($img);
imagepng($img);
imagedestroy($img);
?>
```