Code is Poetry

Creating a Culture of Writing Clean Code

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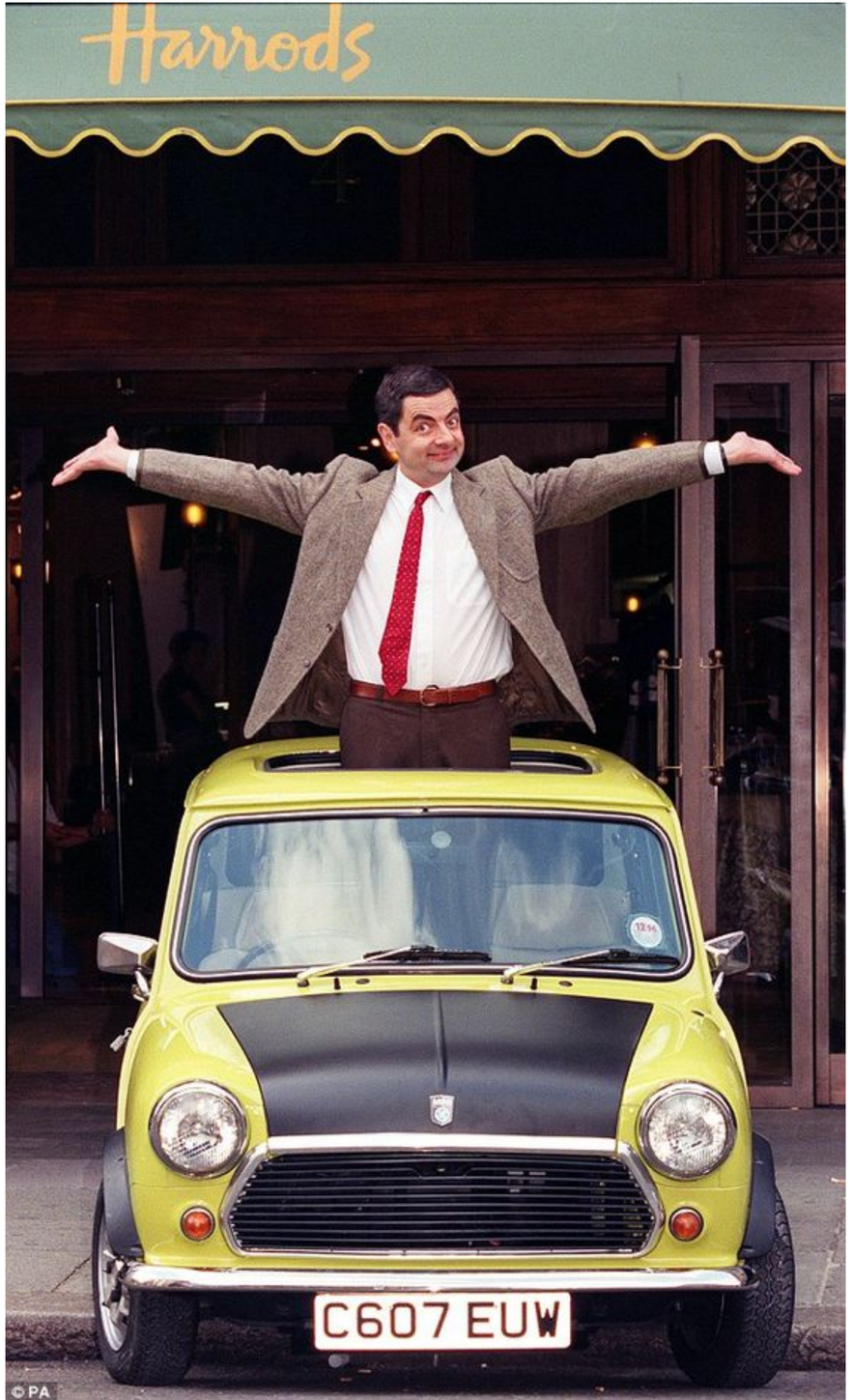
Harrods
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```
/// <summary>
///   <para>Returns the closest power of two value.</para>
/// </summary>
/// <param name="value"></param>
[FreeFunction(IsThreadSafe = true)]
[MethodImpl(MethodImplOptions.InternalCall)]
public static extern int ClosestPowerOfTwo(int value);

/// <summary>
///   <para>Returns true if the value is power of two.</para>
/// </summary>
/// <param name="value"></param>
[FreeFunction(IsThreadSafe = true)]
[MethodImpl(MethodImplOptions.InternalCall)]
public static extern bool IsPowerOfTwo(int value);

/// <summary>
///   <para>Returns the next power of two that is equal to, or greater than, the argu
/// </summary>
/// <param name="value"></param>
[FreeFunction(IsThreadSafe = true)]
[MethodImpl(MethodImplOptions.InternalCall)]
public static extern int NextPowerOfTwo(int value);

/// <summary>
///   <para>Converts the given value from gamma (sRGB) to linear color space.</para>
/// </summary>
/// <param name="value"></param>
[FreeFunction(IsThreadSafe = true)]
[MethodImpl(MethodImplOptions.InternalCall)]
public static extern float GammaToLinearSpace(float value);

/// <summary>
///   <para>Converts the given value from linear to gamma (sRGB) color space.</para>
/// </summary>
/// <param name="value"></param>
[FreeFunction(IsThreadSafe = true)]
[MethodImpl(MethodImplOptions.InternalCall)]
public static extern float LinearToGammaSpace(float value);

/// <summary>
///   <para>Convert a color temperature in Kelvin to RGB color.</para>
/// </summary>
/// <param name="kelvin">Temperature in Kelvin. Range 1000 to 40000 Kelvin.</param>
/// <returns>
///   <para>Correlated Color Temperature as floating point RGB color.</para>
/// </returns>
[FreeFunction(IsThreadSafe = true)]
public static Color CorrelatedColorTemperatureToRGB(float kelvin)
{
  Color ret;
  Mathf.CorrelatedColorTemperatureToRGB_Injected(kelvin, out ret);
  return ret;
}

[FreeFunction(IsThreadSafe = true)]
[MethodImpl(MethodImplOptions.InternalCall)]
public static extern ushort FloatToHalf(float val);

[FreeFunction(IsThreadSafe = true)]
[MethodImpl(MethodImplOptions.InternalCall)]
public static extern float HalfToFloat(ushort val);

/// <summary>
///   <para>Generate 2D Perlin noise.</para>
/// </summary>
/// <param name="x">X-coordinate of sample point.</param>
/// <param name="y">Y-coordinate of sample point.</param>
/// <returns>
///   <para>Value between 0.0 and 1.0. (Return value might be slightly beyond 1.0.)</para>
/// </returns>
[FreeFunction("PerlinNoise::NoiseNormalized", IsThreadSafe = true)]
[MethodImpl(MethodImplOptions.InternalCall)]
public static extern float PerlinNoise(float x, float y);

/// <summary>
///   <para>Returns the sine of angle f.</para>
/// </summary>
/// <param name="f">The input angle, in radians.</param>
/// <returns>
///   <para>The return value between -1 and +1.</para>
/// </returns>
public static float Sin(float f)
{
  return (float) Math.Sin((double) f);
}
```

Why is clean code important?

- Find bugs before they land in production
- Maintain code
- Add new features

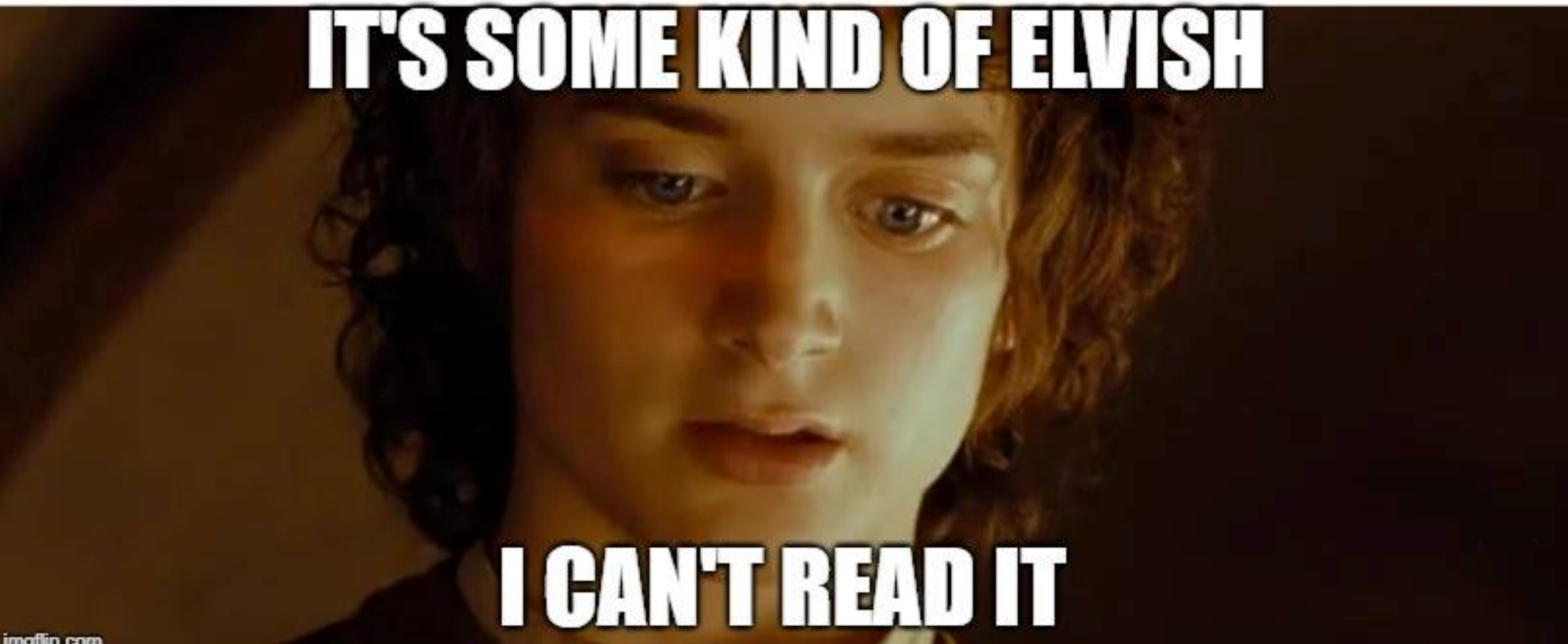
“

Code should be written to minimize the time it would take for someone else to understand it.

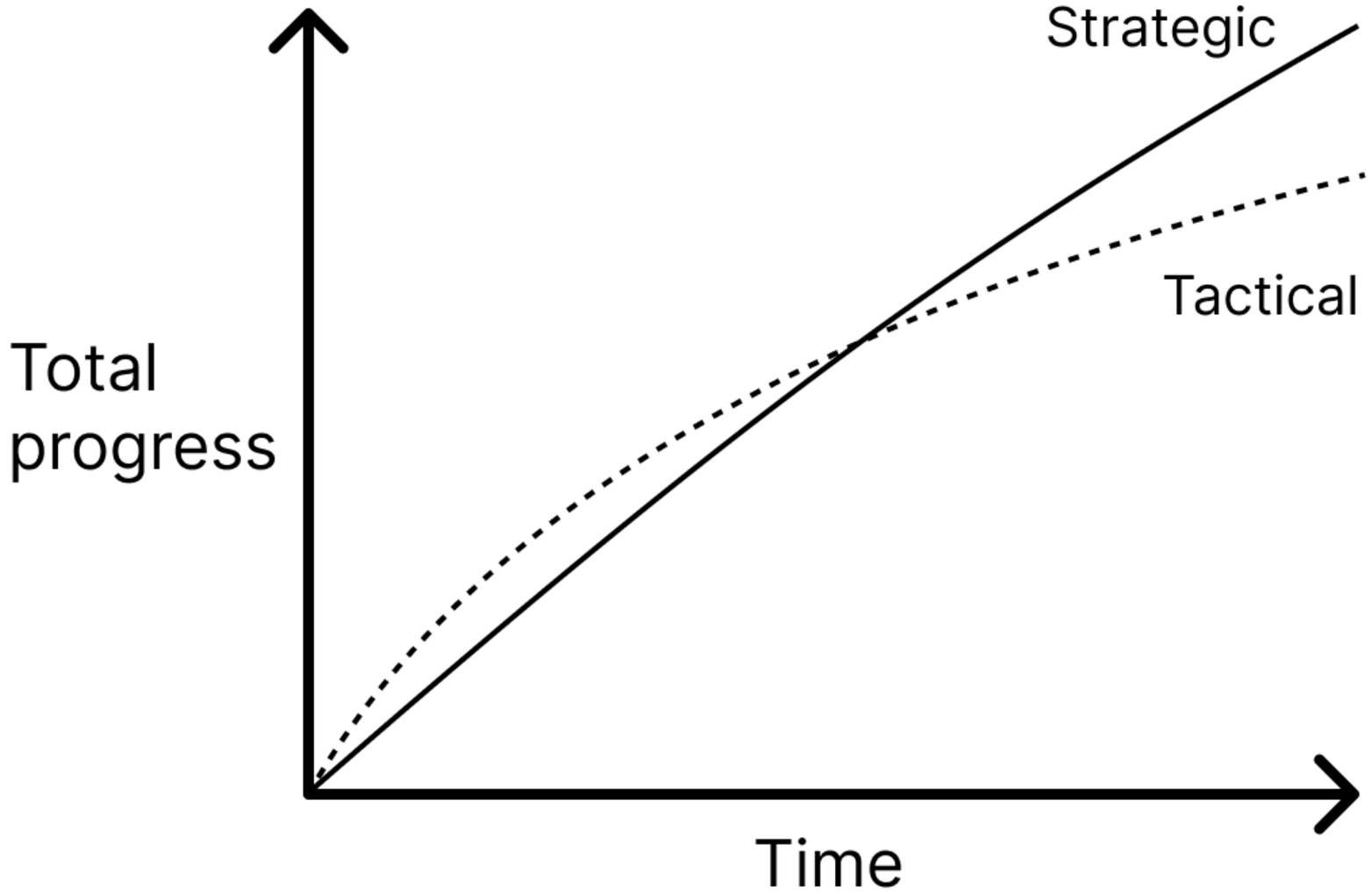
— The Art of Readable Code

Culture of writing clean code

When you trying to look at the code you wrote a month ago



Encourage Strategic over Tactical Programming



Spike

Coding Conventions

“

All code in any code-base should look like a single person typed it, no matter how many people contributed.

— Rick Waldron

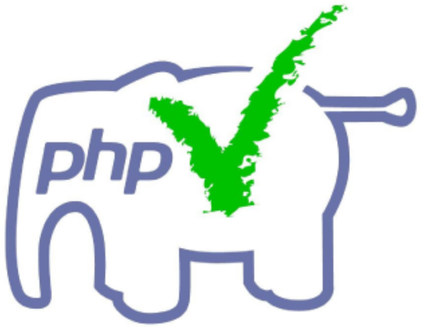
Follow Coding Conventions

- **WordPress Coding Standards**
  - https://developer.wordpress.org/coding-standards/wordpress-coding-standards/

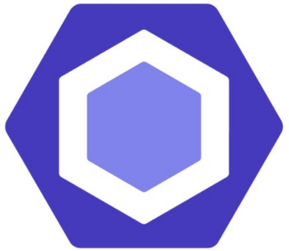
- **Google Coding Conventions**
  - https://google.github.io/styleguide/

Lint Tools & Code Formatters

Prettier



CodeSniffer



ESLint

Normalize Nitpicking
(Be Kind)

Normalize Nitpicking

- Naming (functions and variables)
  - Avoid generic names (like *tmp*, *retVal*)
  - Use specific words
  - Attach important details (like *_ms* or *raw_*)

Normalize Nitpicking

- Avoid abbreviations (var BEManager - what is BE?)
- Code comments
- Code organized in blocks or paragraphs

Normalize Nitpicking

```
if (machine_is_online) {
  if (base_install_ok) {
    if (ssh_keys_ok) {
      if (web_data_install_ok) {
        if (web_server_ok) {
          if (web_content_test_ok) {
            machine_is_usable = true;
          } else
            log("web server not serving up correct content");
          }
        } else {
          start_web_server();
        }
      } else {
        start_web_data_install();
      }
    } else {
      start_ssh_key_install();
    }
  } else {
    log("machine is offline at hosting company");
  }
}
```

Search the Field Guide...

Code Reviews

UPDATED: 3 MONTHS AGO

So you want to learn more about Code Reviews? Fantastic! Automattic has a very strong reviewing culture. Here are a few things to remember to help keep reviews fun and productive.

1. Keep In Mind
2. Communicating
3. Preparing your PR to be Reviewed
4. Code Review Benefits
5. Team process suggestions
6. A Strategy to manage a high volume of meticulous reviews in the pull request
7. Anyone can be a Reviewer!
8. Code Review Challenge
9. Other Resources on Code Reviews

YOU'RE A WINNER

Recap

- Encourage the right mindset
- Coding conventions
- Strong code review culture
- Role Models
- Internal wiki
- Reward structures

“

Programs must be written for people to read, and only incidentally for machines to execute.

— Harold Abelson,
Director of Creative Commons and Free Software Foundation.

Thank you.

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