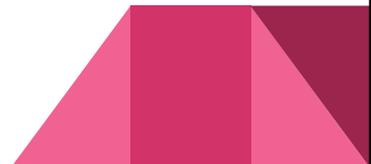


# Style Guide

**Writing better programs**

## Why do we care about style

- Aids thought clarity while writing program
- Prevents errors
- Aids debugging
- Easier to maintain and update
- Easy for other developers to use



## Variable Names

- All names should be descriptive and accurate. They should be in English.
- Avoid abbreviations. “mon” is so much less clear than “month”.
- Use **mixed case for most names:**  
strLastName, strFirstName
- Constants should be in upper case e.g. NULL or PI
- Variable names are usually nouns.
- For simple indexes use x,y and z. Rather than “indexIntoList”, for example.

## Hungarian Notation

- Variable names can be made clearer by **prefixing** with their type.
  - i for integer, str for string, f for float etc.
  - even just using an “i” prefix for your integers is a good start. For example iDayOfWeek you would know is an integer (presumably between 1 and 7).
  - “strDayOfWeek” would be a string.(e.g. “Friday”);

# White Space

- Separate your code into logical paragraphs, often with a comment at the top of each one. Leave a blank line between paragraphs.
- Don't double space lines of code that belong together.
- Indentation is probably the most important style directive. This is not something to do after you got your program to work, but critical to do as you go to follow your own logic and avoid errors.

# White Space (con't)

- If a line of code isn't always going to run sequentially after the previous statement it should be indented. (Usually a tab, or 4 spaces).
- There is a space between the 'if' and the '(' to show it is not a function.  
No space for functions eg. `printf("Hello")`

# Comments

- . Comments should tell a story.
- . Are they understandable if your removed your code?
- . They need to be concise, say what is being done, not how.

Good: Finding maximum mark

Bad: Looping though studentData, incrementing i each time saving highest mark found in highMark.

Don't explain the obvious.

```
// incrementing i by 1
```

```
i = i + 1
```

- . Document any code that is not obvious.
- . Briefly describe entire program and each block of code.

# Remember the 3 components to good style

- Meaningful variable names
- Comments
- White space (blank lines and indentation)
- Style is **not** to be fixed up before handing a program in. It needs to become a habit when writing programs.

# Ideas

- ❑ Try writing your comments before you write your code.
- ❑ Think of exactly what a variable will be used for before naming it. Go back and change name if you think of a better one.
- ❑ Formatting code properly will get rid of many compile errors and some logic errors.

