



PROGRAMMING STYLE GUIDES AND CODING STANDARDS

- A programming style guide is an opinionated guide of programming conventions, style, and best practices for a team or project.
- A team following a style guide helps everyone write code in a consistent way, and consistent code is easier to read and faster to update.
- Consistent code is easier to read and understand making it faster to add new features.



Widely accepted style guides that you should consider to start with:

- Google's Style Guides
- JavaScript Standard Style
- GitHub's Ruby Style Guide
- Python Foundation's Style Guide
- Airbnb's JavaScript Style Guide
- Angular's Style Guide



- Implementing one of these generally accepted style guides is a good start to helping your team write code consistently.
- Make your style guide easy to reference.
- Style guide acts as a basic code blueprint for your team during all parts of the software development lifecycle.



- To keep relevant, it should be often discussed. Such as during a developers onboarding, when writing code, when writing tests, and during code review.



LITERATE PROGRAMMING

- It is a methodology that combines a programming language with a documentation language, thereby making programs more robust, more portable, more easily maintained, and arguably more fun to write than programs that are written only in a high-level language.



- Donald Knuth invented literate programming in 1984.
- The main idea is to treat a program as a piece of literature, addressed to human beings rather than to a computer.
- A program's logic is explained in a natural language, like English, interspersed with code snippets.
- The program is also viewed as a hypertext document, rather like the World Wide Web.



SOFTWARE DOCUMENTATION

Software documentation is a part of any software. Appropriate details and description need to be in the documented to achieve the following goals:

1. Resolve issue encountered by the developer during the development process
2. Help end-user to understand the product
3. Assist customers and the support team to find the information.



JAVADOC

- JavaDoc tool is a document generator tool in Java programming language for generating standard documentation in HTML format.
- It generates API documentation.



- Before using JavaDoc tool, you must include JavaDoc comments
`/** */` providing information about classes, methods, and constructors, etc.
- For creating a good and understandable document API for any java file you must write better comments for every class, method, constructor.



JavaDoc Tool

```
/**  
 * JavaDoc comment  
 */
```

@author

@param

@see

@version

@return

- The JavaDoc comments is different from the normal comments because of the extra asterisk at the beginning of the comment. It may contain the **HTML tags** as well.

// Single-Line Comment

/*

Multiple-Line comment

*/

/**

JavaDoc comment

*/



- By writing a number of comments, it **does not affect the performance** of the Java program as all the comments are removed at compile time.



GENERATION OF JAVADOC

To create a JavaDoc you do not need to compile the java file. To create the Java documentation API, you need to write Javadoc followed by file name.

javadoc file_name or javadoc package_name

After successful execution of the above command, a number of HTML files will be created, open the file named index to see all the information about classes.



Tag	Parameter	Description
-----	-----------	-------------

@author	author_name	Describes an author
---------	-------------	---------------------

@param	description	provide information about method parameter or the input it takes
--------	-------------	--

@see	reference	generate a link to other element of the document
------	-----------	--

@version	version-name	provide version of the class, interface or enum.
----------	--------------	--

@return	description	provide the return value
---------	-------------	--------------------------

PHP DOCUMENTOR

- phpDocumentor is an application that is capable of analyzing your PHP source code and DocBlock comments to generate a complete set of API Documentation.

phpDocumentor v3 (Stable)

- v3 is the latest stable release.
- The easiest way to run phpDocumentor is by running the following command:

```
$ phpdoc run -d <SOURCE_DIRECTORY> -t <TARGET_DIRECTORY>
```

This command will parse the source code provided using the -d argument and output it to the folder indicated by the -t argument.



ASSIGNMENT 2

- Create a git/GitHub repository and create/download a java project and demonstrate the basic operations using git/GitHub. Include Javadoc comments and create a software documentation using Javadoc.
- Team size 2
- Demonstrate in lab or laptop
- Date of Submission: 25/10/2024, 2pm

