

CS 20: Functions for Clarity Rubric

Outcomes include:

[CS20-CP1](#): Apply various problem-solving strategies to solve programming problems throughout Computer Science 20.

(f) Analyze and implement programs with the goal of improving code to achieve the most elegant solution

[CS20-CP2](#): Use common coding techniques to enhance code elegance and troubleshoot errors throughout Computer Science 20.

(a) Discuss and implement appropriate coding style (e.g., indentation and comments) and naming conventions for the programming language used in Computer Science 20.

(d) Create internal documentation (e.g., inline comments and header comments) for a program.

[CS20-FP3](#): Construct and utilize functions to create reusable pieces of code.

(a) Explore the benefits of using built-in and user-defined functions.

(d) Develop user-defined functions that utilize argument passing.

	Expert - 4	Meeting - 3	Progressing - 2	Beginning - 1	Incomplete - 0
Execution	<p>The program runs properly with no errors</p> <p>Image is complex and recognizable</p> <p>All shapes are used (line, ellipse, and rectangle)</p>	<p>The program runs properly with no errors</p> <p>Image is recognizable</p> <p>All shapes are used (line, ellipse, and rectangle)</p>	<p>Minor errors in the code that do not prevent the code from running</p> <p>Image is recognizable</p> <p>Not all shapes are used</p>	<p>Errors in code prevent it from running</p>	<p>Submitted code is incomplete</p>
Functions and Parameters	<p>Functions are used for all code. The functions add to the readability of the code.</p>	<p>At least one function with parameters is used.</p> <p>The function adds to the readability of</p>	<p>At least one function is used but parameters are not used properly (i.e. code bypasses the parameters).</p>	<p>No parameters were used for the functions.</p>	<p>No functions were used</p>

	<p>All functions use parameters.</p> <p>All functions are called and work properly.</p>	<p>the code.</p> <p>All functions are called and work properly.</p>	<p>Functions work properly.</p>		
Formatting		<p>Code is organized and easy to read</p> <p>All code is formatted according to PEP8</p> <p>All comments are properly formatted</p>	<p>Code may be difficult to follow</p> <p>All code is formatted according to PEP8</p> <p>Not all comments are properly formatted</p>	<p>Code may be difficult to follow</p> <p>A few minor formatting errors according to PEP8</p> <p>Comments are not formatted properly</p>	<p>Code is difficult to follow</p> <p>Multiple formatting errors according to PEP8</p>
Documentation		<p>Program includes a header with all necessary information</p> <p>File name relates to the program</p> <p>Comments for at least blocks of code that belong together</p> <p>Comments for all functions</p>		<p>The header may be missing important information</p> <p>File name may not relate to the program</p> <p>Coding does not have enough comments</p> <p>Variables may not have meaningful names, or are not clearly defined.</p>	<p>No header</p> <p>File name does not relate to the program</p> <p>Comments are missing</p> <p>Variables do not have meaningful names, or are not defined.</p>

		All variables are given meaningful names and are defined with comments			
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