



Project Rubric			
Requirement	No evidence ←-----→ Mastery		
Programming Conventions are followed	<ul style="list-style-type: none"> • Variable names aren't descriptive • Function names aren't descriptive • Code blocks inconsistently indented • Capital letters used • Code is not organized into sections 		<ul style="list-style-type: none"> • Variable names are descriptive • Function names are descriptive • Code blocks consistently indented • Use of small letters (not capital) • Code is organized into sections
Documentation and Readability	<ul style="list-style-type: none"> • No comments are used. • Code is difficult to read because no blank lines were used, or too many blank lines were included. 		<ul style="list-style-type: none"> • Frequent and descriptive comments are used regularly. • Blank lines are used to help with readability.
Use of Variables and constants	<ul style="list-style-type: none"> • "Magic Numbers" or literal values are used in the code. • Data isn't tracked or updated (no counters, states, conversions, etc.). 		<ul style="list-style-type: none"> • Constants are used to eliminate "magic numbers." • Variables are used for storing, keeping track of and updating data. • Global and local variables are used.
Use of Functions	<ul style="list-style-type: none"> • No plan or algorithm to follow. • Everything in one main program. • Long sections of code. • Functions use all global or all local variables. • Functions don't take parameters. 		<ul style="list-style-type: none"> • Code is divided into smaller sections that accomplish a task. • Parameters are used as needed. • Local and global variables are used as needed. • Functions return a value as needed.
Use of Inputs Buttons and sensors	<ul style="list-style-type: none"> • Neither button is used for input. • No sensors are read or used. (line sensor, proximity sensor, encoders, system temperature, battery voltage, accelerometer) 		<ul style="list-style-type: none"> • At least one button is used for input and control. • At least one sensor is used to give input. • Conversion of raw data is performed as needed.
Algorithms and Programming	<ul style="list-style-type: none"> • No algorithms identified or used. • Program performs the same for every execution, without input. • Lists and tuples are not utilized when they would simplify the code. • Debugging practices are not used and code contains errors. 		<ul style="list-style-type: none"> • Algorithms are used to manipulate data and get results. • Data is used to inform decisions. • Lists and tuples are used to simplify data collection and implementation. • Debugging practices are used to correct errors in code and logic.
Control Structures	<ul style="list-style-type: none"> • Program does not have any if or if/else or if/elif/else statements. • Program does not use any while loops. • Nested loops or if statements are not used, or are used incorrectly. 		<ul style="list-style-type: none"> • While loops and if statements are used to control the flow of execution. • Conditional and logical operators are used appropriately. • Nested while and if statements are used when needed.
Use of Outputs LEDs, speaker, motors	<ul style="list-style-type: none"> • No output is produced. 		<ul style="list-style-type: none"> • One or more outputs are used to convey data or perform a task.
Collaboration	<ul style="list-style-type: none"> • Students work independently or uncooperatively on a team. 		<ul style="list-style-type: none"> • Students work collaboratively with shared tasks in their team to complete the project.
Synthesis / Purpose	<ul style="list-style-type: none"> • No clear purpose for the program. • Program does not incorporate learning across the mission pack. 		<ul style="list-style-type: none"> • Purpose of the program is clearly stated. • Program combines learning, concepts and code from several missions.
Code Completion	<ul style="list-style-type: none"> • Code will not run or doesn't complete the task correctly. 		<ul style="list-style-type: none"> • Code runs and accomplishes its task without any errors, including logic.