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| **Mission 13 Assignment** | **Name:** |
| **Pre-Mission Preparation** | |
| During this mission you will learn a new way to navigate the CodeBot. What techniques have you used so far to move around the CodeBot? |  |
| **Mission 13 Checks** | |
| Objective #1  How many slots does each wheel encoder have?  What data is returned when a wheel encoder is read? |  |
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| Objective #2  How do you filter out duplicate values?  Run the code and look at the printed values. What are the ranges of values printed? |  |
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| Objective #3  Write a line of code that creates a string of 10 percent symbols. |  |
| Objective #4  What error is caused by: val / 100 |  |
| Objective #5  What caused the error?  How do you prevent the error? |  |
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| Objective #6  What is the data type of: is\_slot    What is the algorithm for counting the slots in one complete turn? |  |
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| Objective #7  How did you change the infinite loop to ensure you went exactly 40 counts? |  |
| Objective #8  How do you convert centimeters to counts? |  |
| Objective #9  When the ‘bot needs to turn, what type of power (+ or -) will the wheels need? | |  |  |  | | --- | --- | --- | | direction | LEFT | RIGHT | | clockwise |  |  | | counterclockwise |  |  | |
| Objective #10  What are the values of the variables & constant? | |  |  | | --- | --- | | POLL\_MS |  | | t\_poll |  | | t\_now |  | |
| Objective #11  What two lines of code do you add before motors.run() to create a feedback loop? |  |
| Objective #12  List at least two changes you made to your code to drive around the free throw circle: |  |
| **Post-Mission Reflection** | |
| On a scale of 1 (not fun) to 5 (the best!), rank this mission. Explain why. |  |
| On a scale of 1 (too easy) to 5 (very hard), rank this mission. Explain why. |  |
| What is one tip you would give a new programmer about finding and fixing errors in code? |  |