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| **AP CSP Python with Robots**  **Mission 5 Obj 6-9 Assignment** | | **Name:** |
| **Mission 5 Introduction** | | |
| Read the introduction and project goals. During this assignment, you will complete the last goal. | | |
| **Mission 5 Objectives 6-9** | | |
| Complete Objective 6. Instead of putting the while loop under the imports, move it to the Main Program, just above the while loop that is already there.  What is the purpose of this new while loop? |  | |
| Complete Objective 7.  What is return used for?  What are two examples of incrementing a variable in the code? |  | |
| This Objective has a lot of changes to the code. Follow CodeTrek carefully, and watch the indenting! You can define the variable line\_count near the top with threshold.  The “Run It!” box states: Something interesting happens when line\_count reaches 256. Run the code with something under the line sensors until the program crashes. What do you think the error message means? | | |
| Complete Objective 8.  What did the error message from Objective 7 mean?  How did you fix the bug? |  | |
| Complete Objective 9. The names of the functions need to be the same as CodeTrek for the goals to be met.  Did you remember to enable the motors? |  | |
| For this objective, you get the motors going. You have already written a function for going straight. You can use the same code for **go\_forward()**, but don’t use any parameters. The **back\_turn()** function is a little different. Use CodeTrek to remind you of the algorithm for turning back. Do not use parameters so that the goals will be met. | | |
| Now make some changes. After the goals have been met, you can modify your code. Use parameters in at least one function. Try using a random time for moving backward and rotating. You can even use a random number for moving forward! What other modifications can you think of to make your line sensor program even more fun? | | |
| List the modifications you made to the LineSense program: |  | |
| After you make modifications, submit your completed ***LineSense*** program to the teacher. | | |