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Grand Blanc High School Robotics Team
2015 Programming Deliverable
Intermediate-Level Autonomous Programming Challenge



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Mentors to ask if you have questions about this Challenge: Sean Lynch or Robin Barrie

IMPORTANT NOTE: if you will be completing this task in the lunchroom, Team Members are required to sit so ALL laptop screens are visible from the lunchroom entrance.

Gather the following Materials:

1. Team Programming laptop with RobotC installed

Prerequisites:

1. Ensure you have completed the Beginning level autonomous programming challenge BEFORE beginning this challenge.
2. You may want to reference the previous challenge, as it will build upon the work you did within the beginning-level challenge.

Challenge Instructions:

You will be using one of the Team's computers to complete this Challenge. We do not have enough licenses for Team Members to install our software on their computer(s).

1. Open Robot C Robot Virtual Worlds-VEX 4.x
2. Click on "Open File"
3. Navigate to Z:\Students*"your name"*\VEX Curriculum\Programming\.
4. Open the "Vex_Competition_Includes_2337_Beginning_Auton_Complete." file you saved at the end of the beginning level challenge. We will use this file to complete this challenge.
5. IMPORTANT!!!! Save the file as
"Vex_Competition_Includes_2337_Intermediate_Auton_Complete"
6. Click on "Download to Robot" to open the Virtual World Curriculum Companion.
7. Log in as guest
8. Select the "ROBOTS" tab and select "VEX Clawbot".
9. Click on the "Movement" tab.
10. Select "Labyrinth Challenge" to choose the field.
11. The goal of this challenge is to move your robot from the starting station shaded in red to the end station shaded in black using the methods you learned in the beginning autonomous challenge.
12. Modify the code you used in the beginning autonomous challenge to move your robot to the end station.
 - o TIP: You must complete the challenge within 20 seconds.



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13. As you progress through the challenges you will receive a number of checkpoint messages. When you have completed the challenge you should see the following message.



14. When completed and validated, make sure you have saved your working program in your share folder as "Vex_Competition_Includes_2337_Intermediate_Auton_Complete."

Engineering Notebook Entry Instructions:

Write an entry in your engineering notebook, USE COMPLETE SENTENCES:

1. While you are working, detail your observations and document your process
2. Answer the following questions:
 - What problems or frustrations did you encounter while trying to write and/or deploy your code?
 - Did you enjoy this programming task? Why or why not?
3. List the functions and commands you utilized to complete this challenge and what they are used to accomplish.

To Complete Your Challenge:

1. Print a copy of your code, and add it to your Engineering Notebook entry
2. Ensure that your Engineering Notebook entry is complete
3. Open the laptop (or PC) you used to write the code, with RobotC visible and running. Ensure that your code has been deployed and is "working"
4. Ask Clinton, Sean, or Robin to approve your Engineering Notebook entry and have your deliverables checklist validated.
5. Put the laptop, charger, and mouse away in the designated backpack, and return the bag to the appropriate bin in the conference room (if used)
6. Put all of the materials and resources back in the designated bin
7. Leave your workspace cleaner than it was when you found it