

Your approach: Whenever you approach a significant problem, rather than trying to implement the entire solution right away, it is often a good idea to break it down into a series of subsystems. Subsystems are designed to solve a portion of the overall problem. This means that we can start implementing and testing at an earlier stage, and it is easier to identify and fix any issues that occur along the way. We can then combine each of these smaller subsystems at the end to solve our complete problem.

We can break our overall solution down into a series of subsystems, like as follows:

1. **Speed control:** we need to program our robot to move by individually setting the rotational speed of each motor.
2. **Navigating curves:** we need to program our robot to detect small curves in the line and adjust its movement accordingly.
3. **Navigating turns:** we need to program our robot to detect significant turns in the line and adjust its movement accordingly.
4. **Extinguishing fires:** we need to program our robot to detect the presence of a fire and automatically put it out.
5. We will then combine each of these smaller programs to solve the complete problem.

To get started building your solution, proceed to the Create step and then begin the first subsystem. In each subsystem, we will research, plan and then code a solution to a smaller problem. Your learning journal and/or teacher will walk you through completing each subsystem. At the end of each subsystem, return to the Create step and start the next subsystem until you have completed them all and solved the problem!