

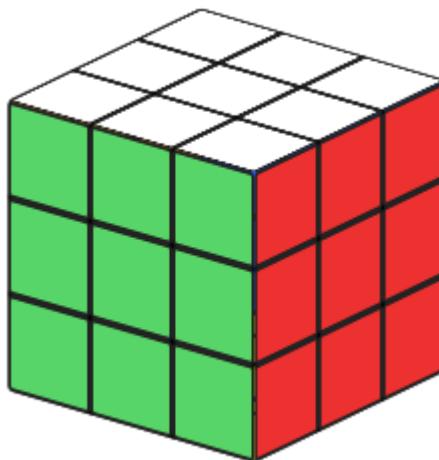
## TTC Software Developer – Rubik's Cube Challenge

Develop a program that simulates a Rubik's cube. The aim of the program is not to solve the cube, just to develop a programmatic Rubik's cube that can correctly rotate any face.

The solution can be developed in any programming language; however, it must be both buildable and runnable on a Windows PC and not require any paid for software.

As part of your submission please provide a Readme containing detailed instructions on how to build and run your program.

You can use <https://rubiks-cube-solver.com/> to help you develop your solution. The initial state of the cube in your solution should be “solved” and you should set your cube up the same way as they do, with the Green tiles at the front, Red tiles on the right-hand side and White tiles on the up face, example shown below:



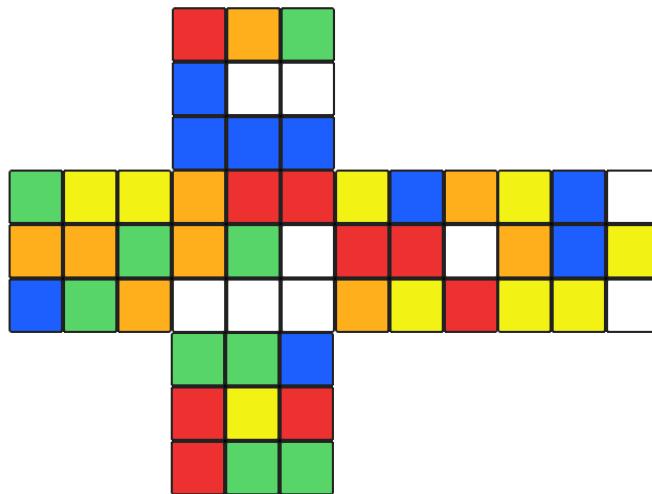
To test your solution, print out the colours on each face after applying the following face rotations to the starting position:

- Front face clockwise 90°
- Right face anti-clockwise 90°
  - Up face clockwise 90°
- Back face anti-clockwise 90°
  - Left face clockwise 90°
- Down face anti-clockwise 90°

On <https://rubiks-cube-solver.com/> this sequence can be setup on their UI using the following buttons in order:



You should print out the faces using the exploded view below.



You do not need to provide a UI, and a solution that prints out the solution using a console write statements is perfectly acceptable.

Although providing a working solution is good, there are other factors we will consider when we evaluate your program. For example, we will look to see if your code is close to “production quality” in terms of being readable, maintainable, testable, etc.

Ideally your solution will be published to an easily accessible platform such as GitHub, but as long as your solution can be shared easily for review by our Lead Developers that will be fine.

Good luck!