# Function Description

**Function Name:** addRoute

**Parameter List:**

|  |  |  |
| --- | --- | --- |
| Parameter Name | Type | Description |
| map | const struct Map\* | “map” is a struct variable with 3 member variables:  int squares[MAP\_ROWS][MAP\_COLS];  int numRows;  int numCols;  The “squares[MAP\_ROWS][MAP\_COLS]” variable represents the squares that are buildings and the squares that are not.  The “numRows” variable represents the number of rows of the map.  The “numCols” variable represents the number of columns of the map. |
| route | const struct Route\* | “route” is a struct variable with 3 member variables:  struct Point points[MAX\_ROUTE];  int numPoints;  char routeSymbol;  The “points[MAX\_ROUTE]” variable represents the row-column position of a square on a map. It is comprised of 2 member variables: char row; char col;  The “numPoints” variable represents the total number of points of the route.  The “routeSymbol” variable stores the character that represents this route variable. |

**Returns:** The return type is struct Map, which is a copy of the original map (i.e. struct Map\* map) with the route added to it.

**Description:** This function adds the “route” to the “map”, by storing the “routeSymbol” to the corresponding “squares” variable.

First, it should make a copy of the “map” variable in the function locally, i.e. “results”, by looping all the values in the “map” parallel array.

Second, it should loop through the “points” parallel array and add the “routeSymbol” to the corresponding “results” parallel array.

Finally, it should return the “results” local variable.