# Function Description

**Function Name:** getClosestPoint

**Parameter List:**

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| --- | --- | --- |
| Parameter Name | Type | Description |
| route | const struct Route\* | Pointer of struct “Route” containing 3 member variables:   * struct Point points[MAX\_ROUTE] – The array of coordinates of a square on a map, composing of 2 member variables: char row and char col. * int numPoints – The total number of points of the route. * char routeSymbol – The character that represents this route variable. |
| pt | const struct Point | The target coordinate of a square on a map, composing of 2 member variables:   * char row – The n-th row * char col – The n-th column |

**Returns:** The return type is int, which is the index of the array of struct Point points[], the data member in the incoming struct Route locating the closest point to the incoming target Point pt.

**Description:** This function iterates all the struct Point in Route.points[] and obtains the index of struct Point in Route.points[] whose distance from the target struct Point pt is the minimum.