

1. `bool pathway[8] = {[0] = true, [2] = true};`
2. I have attempted to try using some searching algorithms to find the shortest path but I was not able to use it successfully for this assignment. Instead I used switch case to set the predetermined charging station

```
#include <stdio.h>
#include <stdbool.h>
```

```
int main(void) {
```

```
    int userinput, j, k;
```

```
    bool road_network[8][8] = {
        {1,1,0,0,0,1,0,0},
        {1,1,1,0,0,0,0,0},
        {0,1,1,0,1,1,0,0},
        {0,0,0,1,1,0,0,0},
        {0,0,0,1,1,0,0,0},
        {1,0,1,0,0,1,0,0},
        {1,0,0,1,0,0,1,0},
        {0,0,0,0,0,1,0,1},
    };
```

```
    printf("A B C D E F G H\n");
    for( j=0; j<8; j++) {
        for( k=0; k<8; k++) {
            printf("%d ", road_network[j][k]);
        }
        printf("\n");
    }
```

```
    printf("\nWhich point are you located? 0 - A, 1 - B, 2 - C, 3 - D, 4 - E, 5- F, 6 - G, 7 - H\n");
    scanf("%d", &userinput);
```

```
    switch(userinput){
    case 0:
        printf("At point: A\n");
        printf("point: C arrived to charging station");
        break;
```

```
case 1:
    printf("At point: B\n");
    printf("point: C arrived to charging station");
    break;

case 2:
    printf("point: C is a charging station");
    break;

case 3:
    printf("point: D is a charging station");
    break;

case 4:
    printf("At point: E\n");
    printf("point: D is a charging station");
    break;

case 5:
    printf("At point: F\n");
    printf("point: C is a charging station");
    break;

default:
    break;
}

return 0;
}
```