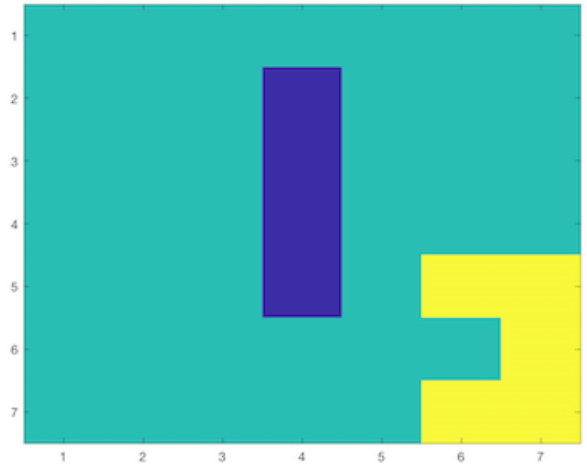
Checking for the Goal State

As the robot navigates through the grid and transitions from one state to another, we need a mechanism to check whether a robot has arrived at the goal state, which is displayed below.



Your next task is to write a function that takes a current state S as an input, and checks if this current state is a goal state. Your function should return 1 if the current state is the goal state, and 0 otherwise. You can also call your previously written function `MakeState.m`.

Your Function

Save Reset MATLAB Documentation (https://www.mathworks.com/help/)

```
function is_goal=isGoal(S)
    % Check if a current state is a goal state
    %
    % Input:
    % - S: n x m matrix that stores a current state
    % Output:
    % - is_goal: a binary variable with a value of 1 if S is the goal state, and 0 otherwise


    is_goal= 0;

    [n,m] = size(S);
    sub_at_goal = [n-1,m; n,m; n-2,m; n,m-1; n-2,m-1];
    lin_idx_list = sub2ind([n m], sub_at_goal(1:end,1), sub_at_goal(1:end,2));

    entry_list = S(lin_idx_list);

    if sum(entry_list) == 5
      is_goal = 1;
    end

end
```

Code to call your function

Reset

```

```

```
9
10 %% Creating a goal state
```

▶ Run Function

Previous Assessment: All Tests Passed

Submit

- ✓ **Is the Function Correct when the Answer is True?**
- ✓ **Is the Function Correct when the Answer is False?**