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Inputs

```
number_of_regions = 10;  
looked_regions = [1,3,2,5,6,7,9,4,10,9];
```

Variable initialization

```
looks_matrix = zeros(number_of_regions,number_of_regions);  
entropy_matix = zeros(number_of_regions,number_of_regions);  
row_total = zeros(number_of_regions);  
col_total = zeros(number_of_regions);
```

Computing the transition matrix

```
for looked_index =2:number_of_regions  
    from = looked_regions(looked_index-1);  
    to = looked_regions(looked_index);  
    looks_matrix(from,to) = looks_matrix(from,to)+1;  
end
```

Entropy calculations

```
entropy_matrix = looks_matrix * log2(1/looks_matrix);  
  
columntotals = sum(looks_matrix,1); % option 1 for columns, 2 for rows  
rowtotals = sum(looks_matrix,2);  
  
column_entropy = columntotals * log2(1/columntotals);  
row_entropy = rowtotals * log2(1/rowtotals);  
  
column_entropy_totals = nansum(column_entropy); %nansum excludes nan  
values  
row_entropy_totals = nansum(row_entropy);  
  
correction = (column_entropy_totals + row_entropy_totals)/2;  
cellenttotal = nansum(nansum(entropy_matrix));  
  
entropy_total = column_entropy_totals + row_entropy_totals -  
    cellenttotal;  
entropytotal = 1-( entropy_total /correction);
```

