Intelligent Scissors  
Sample Test Cases

# Sample Tests

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| --- | --- | --- | --- |
| Case # | Input Image | Image width and height | Output file |
| 1 | Case1/test1.png | 11x11 | Case1/output.txt |
| 2 | Case2/test2.png | 100x100 | Case2/output2.txt |
| 3 | Case3/Case1.1.jpg | 78x59 | Case3/output3.txt  Case3/path.txt |

## Cases Output Description

You shall output these for each case in sample cases:

1. Output file contain the construction of graph
   1. Mention every index node which represents every pixel in the image
   2. With the edges from this index node to the surrounding neighbors and the weight for each edge(**Hint : using 4 connectivity**)

2. Path file contains the list of pixels that represent the shortest path between the source node and the destination node (**Hint: Saving the node index besides the pixel X’s and Y’s position**)

**Check the output of each case below …**

* **Case 1:**
* **Case-1/test1.png.**
* **Output.txt** shall contain:
  + **The graph that is constructed from the image**
  + **Every node index which represents one pixel in the image followed by the edges between it and the neighbors with the weights**
  + **As following**

The index node 118

Edges

edge from 118 To 119 With Weights 1E+16

edge from 118 To 107 With Weights 1E+16

edge from 118 To 117 With Weights 1E+16

## Case 2:

* **Case-1/test2.png.**
* **Output2.txt** shall contain:
  + **The graph that is constructed from the image**
  + **Every node index which represents one pixel in the image followed by the edges between it and the neighbors with the weights**
  + **As following**

## The index node1

## Edges

## edge from 1 To 2 With Weights 1E+16

## edge from 1 To 101 With Weights 1E+16

## edge from 1 To 0 With Weights 1E+16

## Case 3:

* **Case-1/cas41.1.jpg.**
* **Output3.txt** shall contain:
  + **The graph that is constructed from the image**
  + **Every node index which represents one pixel in the image followed by the edges between it and the neighbors with the weights**
  + **As following**

## The index node2

## Edges

## edge from 2 To 3 With Weights 0.999999999999972

## edge from 2 To 80 With Weights 0.333333333333333

## edge from 2 To 1 With Weights 0.499999999999993

* **the file Path .txt shall contain the list of pixels that represent the shortest path between the source node and the destination node as following**

ode 102 at position x 24 at position y 1

Node 103 at position x 25 at position y 1

Node 104 at position x 26 at position y 1

Node 26 at position x 26 at position y 0

Node 27 at position x 27 at position y 0

Node 28 at position x 28 at position y 0

Node 108 at position x 30 at position y 1

Node 32 at position x 32 at position y 0

Node 110 at position x 32 at position y 1

Node 32 at position x 32 at position y 0

Node 33 at position x 33 at position y 0

Node 113 at position x 35 at position y 1

Node 114 at position x 36 at position y 1

Node 115 at position x 37 at position y 1

Node 39 at position x 39 at position y 0