**Problem Statement:**

Seam-carving is a content-aware image resizing technique in which the picture gets decreased in size by one pixel of height or width simultaneously. A vertical seam of an image is the path where pixels are connected from the top to the bottom with one pixel in each row. A horizontal seam is a path of pixels which are connected from the left to the right with one pixel in each column.

**Related Concepts:**

**Code:**

A single file named as **SeamCarver.java** contains the whole project.

In **SeamCarver.java**, we have five public methods and two private methods. Five public methods are

energy(),

findVerticalSeam(),

findHorizontalSeam(),

removeVerticalSeam(),

removeHorizontalSeam()

and

two private methods are

v\_relax() and

h\_relax().

energy() - to find the energy of a single pixel of the picture.

findVerticalSeam() - to find the array of indices which indicates minimum path based on top to bottom or viceversa.

findHorizontalSeam() - to find the array of indices which indicates minimum path based on left to right or viceversa.

removeVerticalSeam() and removeHorizontalSeam() are the two methods to remove the number of columns and rows of given input image.

Relax methods are generally used to check the adjacent sides of the each pixel,

like x , x-1, x+1 pixels.

**Test Cases:**

According to course era,

See the Assessment Guide for information on how to interpret this report.

ASSESSMENT SUMMARY

Compilation: PASSED

API: PASSED

Spotbugs: FAILED (1 warning)

PMD: FAILED (4 warnings)

Checkstyle: FAILED (0 errors, 11 warnings)

Correctness: 29/31 tests passed

Memory: 6/6 tests passed

Timing: 18/17 tests passed

Aggregate score: 97.31%

[Compilation: 5%, API: 5%, Spotbugs: 0%, PMD: 0%, Checkstyle: 0%, Correctness: 60%, Memory: 10%, Timing: 20%]

**Complexity:**

**Conclusion:**

SeamCarver project is used to find the seam's which are vertical seam and horizontal seam and to remove those seams' from the image.