**Investigating Algorithms**

You have been introduced to a number of different algorithms commonly used in computer science. You have also discovered how to implement recursion as a means to implementing various algorithms. ←↑→↓

In this assignment you will be responsible for researching a computer algorithm not discussed in class and creating a website devoted to presenting your findings.

**Steps**:

1. Select an algorithm from the list provided at the URL posted below.\*\*
2. Create a webpage page that describes the algorithm. Use diagrams, illustrations, videos, animations etc. whenever possible to visually illustrate the algorithm.

Give examples of where it might be used ex. quick sort can be used to alphabetize the list of names and phone number in an online phone book.

1. Analyse the algorithm and come up with an IPO, flowchart and pseudocode for it.
2. Implement the pseudocode through a program. Recursion may or may not be used as part of your algorithm. Try and be creative. Look at some of the exemplars provided to you by your teacher.
3. Post your algorithm designs, along with the source and program on your webpage. Make sure to include the name of your algorithm in the title of your page. Include screenshots and descriptions of how to use your program.
4. Add a link to your project via your Unit 3 page.

**Possible Algorithms**: Visit <https://en.wikipedia.org/wiki/List_of_algorithms#Graph_algorithms>

Research the various algorithms listed at this URL and decide as a group which one you would like to base your assignment on. **No two groups will be allowed to select the same algorithm**, so once a decision has been made let your teacher know. You can also not use an algorithm that is posted on the Hall Of Fame page at sdsscomputers.com.

**Marking Scheme**

**Name(s):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Date Submitted:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**C**

Organization and Presentation 30

* Overall appearance of your webpage.
* Is it organized?
* Does it have appropriate titles, headings etc.?
* Does it include a clear description of the algorithm and the problem it is meant to solve? Are their visuals to help understand the algorithm?
* Have you included examples of where this may be used in a program?
* Are links to references included?

Source Code 15

* Is it well documented?
* Are all variables and functions properly named?
* It is formatted neatly?

**TI**

IPO 5

* Is this accurate, neat and well organized?

Flowchart 5

* Is this accurate, neat and well organized?

Pseudocode 5

* Is this accurate, neat and well organized?

**A**

Program 50

* Does the program implement the algorithm correctly?
* Is the implementation imaginative and insightful?
* How complex was the program and the algorithm?

When submitting your project, always make sure to include links to the source code as a text file, the project folder in zipped format as well as a link to the zipped exe.