

MATLAB Marina: Algorithms 1

- 1. Develop and write out an algorithm that will guide a person from your place of residence to the nearest supermarket.
- 2. Using Google Maps, get directions from your place of residence to the nearest supermarket. Compare your algorithm from problem 1 to the directions the map software generated and make changes to your algorithm to make it as precise and unambiguous as possible.
- 3. Develop and write out an algorithm for making a peanut butter and jelly sandwich.
- 4. Develop and write out an algorithm for registering for the Physics I course.
- 5. Develop an algorithm to determine the momentum of a water balloon with a mass of one kilogram dropped from a height of 10 meters just before it hits the ground. The momentum p of an object is the object's mass times its velocity, $p = m \cdot v$. The velocity v of a falling object can be determined using the formula $v = \sqrt{2 \cdot g \cdot d}$ where d is the distance fallen and g is the acceleration due to gravity.

Last modified Friday, September 18, 2020

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