Armstrong State University
Engineering Studies
MATLAB Marina – Algorithm Development I Exercises

1. Develop an algorithm that will guide a person from your place of residence to the nearest supermarket.

2. Using either Google Maps, https://maps.google.com/, or MapQuest Maps, http://www.mapquest.com/, 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 an algorithm to determine the momentum of a water balloon dropped from 20 feet on a passerby of height h. Hints: 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.

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