

# Programming Languages and Compilers (CS516) - Homework #3

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- 1 For each of the following loops, specify the nature of each loop dependency (if any). 1**

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1. Here, the statement  $S$  defined as  $A(2i) = A(i) + 1$  has a true dependence on itself. We supply direction vector  $[<]$ , but we cannot supply a distance vector due to the inconsistency of the dependency.
2. Here, the statement  $S$  defined as  $A(2i) = A(7i) + 1$  has an anti-dependence on itself. We supply direction vector  $[<]$ , but we cannot supply a distance vector due to the inconsistency of the dependency.