**4-3 Project One Milestone Two: Hash Table Data Structure**

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**Pseudocode**

CREATE Course structure with fields: courseNumber, title, prerequisites

CREATE empty HashTable

FUNCTION readFile(fileName):

OPEN file with name filename

IF file not open:

PRINT "ERROR: cannot open file"

RETURN

WHILE not end of file:

READ line

TRIM line

IF line is empty: CONTINUE

SPLIT line by ',' INTO tokens

IF LENGTH(tokens) < 2:

PRINT "FORMAT ERROR: need courseNumber,title"

CONTINUE

CREATE Course object

SET courseNumber and title from tokens

IF there are more than 2 tokens:

FOR each remaining token:

IF token is not a course in file:

PRINT prerequisite error

ELSE:

ADD token to prerequisites

ADD Course to HashTable

CLOSE file

FUNCTION printCourses(HashTable):

FOR each Course in HashTable:

PRINT courseNumber, title, prerequisites