***QUIZ 2 ALGORITHMS***

*QUESTION 1*

hasCycle(head):

visited = empty hash table

currentNode = head

while currentNode is not null:

if currentNode is in visited:

return true

add currentNode to visited

currentNode = currentNode.next

return false

*QUESTION 2*

detectCycle(head):

currentNode = head

visited = empty set

while currentNode is not null:

if currentNode is in visited:

return currentNode

add currentNode to visited

currentNode = currentNode.next

return null

*QUESTION 3*

reverseList(head):

// Initialize three pointers: prev, curr, and nextNode

prev = null

curr = head

nextNode = null

// Traverse the linked list

while curr is not null:

// Store the next node

nextNode = curr. next

// Reverse the next pointer of the current node to point to the previous node

curr. next = prev

// Move prev pointer forward

prev = curr

// Move curr pointer forward

curr = nextNode

// Return the new head of the reversed list (prev)

return prev