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CS1350

Program 2

linkedList

Due Date: 9/29/17

**Design Document**

Design and implement a class node to use to implement a linked list containing one hundred integers. Data should be read from a file. Manipulate the list so that it can be printed in 5 columns. User input is required for further manipulation of the program because they should be able to display the node of any item in the list.

**Calculations**

Producing 5 columns

List size = 100

List size/5 = 20 rows

For(int i= 0 ; i<rows;i++){

for(int j =0; j< column; j++){  
statements;  
}

}

**UML**

+ void addNode(int addData);

+ void printList();

+ void displayNode();

+ linkedList();

+ ~linkedList();

- struct node

{

- int data;

- node\* link;

};

- node\* tail;

- node\* head;

- node\* current;

- node\* temp;

**Reflection**

**What I Learned:**

From completing this program, I learned a little about pointers and how they can be used to create a linked list. Also, I learned various was to manipulate this list.

**Challenges:**

My biggest challenge was trying to grasp the concepts of what pointers should do and what should be done to implement them correctly. However, I do not think that I fully grasped this topic through this project.  
**Solutions:**

Despite not being able to fully comprehend what was happening in my code I was able to complete this program through research and prior knowledge of creating algorithms.

**Output Listing**

1 2 3 4 5

6 7 8 9 10

11 12 13 14 15

16 17 18 19 20

21 22 23 24 25

26 27 28 29 30

31 32 33 34 35

36 37 38 39 40

41 42 43 44 45

46 47 48 49 50

51 52 53 54 55

56 57 58 59 60

61 62 63 64 65

66 67 68 69 70

71 72 73 74 75

76 77 78 79 80

81 82 83 84 85

86 87 88 89 90

91 92 93 94 95

96 97 98 99 100

Select any item by numerical position

input: 68

Item at position: 68

node points to 68

node is at 0x7ff36a403320

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Head is at 0x7ff36a400030

Head data:1

Tail is at 0x7ff36a403330

Tail data:69

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