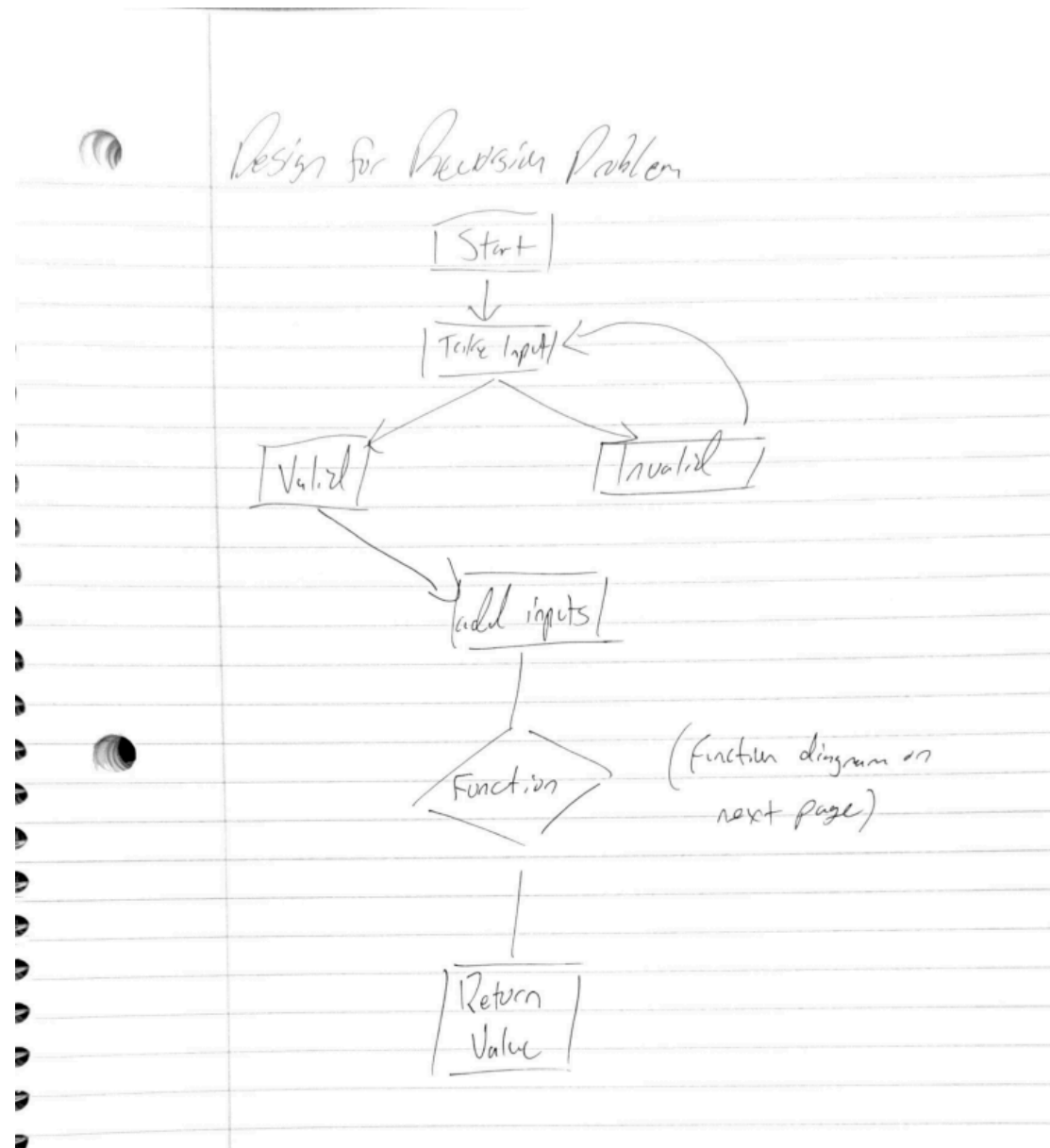


David Alsobrooks
2/12 Requirements

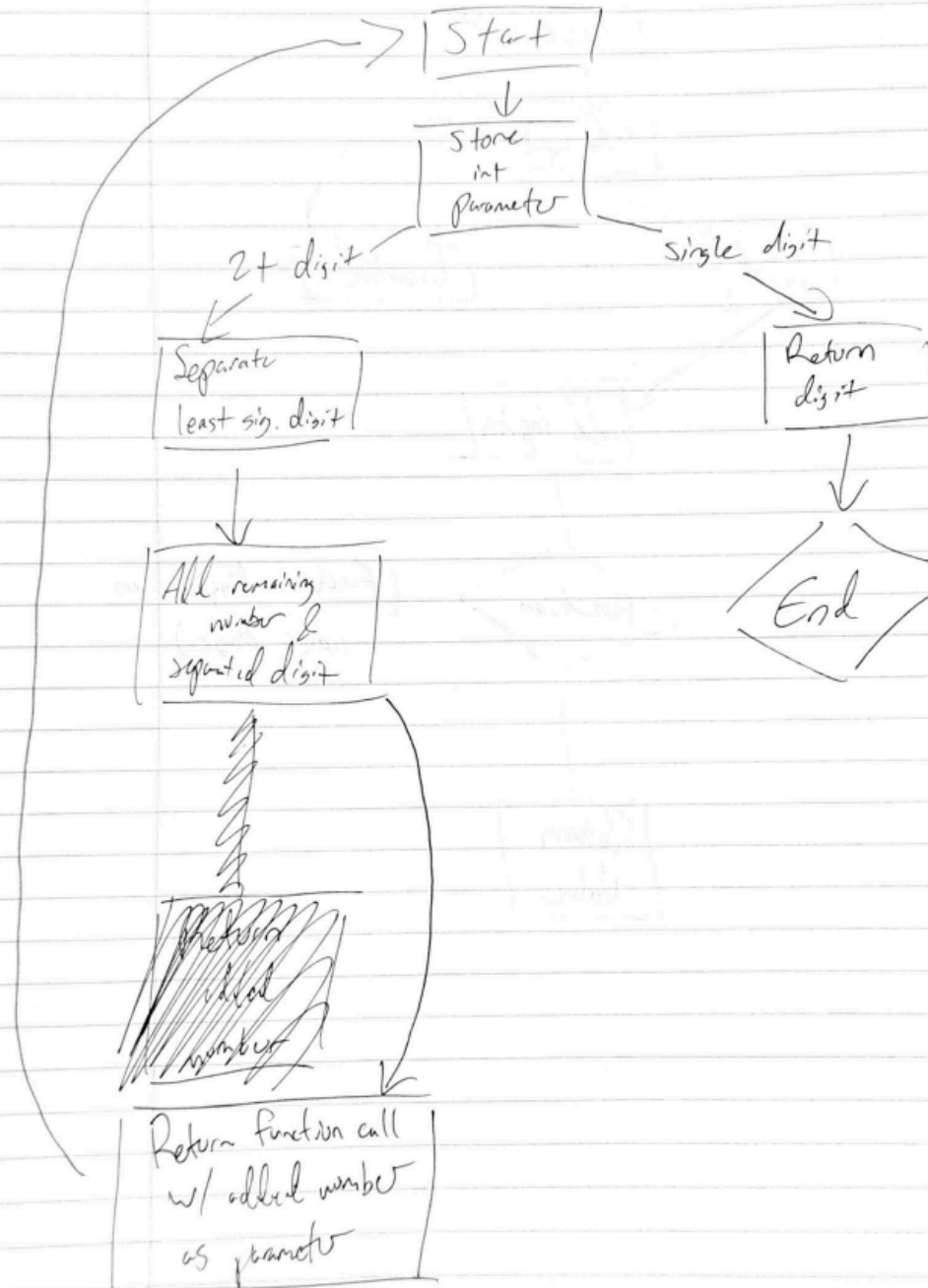
1. Takes in two numbers from the user
 - 1.1 Validates this input
2. Adds these two numbers together and uses this new number as the base for the problem
3. Recursively separates the least significant digit and adds it to the remaining number
4. Returns a single digit number

Design




Function Design

Function Design



Code Implementation (Unfinished)

```
1  # Team Name:   David Alsobrooks
2  #####
3  # Problem 1:   Using recursion, take 2 numbers in from a user and add them together;      #
4  #               then separate the least significant digit and add the remaining digits and so on  #
5  #               until you have a single digit answer.                                     #
6  #               Ex: 87345 -> 8734 + 5 -> 8739 -> 873 + 9 -> 882 ...                          #
7  #####
8
9  # First step:  Take in input from the user. This should show an example of proper input,
10 #               as well as validate that this proper input is done.
11
12 x, y = input("Input two numbers, separated by a space (ex: 87 90)").split()
13 x = int(x)
14 y = int(y)
15
16 # Second step: Add the two inputted numbers together, and save this value.
17 x = x + y
18
19 # Third step:  RECURSIVE FUNCTION: If there is only one digit remaining, return this last digit.
20 #               Separate the least significant digit off from the number,
21 #               and save both the original number (minus the last digit) and the separated digit.
22 #               Then, add these two numbers. Return a function call with the parameter
23 #               being this newly added number.
24 def AddLastDigit(x): 1usage
25     # If there is only one digit remaining, return this last digit.
26     if (x < 10 & x > -10): return x
27     # Separate the least significant digit from the number, save it in y;
28
29     # Save original number with LSD removed back in x
30
31     # Add x and y
32
33      return AddLastDigit(x)
34
```