

Prac 5 Design

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Problem Description

- Displays the contents of each of the vectors to the screen
- Empties the contents in each of the vectors
- Fills vecData with a user-provided set of random numbers in a user-provided range.
- Prompts the user for a number and fills vecSmall with those values in vecData which were smaller than the number, vecLarge with those values larger than the number and vecSame with those values equal to the number.
- A function which when given the vecData vector returns a vecSum containing the sums of the digits in those numbers

Input and Output

Case 1

Input	
Upper bound	Standard input stream
Lower bound	Standard input stream
Number of random numbers generated	Standard input stream
Output	
N/A	

Case 2

Input	
Number to be compared to other values	Standard input stream
Output	
All values in array smaller than number entered	Standard output stream

Case 3

Input	
Number to be compared to other values	Standard input stream
Output	
All values in array Larger than number entered	Standard output stream

Case 4

Input	
Number to be compared to other values	Standard input stream
Output	
All numbers equal to the input value	Standard output stream

Case 5

Input	
N/A	
Output	
Sum of digits in array	Standard output stream

Option 6

Input	
Null	
Output	
Exit Application	

Data Format

Identifier	Data type	Description
chOption	Char	Select number 1 to 6
vecNum	Integer	Amount of numbers to be generated
intLowerbound	Integer	Lower bound to be generated
intUpperbound	Integer	Upper bound to be generated
vecLarger	integer	Numbers Higher than inputted values
		Numbers lower than inputted
vecEqual	Integer	Stores and compares values to display values larger and smaller
vecSum	Integer	Sum of digits in a random number

Pseudo Code

vecSum \leftarrow VecData

Values \leftarrow Get digits from each number

For each value in vector

If digit > 0

Value + n

Else

Next value

Return \rightarrow value

UML

