**22W\_CST8116\_451 Intro to Computer Programming**

Project #1 Java Programming Structure: Flowchart and Pseudocode

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# Project #1 Java Programming Structure: Flowchart and Pseudocode

## Write a pseudo code and draw a flowchart that performs the following:

1. Ask a user to enter a number.
   1. If the number is between 0 and 10, write the word blue.
   2. If the number is between 11 and 20, write the word red.
   3. If the number is between 21 and 30, write the word green.
   4. If it is any other number, write that it is not a correct color option.

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| **Pseudocode** |
| Ask user to enter a number, use scanner to store the int as number  If  number is >= 0 AND <11 print response “Your colour is blue”  Else  if number is >10 and <21 print response “Your colour is red”  Else  if number is >20 and <31 print response “Your colour is green”  otherwise, print response “That is not a valid colour option.”  End |

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| **Flowchart** |
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## Write a pseudo code and draw flowchart to print all multiples of 5 between 1 and 100 (including both 1 and 100).

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| **Pseudocode** |
| Set starting number to 0:  Loop while number is <101:  number = number + 5  print number  end |

Comment: I would probably have the starting and ending numbers be input by user as well as the “divisible by” number, so that you could do this for anything.

For example

Set starting number to x,  
set ending number to y + 1  
 set divisor number to z

Loop while x < y

X = x + z

Print x

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| **Flowchart** |
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## Write a pseudo code and draw a flowchart that will ask a user to input 5 numbers and does following steps:

1. Read in 5 separate numbers.
2. Calculate the average of the five numbers.
3. Find the smallest (minimum) and largest (maximum) of the five entered numbers.
4. Write out the results found from steps b and c with a message describing what they are.

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| **Pseudocode** |
| Ask the users to enter 5 numbers  read the numbers into an array  Calculate the average of all given numbers and store it in an Double of averageNumber  Sort the array from lowest to highest  Use a Boolean search to find the lowest number and store it in int of lowestNumber;  Use a Boolean search to find the highest number and store it in an int of highestNumber;  Print the averageNumber (with delimiter so you don’t have more than 2 decimal places)  Print lowestNumber  Print highestNumber  end |

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| **Flowchart** |
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## Write a pseudocode and draw a flowchart solution, which will take in an integer value from the user and determine whether that value is odd or even.

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| **Pseudocode** |
| Ask the user to enter an integer  If the number can be divided by two with no remainder, then print that the number is even (num % 2 == 0)  Else the number has a remainder, then print that the number is odd  end |

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| **Flowchart** |
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## References

theprogrammedwords. (2021, September 30). *How to write a pseudo code?* GeeksforGeeks. Retrieved February 1, 2022, from <https://www.geeksforgeeks.org/how-to-write-a-pseudo-code/>