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CSC 201

Assignment # 4

**REPORT**

For this programming assignment, the main objectives were to learn how to use and implement functions in our python programs. It also served a purpose in giving us some experience in recording an existing program.

Throughout the program, I used local variables within functions to help me accomplish certain objectives. I used letter variables a through d to find the position of any operations used, and then used variables n1 through n8 to obtain the values before and after the operation signs. I also used the variable count to help determine if an expression is valid or not. It counts the amount of things wrong with the expression, which could be wrong characters used, blank spaces after or before operation signs, and no operations used. So if there is just one thing wrong with the expression, it becomes an invalid expression. The function *simpleExpressionIsValid* will determine whether or not a given function is valid or invalid. Using the variables mentioned above, we are able to calculate the expressions for any operation used. The function *evaluateSimpleExpression* will calculate and given valid expression and return its value. In the function *calculator*, I combined both objectives and created a program where it will calculate a given expression if it is valid and then ask for a new expression if it is invalid. By using the append function, I was able to create infinite memory within the function, as it will add on each calculated valid expression onto the list mem. I had trouble with the presentation of the expressions, as I was forced to use commas and quotation marks in the presentations. I could not find a way to make it any neater as I approached an error every time I changed the format. I was also not able to handle parentheses in the function as I was heading towards a process that was too complicated and required too many variables and steps. I could not find a simpler and appropriate way to handle this part of the program.