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Assignment 1 – Task 4

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Problem 1 (Marawan Mohamed)

1. reads input from user
2. check if its a number and refuse anything else
3. if its anything less than a specific threshold, the respective mark is printed
4. exit code

Problem 2 (Marawan Mohamed)

1. read input from user
2. check if its a number and refuse anything else
3. loops for as many digits as there are in the number
4. multiplies the digit by itself for as many digits as there are in the number then adds all the multiplied digits in sum
5. checks if the sum is equal to the original number
6. print result

Problem 3 (Adam Samir)

1. read input from user as to what term the user wants pie to approximated to.
2. check if the user inputed a positive integer, else the program runs from the beginning
3. loop a list to get odd all odd numbers from 1 till the desired term
4. loop a counter to cycle between -1 and 1 for the sign.
5. add the fractions
6. multiply by 4
7. display the final number

Problem 4 (Ahmed Ashraf)

1. Take the input from the user and check it contains at least one alphabetic and then it will encrypt only the alpha chars in the input
2. Take the input of the shift value and check it's valid numeric from 1 to 25
3. Declare an empty string value called newTxt
4. Do a loop for each char in the inserted txt and check if the char is alpha then it will shift it and add it to the newTxt else it will add it as it is.
5. For each char to be shifted, it will check at first if it's lowercase or uppercase, and add this to a boolean isLower
6. It shifts the char as it's lowercase using modulus, and if it's isLower was False it will return the upper of this char, else it will return this char
7. After shifting each char we add it to the newTxt then print it to the user.

Problem 5 (Adam Samir)

1. read user input and decide in which form the user inputted numbers ([1,2,3] or 1,2,3 or 1 2 3 or 123)
2. remove commas, brackets or spaces according to which type
3. list the numbers
4. search each digit of the first list if it exists in the other list if it does, it adds to a counter
5. if the counter equals the length of the first list, then the two lists are equal.
6. print result

Problem 6 (Ahmed Ashraf)

1. Infinite loop to take the +ve number from the user and if it's valid +ve the loop will break
2. Make a list of factors where it starts with one and ends with the number
3. A loop will check that the number is divisible by an integer from 2 to 1/2 of the number, and if it is, this number will be added to the list between 1 and the number