<u>Assignment Report</u>

- Analysis of "collatz_num" function:
    - ➔ This function takes a positive integer as the input.
    - ➔ The fork() system call creates a new process. Since the child process has a copy of the address space of the parent space, it also has access to the input value.
    - ➔ After the new process is created, both the parent and the child start executing from the fork() instruction.
    - ➔ If the pid is zero(i.e if it's the child process), it takes the input number and outputs the sequence of collatz numbers using the given conjecture.
    - ➔ After the job is done, the child process terminates. All this while, the parent is waiting. After the child process terminates, the parent also terminates.

- Analysis of "main" function:
    - ➔ Upon executing, this function takes a positive integer as input. If the entered input is not an integer or is negative or is zero, it terminates the program. Upon making sure the input is valid, it calls the "collatz_num" function .