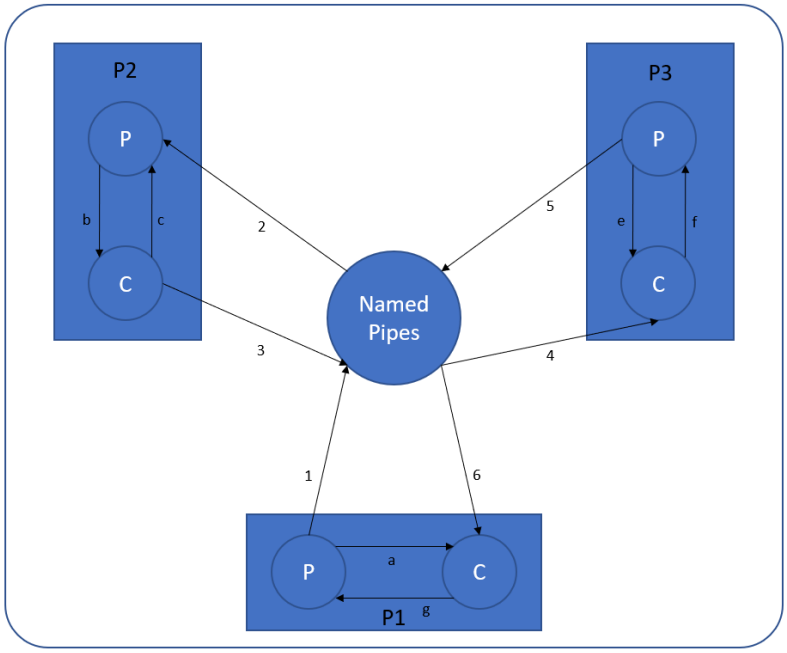
Iblis Encryptor



- *Named Pipes:*
  Permissions set to only read/write (execution not allowed) for all programs.

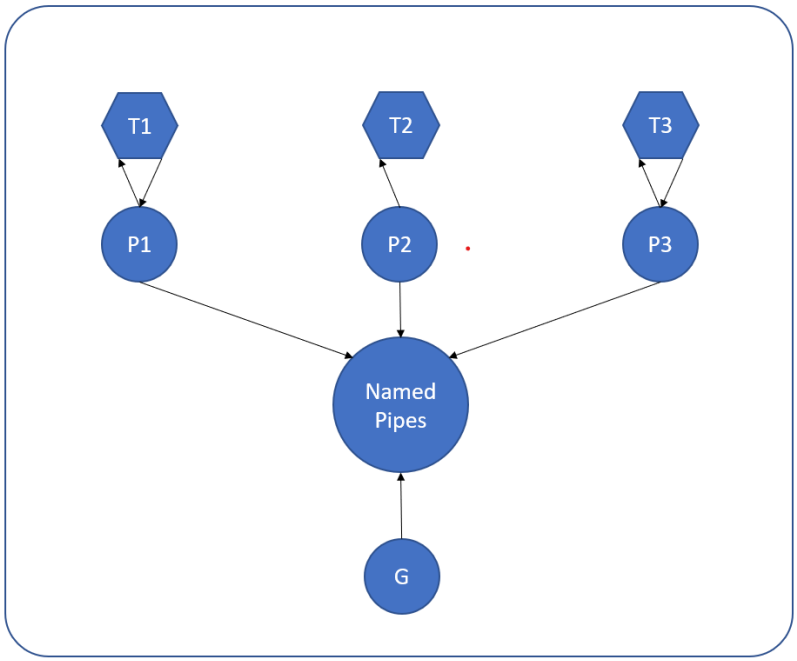
- *P1 program:*
  - *Parent reads the contents from a file and send it to the named pipe [1]*
  - *Parent also sends a message or signal to Child [a] that it has sent the contents for encryption.*
  - *Child should only try to read an output from the named pipe if it has received a signal from Parent.*
  - *After reading the results from the named pipe [6], it should display the results, then send them to parent [g]*
  - *Parent stores them in a new text file called "finalresults.txt"*

- *P2 program:*
  - *Parent reads the contents from the named pipe [2]*
  - *Parent sends them to Child [b]*
  - *Child reverses the contents e.g. "Hello world, this is me" becomes "em si siht, dlrow olleH"*
  - *Child sends them to the named pipe [3] and also sends a copy to Parent [c]*
  - *Parent stores results in a new text file called "P2_results.txt"*

- *P3 program:*
  - *Parent reads the contents from a file "P2_results.txt" and send it to Child [e]*
  - *Child receives contents from Parent and also reads the contents from the named pipe [4]*
  - *Child matches if both the contents are the same.*
  - *If same, Child increments ascii value of each character by 3, otherwise, it increments value by 2.*
  - *Child then sends the results to Parent [f].*
  - *Parent receiving the contents, replaces any character that is not alphanumeric with "-" if the index of the character is even and with "." if the index of the character is odd and sends the results to the named pipe [5]*
  - *Parent also stores them in a new text file called "P3_results.txt".*

Note:
make use of wait to achieve synchronization. named pipes don't store data & Programs must operate in pairs.

Anato's Counter



- *Named Pipes:*
  Permissions set to only read/write (execution not allowed) for all programs.

- *Generator program (G):*
  This program will write three random numbers i.e. 12, 34, 51 and write on a named pipe.
  - *1st number will be read by the program "p1"*
  - *2nd number will be read by the program "p2"*
  - *3rd number will be read by the program "p3"*

- *P1 program:*
  This program will read the required data from the named pipe and store them in a variable "Var".
  - *The program will initialize 5 pthreads,*
  - *In each thread, a random number is added to Var and returned to P1.*
  - *P1 will calculate sum of all the results and display the sum on the screen,*
  - *P1 also stores all the 5 results in a file called "Sum_of_5s.txt".*

- *P2 program:*
  This program will read the required data from the named pipe and store them in a variable "Var2".
  - *The program will initialize 3 pthreads,*
  - *In each thread, a random number is subtracted from Var2 and then displayed on the screen.*
  - *In each thread, the result value will also be appended in a file called "Sub_of_3s.txt".*

- *P3 program:*
  This program will read the required data from the named pipe and store them in a variable "Var3".
  - *The program will then initialize 2 pthreads, and pass them filenames "Sum_of_5s.txt" and "Sub_of_3s.txt".*
  - *Each thread must return the multiplication of all the numbers in each file.*
  - *P3 after receiving each result, will divide the values by var3 and then display on the screen*
  - *P3 also appending the result values after division in a file called "Div_of_2s.txt".*