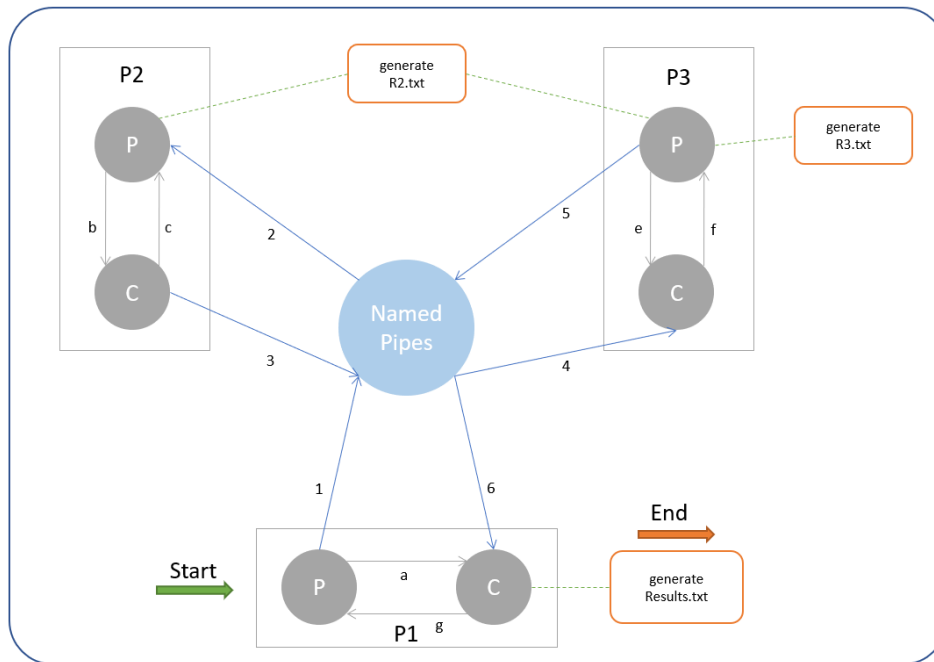


# Iblis Encryptor

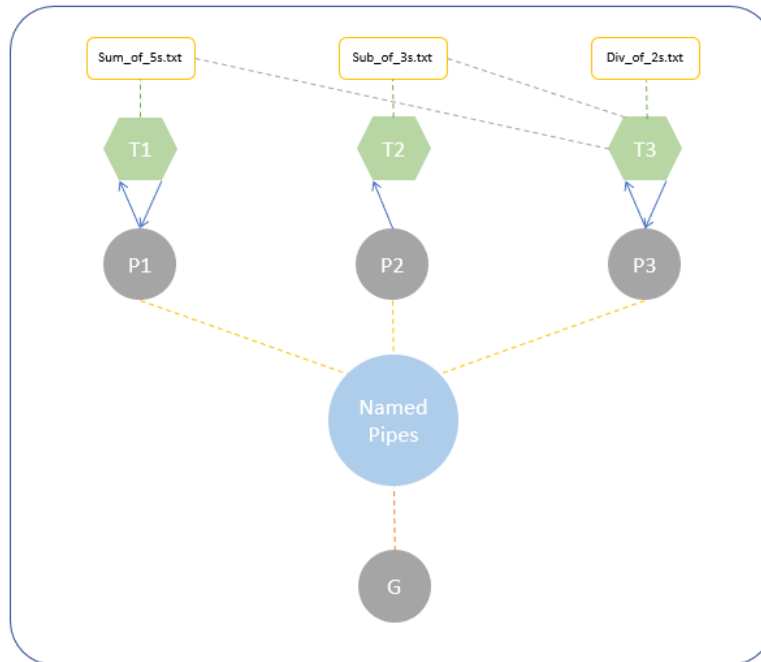


- **Named Pipes:**  
Permissions set to only read/write (execution not allowed) for all programs.
- **P1 program:**
  - Parent reads the contents from a file and send it to the named pipe [1]
  - Parent also sends a message or signal to Child [a] that it has sent the contents for encryption.
  - Child 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 "Results.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 "R2.txt"
- **P3 program:**
  - Parent reads the contents from a file "R2.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 "R3.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.
  - 1<sup>st</sup> number will be read by the program "p1"
  - 2<sup>nd</sup> number will be read by the program "p2"
  - 3<sup>rd</sup> 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".