

# Design Document - Pseudocode

## I1: Initialize

```
SYS set terminal: raw, !canon, igncr, !echo
```

```
Open INPUT_OUTPUT pipe
```

```
Open INPUT_TRANSLATE pipe
```

```
Open TRANSLATE_OUTPUT pipe
```

```
fork -> OUTPUT_PROCESS
```

```
fork -> TRANSLATE_PROCESS
```

```
WaitForInput()
```

## I2: WaitForInput

```
while there is still input
```

```
    WriteChar(c)
```

```
    buffer <- char
```

```
    if char == E
```

```
        WriteBuffer()
```

```
    if char == [control + k]
```

```
        kill(processes)
```

```
    if char == T
```

```
        WriteBuffer()
```

```
        terminate processes
```

## I3: WriteChar

```
    write char to INPUT_OUTPUT pipe
```

## I4: WriteBuffer

```
    write buffer to INPUT_TRANSLATE pipe
```

```
    ClearBuffer
```

## I5: ClearBuffer

```
Buffer[0] <- '\0'
```

## O1: WaitForOutputData

```
while no T or [Control+k] chars in pipe, read()  
  PrintData(char)  
  if (char == E)  
    read(TRANSLATE_OUTPUT pipe)  
    PrintData(TranslateData)
```

## O2: PrintData

```
printf(data)
```

## T1: WaitForTranslateData

```
while no T or [Control+k] chars in pipe, read()  
  ProcessData()
```

## T2: ProcessData

```
for each character in buffer  
  if char is a: char <- z  
  if char is X: bufferpointer--  
  if char is T: terminate()
```

## T3: WriteTranslateData

```
write buffer to TRANSLATE_OUTPUT pipe
```