

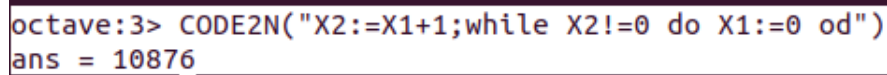
# Practica 4

Carmen Alonso Jimenez

26 de diciembre de 2022

1. Create the simplest WHILE program that computes the diverge function (with zero arguments) and compute the codification of its code

```
Q = (0,s)
s:
  X2 := X1 + 1;
  while X2 ≠ 0 do
    X1 := 0
  od
```

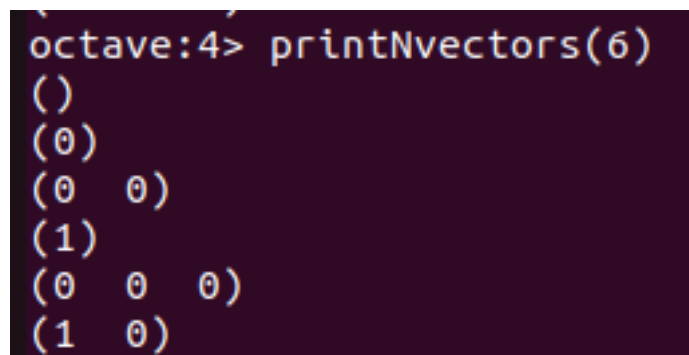


```
octave:3> CODE2N("X2:=X1+1;while X2!=0 do X1:=0 od")
ans = 10876
```

Figura 1:

2. Create an Octave script that enumerates all the vectors.

```
function printNvectors(N)
for i=0:N-1
disp([( num2str(godeldecoding(i)))]))
end
end
```



```
octave:4> printNvectors(6)
()
(0)
(0 0)
(1)
(0 0 0)
(1 0)
```

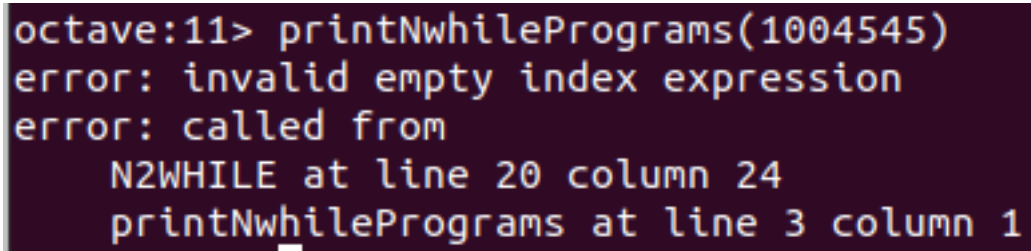
Figura 2:

3. Create an Octave script that enumerates all the WHILE programs.

```
function printNwhilePrograms(N)
```

```
for i=1:inf
    N2WHILE(i)
end

end
```

A screenshot of an Octave terminal window with a dark background and light-colored text. The text shows a command being executed, followed by an error message and a stack trace.

```
octave:11> printNwhilePrograms(1004545)
error: invalid empty index expression
error: called from
    N2WHILE at line 20 column 24
    printNwhilePrograms at line 3 column 1
```

Figura 3: