Practica 4

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EJERCICIO 1

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

```
\begin{array}{l} Q{:}(0,s)\\ s{:}^{\circ}{}^{\circ}X2:=X1+1;\\ while~X2!{=}0~do\\ X1:=0;\\ od\\ \\ Su~codificacion~es:\\ CODE2N("X2:=X1+1;~while~X2!{=}0~do~X1:=0~od")\\ ans=10876 \end{array}
```

EJERCICIO 2

Create an Octave script that enumerates all the vectors.

```
\label{eq:function_printNvectors} \begin{split} & \text{function printNvectors}(N) \\ & \text{for } i{=}0\text{: } N\text{-}1 \\ & \text{disp}([\text{'('num2str(godelcoding(i))')']}) \\ & \text{end} \\ & \text{end} \end{split}
```

EJERCICIO 3

Create an Octave script that enumerates all the WHILE programs.

```
\label{eq:function} \begin{split} & \text{function code} = \text{printNwhilePrograms} \\ & \text{for i=0: N-1} \\ & \text{disp(N2WHILE(i))} \\ & \text{endfor} \\ & \text{end} \end{split}
```

