Teoría de Autómatas y Lenguajes Formales

Práctica 1: Ejercicio 1

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1. Find the power set R^3 of R={(1,1),(1,2),(2,3),(3,4)}

$R^3 = R^2 \circ R$
$R^2 = R \circ R$
R^2={ (1,1),(1,2),(2,3),(3,4)}o{(1,1),(1,2),(2,3),(3,4)}={(1,1),(1,2),(1,3),(2,4)}
R^3={ (1,1),(1,2),(2,3),(3,4)}o{(1,1),(1,2),(1,3),(2,4)}={(1,1),(1,2),(1,3),(1,4)}

```
>> powerrelation({['1','1'],['1','2'],['2','3'],['3','4']},2)
ans =
{
  [1,1] = 11
  [1,2] = 12
  [1,3] = 13
  [1,4] = 24
}

>> powerrelation({['1','1'],['1','2'],['2','3'],['3','4']},3)
ans =
{
  [1,1] = 11
  [1,2] = 12
  [1,3] = 13
  [1,4] = 14
}
```

Figura 1:

2. Within the folder"files",find a TEX file in whoose content appears the string usepackage{amsthm, amsmath}

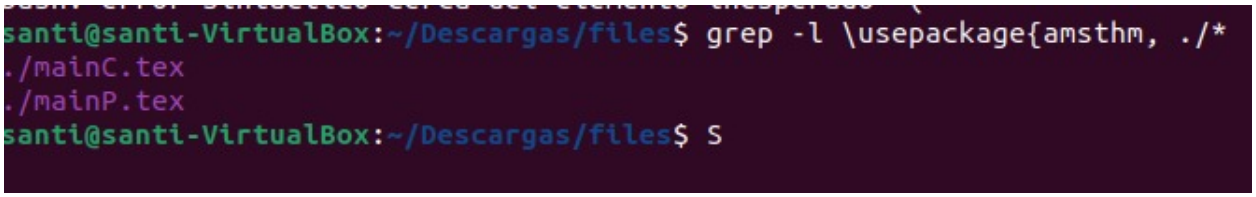

Figura 2:

Ultimo ejercicio:
Consideremos $L = \{w$ pertenece{a,b}* : w no termina en $ab\}$. Una de las expresiónes regulares que genera L es:

$$L(a^* + b^*a) = \{a,\ aa,\ aba,\ abba,\ ba,\ bba, bbbba, bbbbbba...\}$$