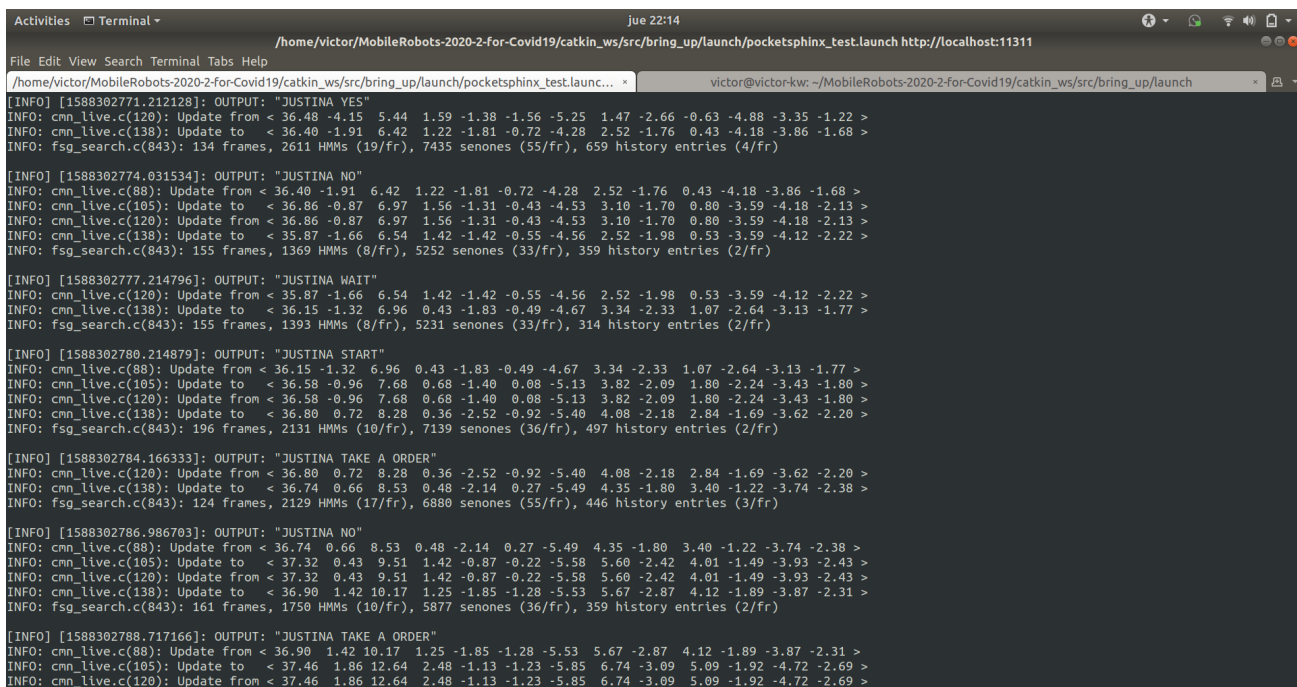


Ejemplos de frases que se pueden reconocer de acuerdo con la gramática ‘restaurant.gram’:

- JUSTINA YES
- JUSTINA NO
- JUSTINA WAIT
- JUSTINA START
- JUSTINA TAKE A ORDER
- JUSTINA THIS IS THE ORDER
- I WANT PRINGLES AND CHIPS
- I WANT CHIPS AND PASTA
- I WANT COOKIES AND CHOCOFLAKES
- I WANT MUESLI AND M AND M
- I WANT ROBO O’S AND TUNA FISH
- I WANT A TEA
- I WANT A BEER
- I WANT A COKE
- I WANT A WATER

Explicación breve de lo que significan los cuatro parámetros mencionados en el punto 5 de la diapositiva 19:

- gram → Indica la ruta absoluta del archivo que contiene la gramática.
- dict → Indica la ruta absoluta del diccionario, este contiene las palabras que se usan en las frases clave junto con su fonética como se usa en el modelo acústico.
- grammar → El valor de este parametro indica el nombre de la gramática usada.
- rule → Indica que regla se debe emplear. Las reglas se describen dentro de una gramática.

Capturas de pantalla donde se observen las frases reconocidas:

```
Activities Terminal +
Jue 22:14
/home/victor/MobileRobots-2020-2-for-Covid19/catkin_ws/src/bring_up/launch/pocketsphinx_test.launch http://localhost:11311
File Edit View Search Terminal Tabs Help
/home/victor/MobileRobots-2020-2-for-Covid19/catkin_ws/src/bring_up/launch/pocketsphinx_test.launch x victor@victor-kw: ~/MobileRobots-2020-2-for-Covid19/catkin_ws/src/bring_up/launch
[INFO] [1588302771.212128]: OUTPUT: "JUSTINA YES"
INFO: cmn_llv.c(120): Update from < 36.48 -4.15 5.44 1.59 -1.38 -1.56 -5.25 1.47 -2.66 -0.63 -4.88 -3.35 -1.22 >
INFO: cmn_llv.c(138): Update to < 36.40 -1.91 6.42 1.22 -1.81 -0.72 -4.28 2.52 -1.76 0.43 -4.18 -3.86 -1.68 >
INFO: fsg_search.c(843): 134 frames, 2611 HMMs (19/fr), 7435 senones (55/fr), 659 history entries (4/fr)

[INFO] [1588302774.031534]: OUTPUT: "JUSTINA NO"
INFO: cmn_llv.c(88): Update from < 36.40 -1.91 6.42 1.22 -1.81 -0.72 -4.28 2.52 -1.76 0.43 -4.18 -3.86 -1.68 >
INFO: cmn_llv.c(105): Update to < 36.86 -0.87 6.97 1.56 -1.31 -0.43 -4.53 3.10 -1.70 0.80 -3.59 -4.18 -2.13 >
INFO: cmn_llv.c(120): Update from < 36.86 -0.87 6.97 1.56 -1.31 -0.43 -4.53 3.10 -1.70 0.80 -3.59 -4.18 -2.13 >
INFO: cmn_llv.c(138): Update to < 35.87 -1.66 6.54 1.42 -1.42 -0.55 -4.56 2.52 -1.98 0.53 -3.59 -4.12 -2.22 >
INFO: fsg_search.c(843): 155 frames, 1369 HMMs (8/fr), 5252 senones (33/fr), 359 history entries (2/fr)

[INFO] [1588302777.214796]: OUTPUT: "JUSTINA WAIT"
INFO: cmn_llv.c(120): Update from < 35.87 -1.66 6.54 1.42 -1.42 -0.55 -4.56 2.52 -1.98 0.53 -3.59 -4.12 -2.22 >
INFO: cmn_llv.c(138): Update to < 36.15 -1.32 6.96 0.43 -1.83 -0.49 -4.67 3.34 -2.33 1.07 -2.64 -3.13 -1.77 >
INFO: fsg_search.c(843): 155 frames, 1393 HMMs (8/fr), 5231 senones (33/fr), 314 history entries (2/fr)

[INFO] [1588302780.214879]: OUTPUT: "JUSTINA START"
INFO: cmn_llv.c(88): Update from < 36.15 -1.32 6.96 0.43 -1.83 -0.49 -4.67 3.34 -2.33 1.07 -2.64 -3.13 -1.77 >
INFO: cmn_llv.c(105): Update to < 36.58 -0.96 7.68 0.68 -1.40 0.08 -5.13 3.82 -2.09 1.80 -2.24 -3.43 -1.80 >
INFO: cmn_llv.c(120): Update from < 36.58 -0.96 7.68 0.68 -1.40 0.08 -5.13 3.82 -2.09 1.80 -2.24 -3.43 -1.80 >
INFO: cmn_llv.c(138): Update to < 36.80 0.72 8.28 0.36 -2.52 -0.92 -5.40 4.08 -2.18 2.84 -1.69 -3.62 -2.20 >
INFO: fsg_search.c(843): 196 frames, 2131 HMMs (10/fr), 7139 senones (36/fr), 497 history entries (2/fr)

[INFO] [1588302784.166333]: OUTPUT: "JUSTINA TAKE A ORDER"
INFO: cmn_llv.c(120): Update from < 36.80 0.72 8.28 0.36 -2.52 -0.92 -5.40 4.08 -2.18 2.84 -1.69 -3.62 -2.20 >
INFO: cmn_llv.c(138): Update to < 36.74 0.66 8.53 0.48 -2.14 0.27 -5.49 4.35 -1.80 3.40 -1.22 -3.74 -2.38 >
INFO: fsg_search.c(843): 124 frames, 2129 HMMs (17/fr), 6880 senones (55/fr), 446 history entries (3/fr)

[INFO] [1588302786.986703]: OUTPUT: "JUSTINA NO"
INFO: cmn_llv.c(88): Update from < 36.74 0.66 8.53 0.48 -2.14 0.27 -5.49 4.35 -1.80 3.40 -1.22 -3.74 -2.38 >
INFO: cmn_llv.c(105): Update to < 37.32 0.43 9.51 1.42 -0.87 -0.22 -5.58 5.60 -2.42 4.01 -1.49 -3.93 -2.43 >
INFO: cmn_llv.c(120): Update from < 37.32 0.43 9.51 1.42 -0.87 -0.22 -5.58 5.60 -2.42 4.01 -1.49 -3.93 -2.43 >
INFO: cmn_llv.c(138): Update to < 36.90 1.42 10.17 1.25 -1.85 -1.28 -5.53 5.67 -2.87 4.12 -1.89 -3.87 -2.31 >
INFO: fsg_search.c(843): 161 frames, 1750 HMMs (10/fr), 5877 senones (36/fr), 359 history entries (2/fr)

[INFO] [1588302788.717166]: OUTPUT: "JUSTINA TAKE A ORDER"
INFO: cmn_llv.c(88): Update from < 36.90 1.42 10.17 1.25 -1.85 -1.28 -5.53 5.67 -2.87 4.12 -1.89 -3.87 -2.31 >
INFO: cmn_llv.c(105): Update to < 37.46 1.86 12.64 2.48 -1.13 -1.23 -5.85 6.74 -3.09 5.09 -1.92 -4.72 -2.69 >
INFO: cmn_llv.c(120): Update from < 37.46 1.86 12.64 2.48 -1.13 -1.23 -5.85 6.74 -3.09 5.09 -1.92 -4.72 -2.69 >
```

```
Activities Terminal jue 22:14
/home/victor/MobileRobots-2020-2-for-Covid19/catkin_ws/src/bring_up/launch/pocketsphinx_test.launch http://localhost:11311
File Edit View Search Terminal Tabs Help
/home/victor/MobileRobots-2020-2-for-Covid19/catkin_ws/src/bring_up/launch/pocketsphinx_test.launch... x victor@victor-kw: ~/MobileRobots-2020-2-for-Covid19/catkin_ws/src/bring_up/launch

[INFO] [1588302788.717166]: OUTPUT: "JUSTINA TAKE A ORDER"
INFO: cmn_live.c(88): Update from < 36.90 1.42 10.17 1.25 -1.85 -1.28 -5.53 5.67 -2.87 4.12 -1.89 -3.87 -2.31 >
INFO: cmn_live.c(105): Update to < 37.46 1.86 12.64 2.48 -1.13 -1.23 -5.85 6.74 -3.09 5.09 -1.92 -4.72 -2.69 >
INFO: cmn_live.c(120): Update from < 37.46 1.86 12.64 2.48 -1.13 -1.23 -5.85 6.74 -3.09 5.09 -1.92 -4.72 -2.69 >
INFO: cmn_live.c(138): Update to < 37.06 1.42 12.17 2.44 -1.21 -1.25 -5.79 6.56 -3.02 4.94 -1.91 -4.50 -2.59 >
INFO: fsg_search.c(843): 204 frames, 2381 HMMs (11/fr), 8212 senones (40/fr), 573 history entries (2/fr)

[INFO] [1588302794.086059]: OUTPUT: "JUSTINA THIS IS THE ORDER"
INFO: cmn_live.c(120): Update from < 37.06 1.42 12.17 2.44 -1.21 -1.25 -5.79 6.56 -3.02 4.94 -1.91 -4.50 -2.59 >
INFO: cmn_live.c(138): Update to < 37.48 1.46 12.94 1.45 -1.93 -0.20 -6.19 6.58 -2.72 4.63 -1.73 -4.96 -2.77 >
INFO: fsg_search.c(843): 192 frames, 3959 HMMs (20/fr), 11521 senones (60/fr), 751 history entries (3/fr)

[INFO] [1588302800.770463]: OUTPUT: "I WANT PRINGLES AND CHIPS"
INFO: cmn_live.c(88): Update from < 37.48 1.46 12.94 1.45 -1.93 -0.20 -6.19 6.58 -2.72 4.63 -1.73 -4.96 -2.77 >
INFO: cmn_live.c(105): Update to < 36.41 0.69 11.54 1.04 -2.33 -0.74 -6.28 5.27 -3.40 3.51 -2.44 -4.84 -2.75 >
INFO: cmn_live.c(120): Update from < 36.41 0.69 11.54 1.04 -2.33 -0.74 -6.28 5.27 -3.40 3.51 -2.44 -4.84 -2.75 >
INFO: cmn_live.c(138): Update to < 36.41 0.69 11.54 1.04 -2.33 -0.74 -6.28 5.27 -3.40 3.51 -2.44 -4.84 -2.75 >
INFO: fsg_search.c(843): 86 frames, 1025 HMMs (11/fr), 3016 senones (35/fr), 415 history entries (4/fr)

ERROR: "fsg_search.c", line 913: Final result does not match the grammar in frame 86
INFO: cmn_live.c(120): Update from < 36.41 0.69 11.54 1.04 -2.33 -0.74 -6.28 5.27 -3.40 3.51 -2.44 -4.84 -2.75 >
INFO: cmn_live.c(138): Update to < 36.95 1.27 11.73 -0.46 -2.83 -0.53 -6.68 5.77 -2.43 4.93 -1.49 -4.20 -2.77 >
INFO: fsg_search.c(843): 176 frames, 3072 HMMs (17/fr), 8939 senones (50/fr), 627 history entries (3/fr)

[INFO] [1588302805.410123]: OUTPUT: "I WANT CHIPS AND PASTA"
INFO: cmn_live.c(88): Update from < 36.95 1.27 11.73 -0.46 -2.83 -0.53 -6.68 5.77 -2.43 4.93 -1.49 -4.20 -2.77 >
INFO: cmn_live.c(105): Update to < 37.49 1.55 12.27 -0.15 -2.61 -0.09 -6.31 6.37 -1.89 5.38 -1.26 -4.78 -3.10 >
INFO: cmn_live.c(120): Update from < 37.49 1.55 12.27 -0.15 -2.61 -0.09 -6.31 6.37 -1.89 5.38 -1.26 -4.78 -3.10 >
INFO: cmn_live.c(138): Update to < 37.00 -0.10 12.21 -1.15 -2.74 -0.20 -5.81 5.68 -2.10 4.91 -1.24 -3.42 -2.49 >
INFO: fsg_search.c(843): 258 frames, 3905 HMMs (15/fr), 12737 senones (49/fr), 872 history entries (3/fr)

[INFO] [1588302809.633479]: OUTPUT: "I WANT COOKIES AND CHOCO FLAKES"
INFO: cmn_live.c(88): Update from < 37.00 -0.10 12.21 -1.15 -2.74 -0.20 -5.81 5.68 -2.10 4.91 -1.24 -3.42 -2.49 >
INFO: cmn_live.c(105): Update to < 38.57 2.56 13.07 -0.26 -1.51 -0.61 -6.38 7.27 -2.03 6.61 -1.57 -3.47 -2.83 >
INFO: cmn_live.c(120): Update from < 38.57 2.56 13.07 -0.26 -1.51 -0.61 -6.38 7.27 -2.03 6.61 -1.57 -3.47 -2.83 >
INFO: cmn_live.c(138): Update to < 37.76 2.31 12.28 -0.18 -1.35 -0.36 -5.72 6.94 -2.09 6.10 -1.49 -2.90 -2.79 >
INFO: fsg_search.c(843): 208 frames, 4983 HMMs (23/fr), 14159 senones (68/fr), 1039 history entries (4/fr)

[INFO] [1588302815.507941]: OUTPUT: "I WANT MUESLI AND M AND M"
INFO: cmn_live.c(88): Update from < 37.76 2.31 12.28 -0.18 -1.35 -0.36 -5.72 6.94 -2.09 6.10 -1.49 -2.90 -2.79 >
INFO: cmn_live.c(105): Update to < 38.57 2.56 13.07 -0.26 -1.51 -0.61 -6.38 7.27 -2.03 6.61 -1.57 -3.47 -2.83 >
INFO: cmn_live.c(120): Update from < 38.57 2.56 13.07 -0.26 -1.51 -0.61 -6.38 7.27 -2.03 6.61 -1.57 -3.47 -2.83 >
INFO: cmn_live.c(138): Update to < 37.76 2.31 12.28 -0.18 -1.35 -0.36 -5.72 6.94 -2.09 6.10 -1.49 -2.90 -2.79 >
INFO: fsg_search.c(843): 208 frames, 4983 HMMs (23/fr), 14159 senones (68/fr), 1039 history entries (4/fr)
```

```
Activities Terminal jue 22:14
/home/victor/MobileRobots-2020-2-for-Covid19/catkin_ws/src/bring_up/launch/pocketsphinx_test.launch http://localhost:11311
File Edit View Search Terminal Tabs Help
/home/victor/MobileRobots-2020-2-for-Covid19/catkin_ws/src/bring_up/launch/pocketsphinx_test.launch... x victor@victor-kw: ~/MobileRobots-2020-2-for-Covid19/catkin_ws/src/bring_up/launch

[INFO] [1588302815.507941]: OUTPUT: "I WANT MUESLI AND M AND M"
INFO: cmn_live.c(88): Update from < 37.76 2.31 12.28 -0.18 -1.35 -0.36 -5.72 6.94 -2.09 6.10 -1.49 -2.90 -2.79 >
INFO: cmn_live.c(105): Update to < 38.77 3.78 13.83 -0.58 -3.01 -1.52 -4.98 7.49 -0.90 5.51 -2.50 -4.07 -3.20 >
INFO: cmn_live.c(120): Update from < 38.77 3.78 13.83 -0.58 -3.01 -1.52 -4.98 7.49 -0.90 5.51 -2.50 -4.07 -3.20 >
INFO: cmn_live.c(138): Update to < 38.08 2.94 12.94 -0.55 -2.97 -1.49 -4.99 7.07 -1.05 5.25 -2.59 -3.83 -3.17 >
INFO: fsg_search.c(843): 283 frames, 4406 HMMs (15/fr), 14551 senones (51/fr), 968 history entries (3/fr)

[INFO] [1588302821.505312]: OUTPUT: "I WANT ROBO O'S AND TUNA FISH"
INFO: cmn_live.c(120): Update from < 38.08 2.94 12.94 -0.55 -2.97 -1.49 -4.99 7.07 -1.05 5.25 -2.59 -3.83 -3.17 >
INFO: cmn_live.c(138): Update to < 37.88 3.43 12.96 0.17 -3.12 -2.41 -5.60 6.27 -1.31 4.75 -2.34 -3.60 -2.46 >
INFO: fsg_search.c(843): 134 frames, 4409 HMMs (32/fr), 11359 senones (84/fr), 808 history entries (6/fr)

[INFO] [1588302825.874243]: OUTPUT: "I WANT A TEA"
INFO: cmn_live.c(88): Update from < 37.88 3.43 12.96 0.17 -3.12 -2.41 -5.60 6.27 -1.31 4.75 -2.34 -3.60 -2.46 >
INFO: cmn_live.c(105): Update to < 37.97 4.03 12.31 -0.18 -3.56 -2.68 -6.68 6.25 -1.29 5.30 -2.17 -3.08 -1.99 >
INFO: cmn_live.c(120): Update from < 37.97 4.03 12.31 -0.18 -3.56 -2.68 -6.68 6.25 -1.29 5.30 -2.17 -3.08 -1.99 >
INFO: cmn_live.c(138): Update to < 37.97 4.03 12.31 -0.18 -3.56 -2.68 -6.68 6.25 -1.29 5.30 -2.17 -3.08 -1.99 >
INFO: fsg_search.c(843): 135 frames, 8021 HMMs (59/fr), 17554 senones (130/fr), 1387 history entries (10/fr)

[INFO] [1588302828.612659]: OUTPUT: "I WANT A BEER"
INFO: cmn_live.c(120): Update from < 37.97 4.03 12.31 -0.18 -3.56 -2.68 -6.68 6.25 -1.29 5.30 -2.17 -3.08 -1.99 >
INFO: cmn_live.c(138): Update to < 37.50 4.32 11.61 -1.35 -5.15 -2.00 -6.45 5.52 -0.60 4.65 -1.55 -3.03 -2.44 >
INFO: fsg_search.c(843): 147 frames, 3048 HMMs (20/fr), 8476 senones (57/fr), 762 history entries (5/fr)

[INFO] [1588302831.061349]: OUTPUT: "I WANT A COKE"
INFO: cmn_live.c(88): Update from < 37.50 4.32 11.61 -1.35 -5.15 -2.00 -6.45 5.52 -0.60 4.65 -1.55 -3.03 -2.44 >
INFO: cmn_live.c(105): Update to < 37.99 5.57 11.80 -2.55 -6.30 -1.81 -7.36 5.57 -0.87 4.40 -0.93 -2.45 -2.47 >
INFO: cmn_live.c(120): Update from < 37.99 5.57 11.80 -2.55 -6.30 -1.81 -7.36 5.57 -0.87 4.40 -0.93 -2.45 -2.47 >
INFO: cmn_live.c(138): Update to < 37.79 5.32 11.63 -2.48 -6.32 -1.77 -7.16 5.61 -0.88 4.30 -1.02 -2.47 -2.45 >
INFO: fsg_search.c(843): 159 frames, 2769 HMMs (17/fr), 8012 senones (50/fr), 653 history entries (4/fr)

[INFO] [1588302833.696844]: OUTPUT: "I WANT A WATER"
INFO: cmn_live.c(120): Update from < 37.79 5.32 11.63 -2.48 -6.32 -1.77 -7.16 5.61 -0.88 4.30 -1.02 -2.47 -2.45 >
INFO: cmn_live.c(138): Update to < 36.44 3.43 9.85 -2.49 -5.81 -1.81 -6.86 4.82 -1.17 3.40 -1.26 -1.81 -2.19 >
INFO: fsg_search.c(843): 77 frames, 1031 HMMs (13/fr), 2914 senones (37/fr), 370 history entries (4/fr)

ERROR: "fsg_search.c", line 913: Final result does not match the grammar in frame 77
INFO: cmn_live.c(120): Update from < 36.44 3.43 9.85 -2.49 -5.81 -1.81 -6.86 4.82 -1.17 3.40 -1.26 -1.81 -2.19 >
INFO: cmn_live.c(138): Update to < 34.74 0.86 6.82 -2.23 -4.73 -2.02 -5.72 3.62 -2.22 2.07 -1.55 -1.60 -2.14 >
INFO: fsg_search.c(843): 205 frames, 3409 HMMs (16/fr), 8899 senones (43/fr), 1048 history entries (5/fr)
```