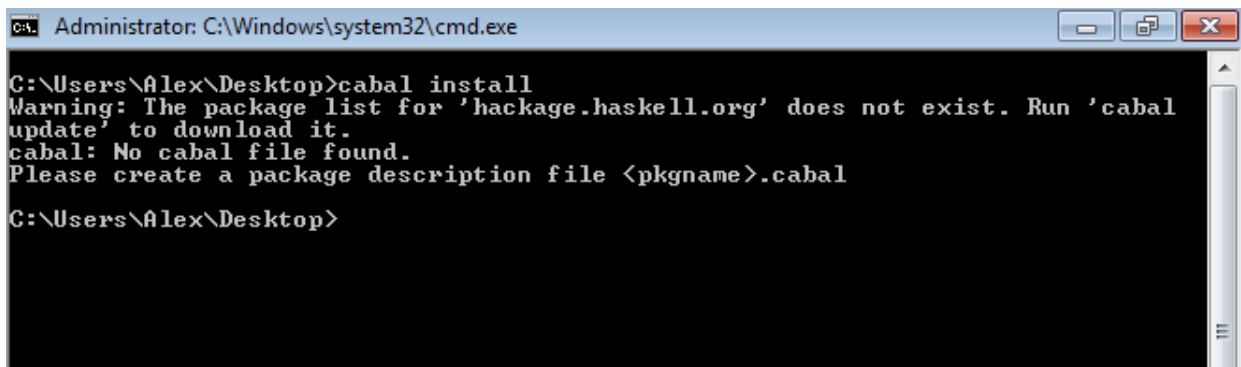


Tutorial 1 - Chatter NLP Library

Pasul 1. Instalare cabal

Deschideti un cmd:



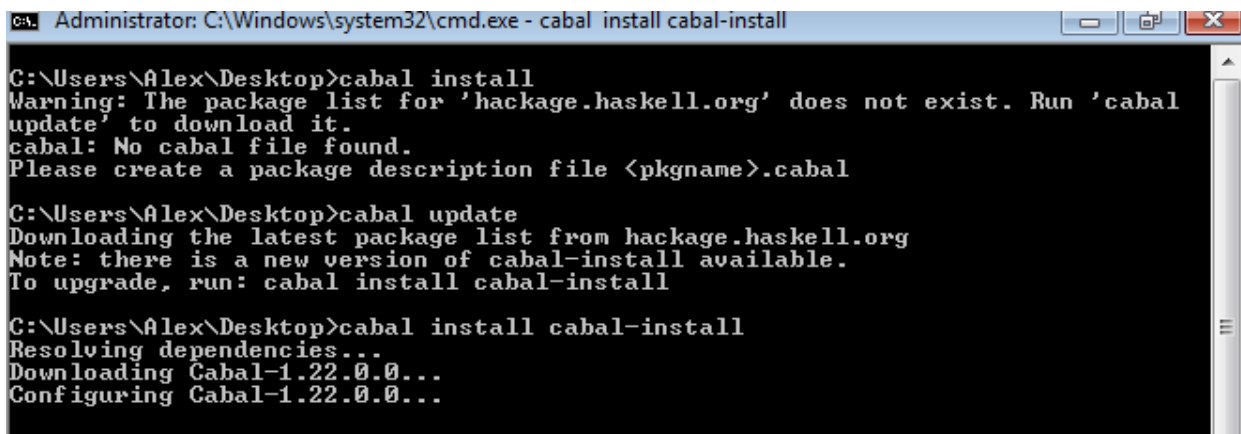
```
Administrator: C:\Windows\system32\cmd.exe

C:\Users\Alex\Desktop>cabal install
Warning: The package list for 'hackage.haskell.org' does not exist. Run 'cabal
update' to download it.
cabal: No cabal file found.
Please create a package description file <pkgname>.cabal
C:\Users\Alex\Desktop>
```

>cabal install

>cabal update

>cabal install cabal-install



```
Administrator: C:\Windows\system32\cmd.exe - cabal install cabal-install

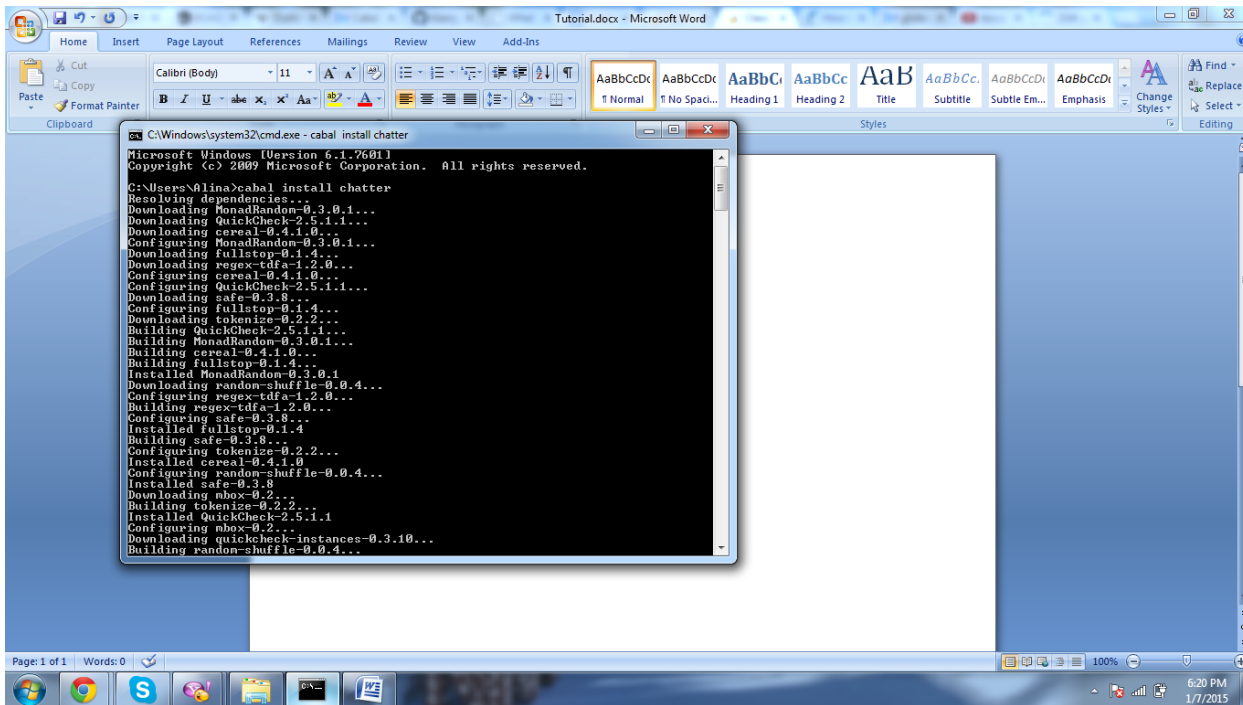
C:\Users\Alex\Desktop>cabal install
Warning: The package list for 'hackage.haskell.org' does not exist. Run 'cabal
update' to download it.
cabal: No cabal file found.
Please create a package description file <pkgname>.cabal

C:\Users\Alex\Desktop>cabal update
Downloading the latest package list from hackage.haskell.org
Note: there is a new version of cabal-install available.
To upgrade, run: cabal install cabal-install

C:\Users\Alex\Desktop>cabal install cabal-install
Resolving dependencies...
Downloading Cabal-1.22.0.0...
Configuring Cabal-1.22.0.0...
```

Pasul 2. Instalare biblioteca NLP chatter

>cabal install chatter



Pasul 3. Descarcati fisierul chatter.hs

<https://github.com/VeliceaAlex>

Fisierul cuprinde

1. Importurile necesare:

2. `import NLP.POS`

`import Data.Text (pack)`

3. Functia tagger :

4. `main = do`

`tagger <- defaultTagger`

5. `let text = pack "The best jokes have no punchline."`

`print $ tag tagger text`

6. Rezultatul va fi o lista de asocieri ale cuvintelor cu parti de vorbire:

7. `[("The", Tag "at"),`

8. `("best", Tag "jtt"),`

9. `("jokes", Tag "nns"),`

10. `("have", Tag "hv"),`

11. `("no", Tag "at"),`

12. `("punchline",Tag "nn"),`

13. `(".",Tag ".")]]`

Pasul 4. Incarcati fisierul chatter.hs

Pasul 5. >main

Daca nu functioneaza import-urile din fisier le puteti porni din ghci:

GHCI, version 7.8.3: <http://www.haskell.org/ghc/> :? for help

Loading package ghc-prim ... linking ... done.

Loading package integer-gmp ... linking ... done.

Loading package base ... linking ... done.

Prelude> :m +NLP.POS

Prelude NLP.POS> :m +Data.Text

si apoi

Prelude NLP.POS Data.Text> let text = pack "The best jokes have no punchline."

Prelude NLP.POS Data.Text> print \$ tag tagger text

[TaggedSent [POS {posTag = DT, posToken = Token "The"},POS {posTag = JJS, posToken = Token "best"},POS {posTag = NNS, posToken = Token "jokes"},POS {posTag = VBP, posToken = Token "have"},POS {posTag = DT, posToken = Token "no"},POS {posTag = NN, posToken = Token "punchline"},POS {posTag = Term, posToken = Token "."}]]

http://en.wikipedia.org/wiki/Brown_Corpus#Part-of-speech_tags_used.

Tag	Definition
.	sentence closer (. ; ? *)
(left paren
)	right paren
*	not, n't
--	dash
,	comma
:	colon
ABL	pre-qualifier (quite, rather)
ABN	pre-quantifier (half, all)
ABX	pre-quantifier (both)
AP	post-determiner (many, several, next)
AT	article (a, the, no)

BE	be
BED	were
BEDZ	was
BEG	being
BEM	am
BEN	been
BER	are, art
BEZ	is
CC	coordinating conjunction (and, or)
CD	cardinal numeral (one, two, 2, etc.)
CS	subordinating conjunction (if, although)
DO	do
DOD	did
DOZ	does
DT	singular determiner/quantifier (this, that)

DTI	singular or plural determiner/quantifier (some, any)
DTS	plural determiner (these, those)
DTX	determiner/double conjunction (either)
EX	existential there
FW	foreign word (hyphenated before regular tag)
HV	have
HVD	had (past tense)
HVG	having
HVN	had (past participle)
IN	preposition
JJ	adjective
JJR	comparative adjective
JJS	semantically superlative adjective (chief, top)
JJT	morphologically superlative adjective (biggest)
MD	modal auxiliary (can, should, will)

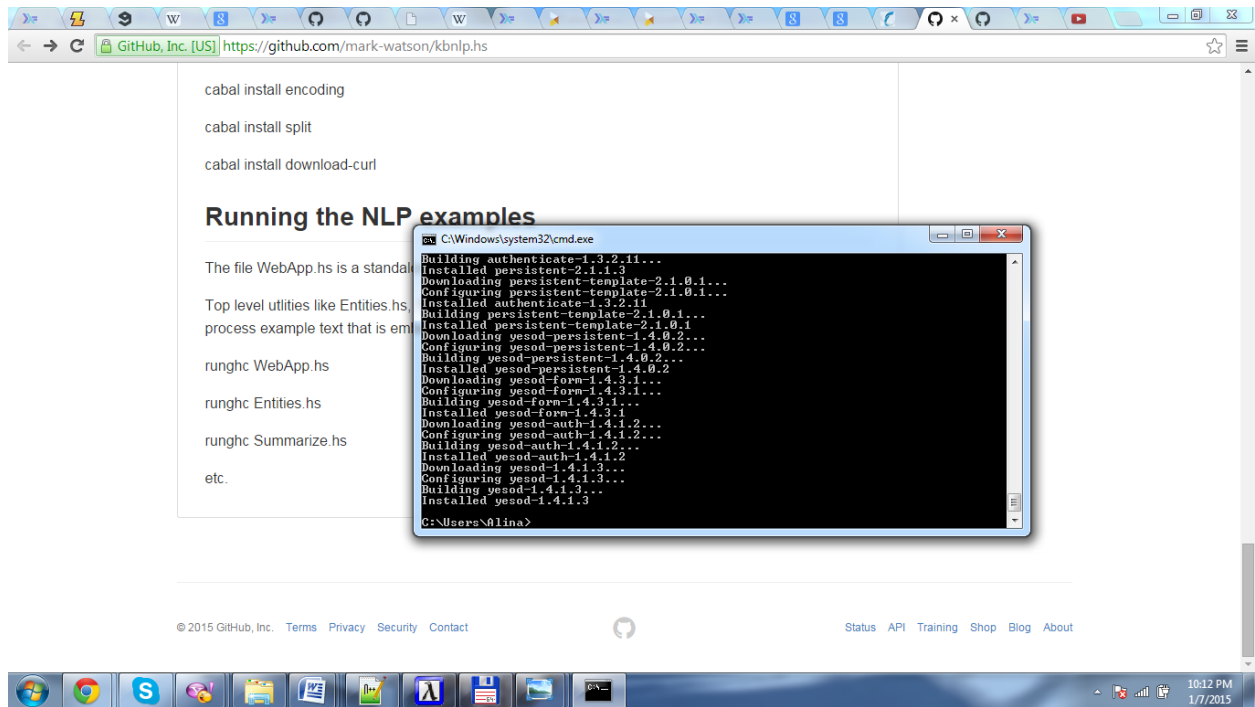
NC	cited word (hyphenated after regular tag)
NN	singular or mass noun
NN\$	possessive singular noun
NNS	plural noun
NNS\$	possessive plural noun
NP	proper noun or part of name phrase
NP\$	possessive proper noun
NPS	plural proper noun
NPS\$	possessive plural proper noun
NR	adverbial noun (home, today, west)
OD	ordinal numeral (first, 2nd)
PN	nominal pronoun (everybody, nothing)
PN\$	possessive nominal pronoun
PP\$	possessive personal pronoun (my, our)
PP\$\$	second (nominal) possessive pronoun (mine, ours)

PPL	singular reflexive/intensive personal pronoun (myself)
PPLS	plural reflexive/intensive personal pronoun (ourselves)
PPO	objective personal pronoun (me, him, it, them)
PPS	3rd. singular nominative pronoun (he, she, it, one)
PPSS	other nominative personal pronoun (I, we, they, you)
PRP	Personal pronoun
PRP\$	Possessive pronoun
QL	qualifier (very, fairly)
QLP	post-qualifier (enough, indeed)
RB	adverb
RBR	comparative adverb
RBT	superlative adverb
RN	nominal adverb (here, then, indoors)
RP	adverb/particle (about, off, up)
TO	infinitive marker to

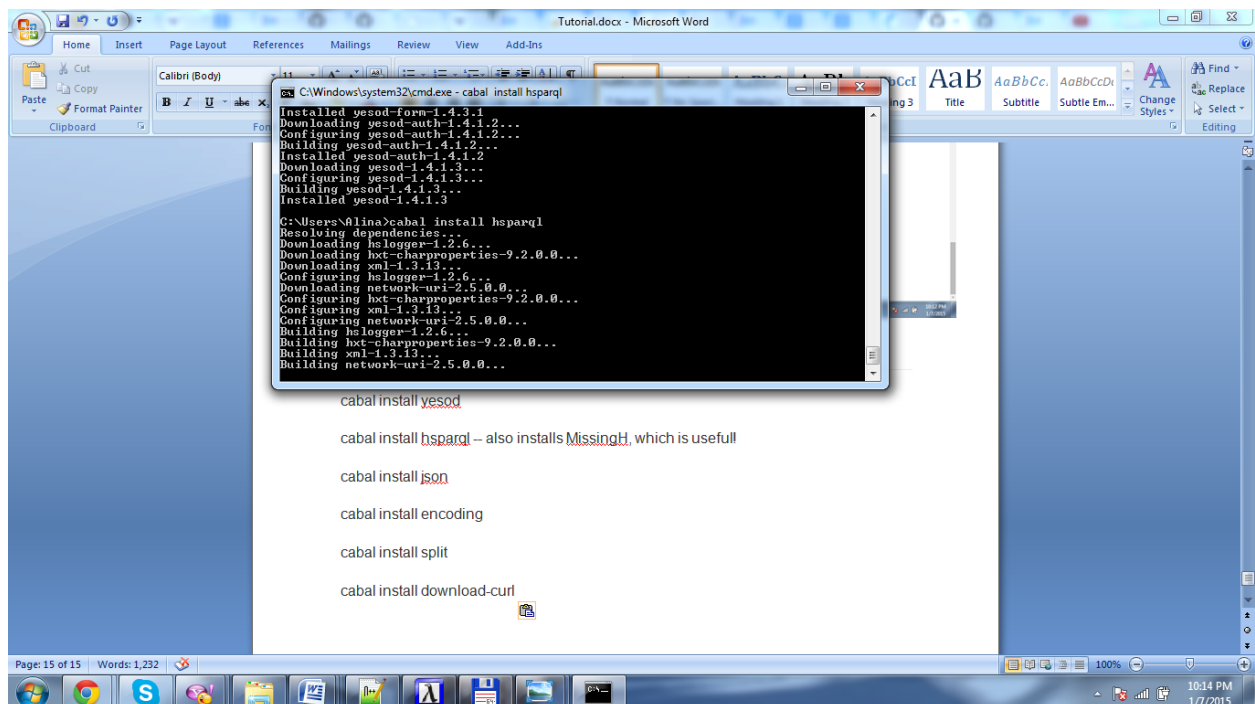
UH	interjection, exclamation
VB	verb, base form
VBD	verb, past tense
VBG	verb, present participle/gerund
VCN	verb, past participle
VBP	verb, non 3rd person, singular, present
VBZ	verb, 3rd. singular present
WDT	wh- determiner (what, which)
WP\$	possessive wh- pronoun (whose)
WPO	objective wh- pronoun (whom, which, that)
WPS	nominative wh- pronoun (who, which, that)
WQL	wh- qualifier (how)
WRB	wh- adverb (how, where, when)

Tutorial 2

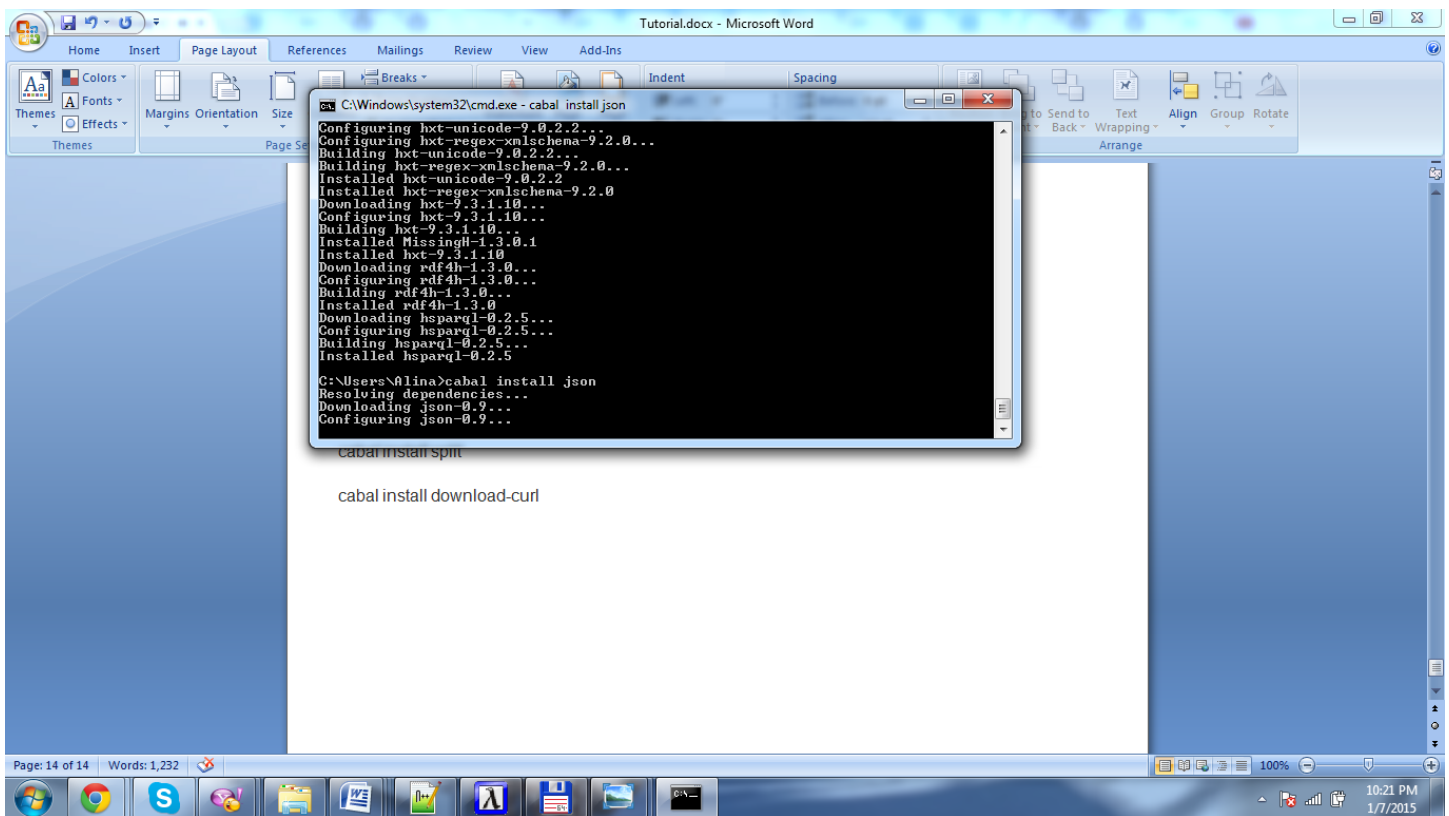
>cabal install yesod



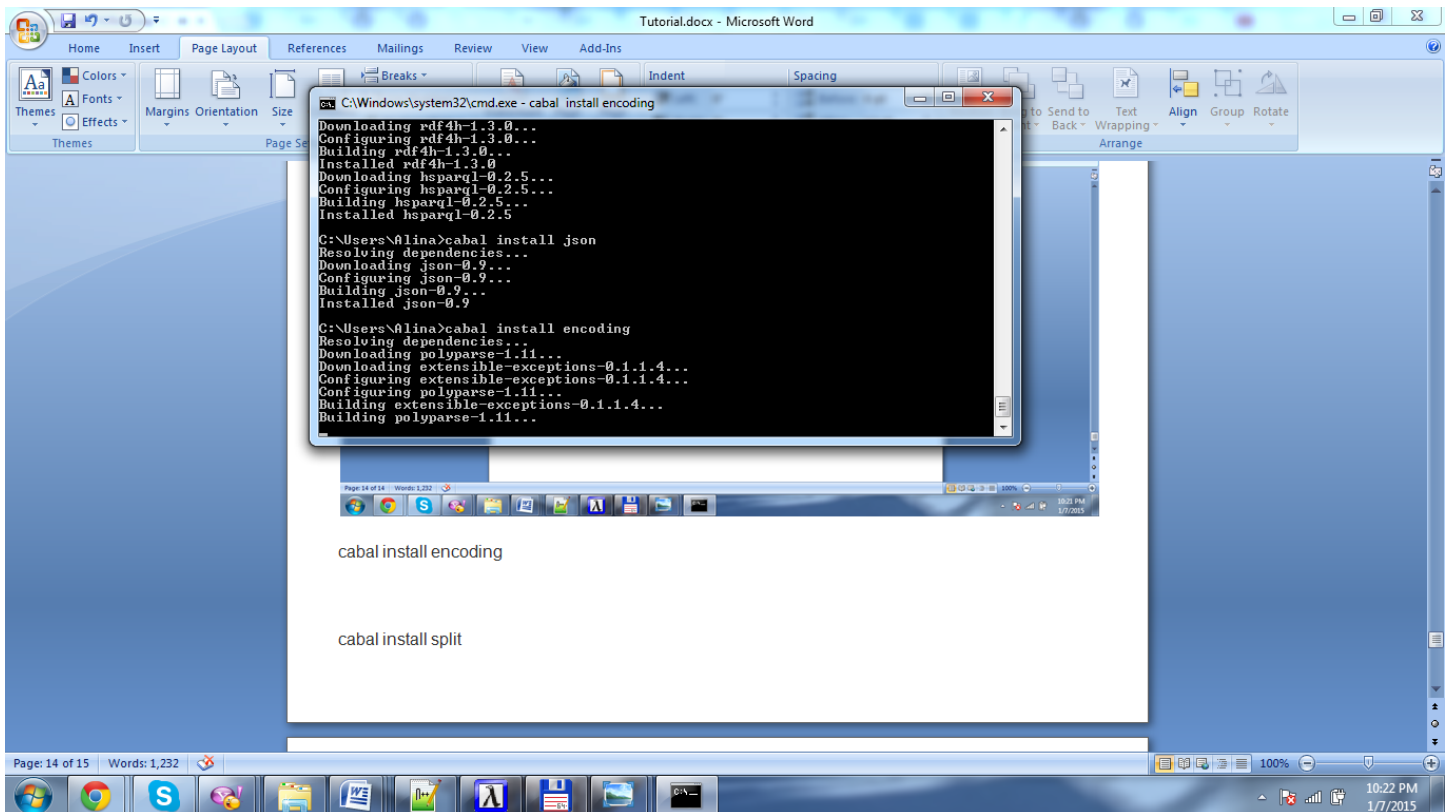
>cabal install hspqrql

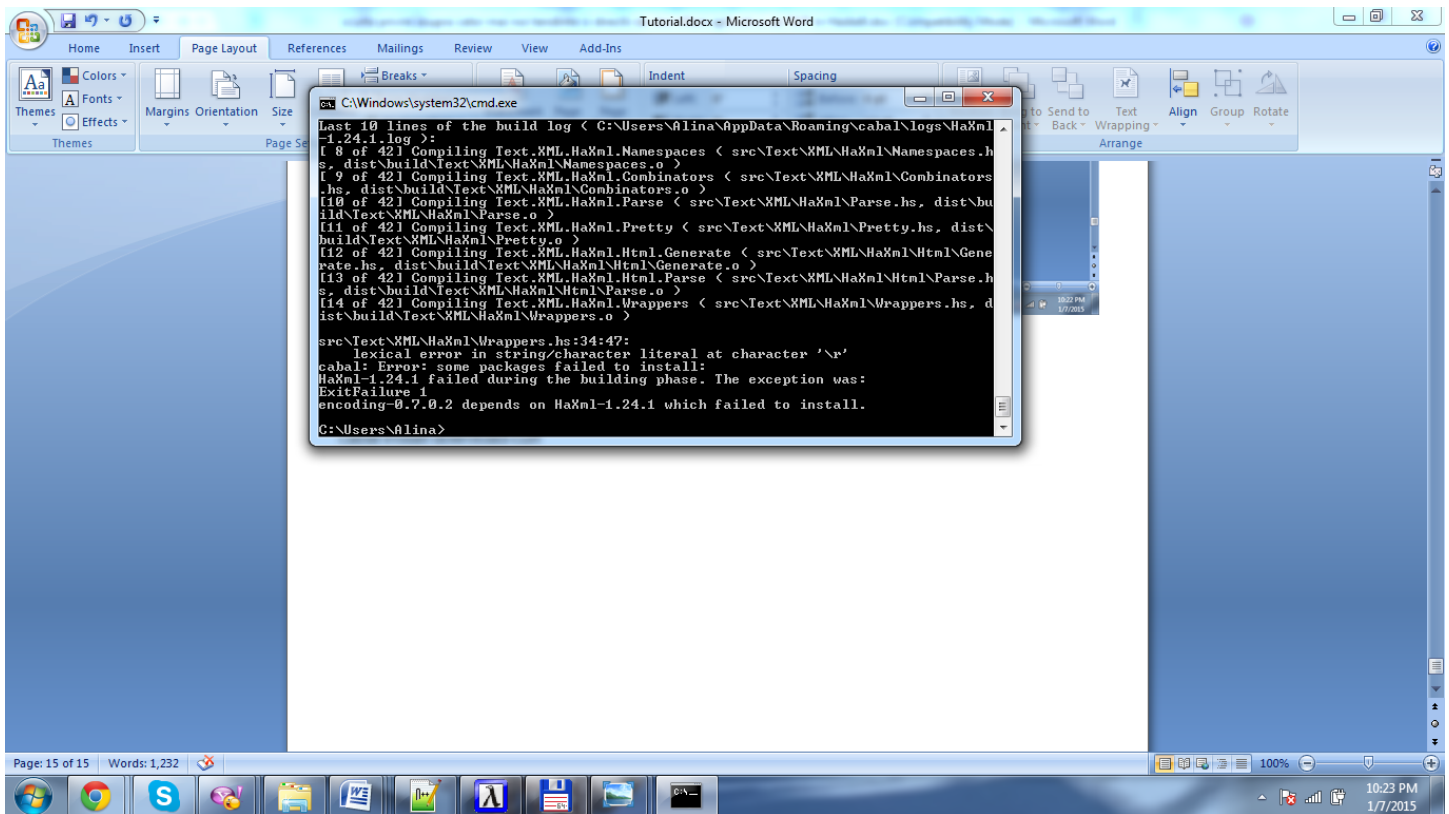


>cabal install json

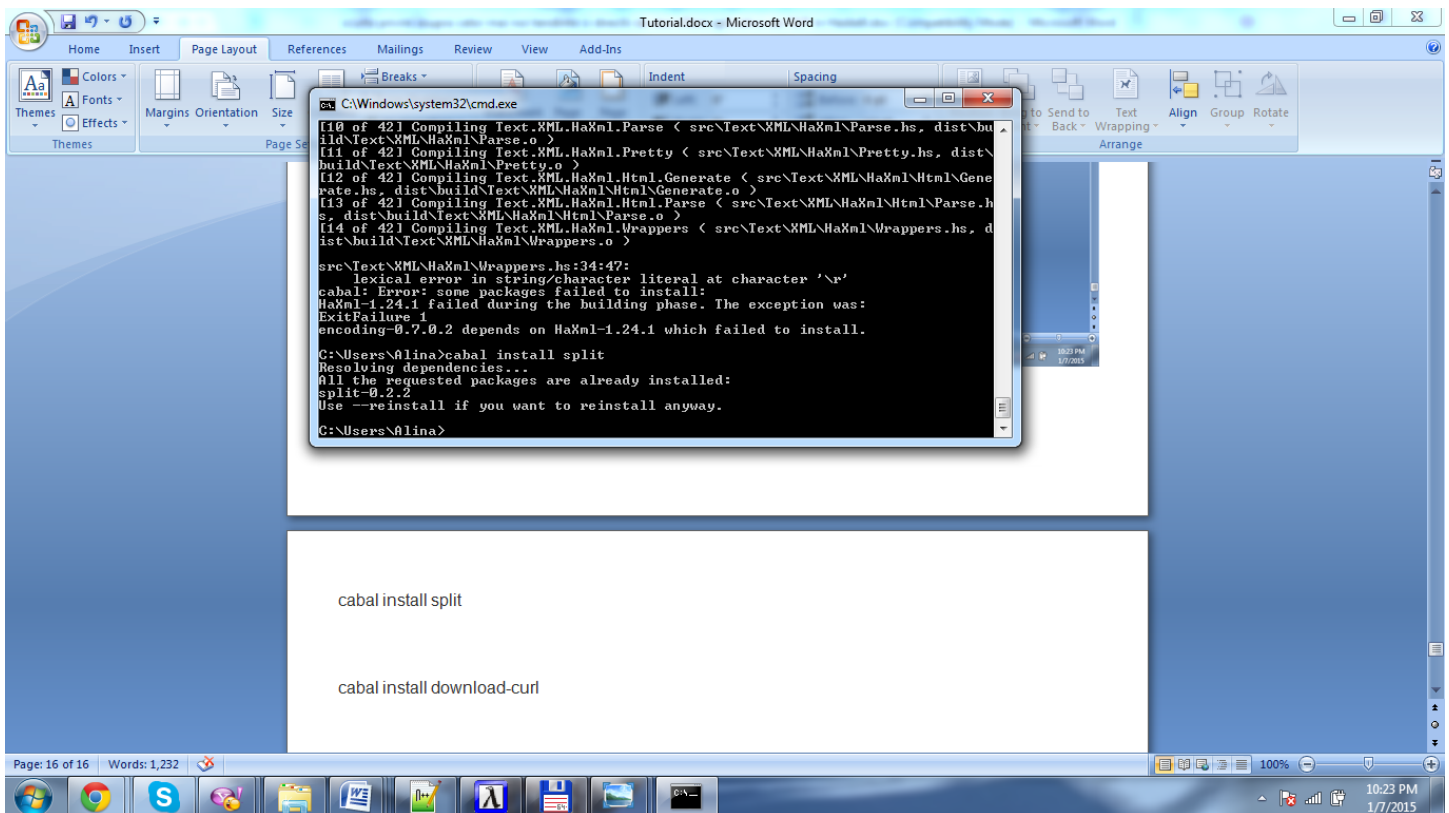


>cabal install encoding

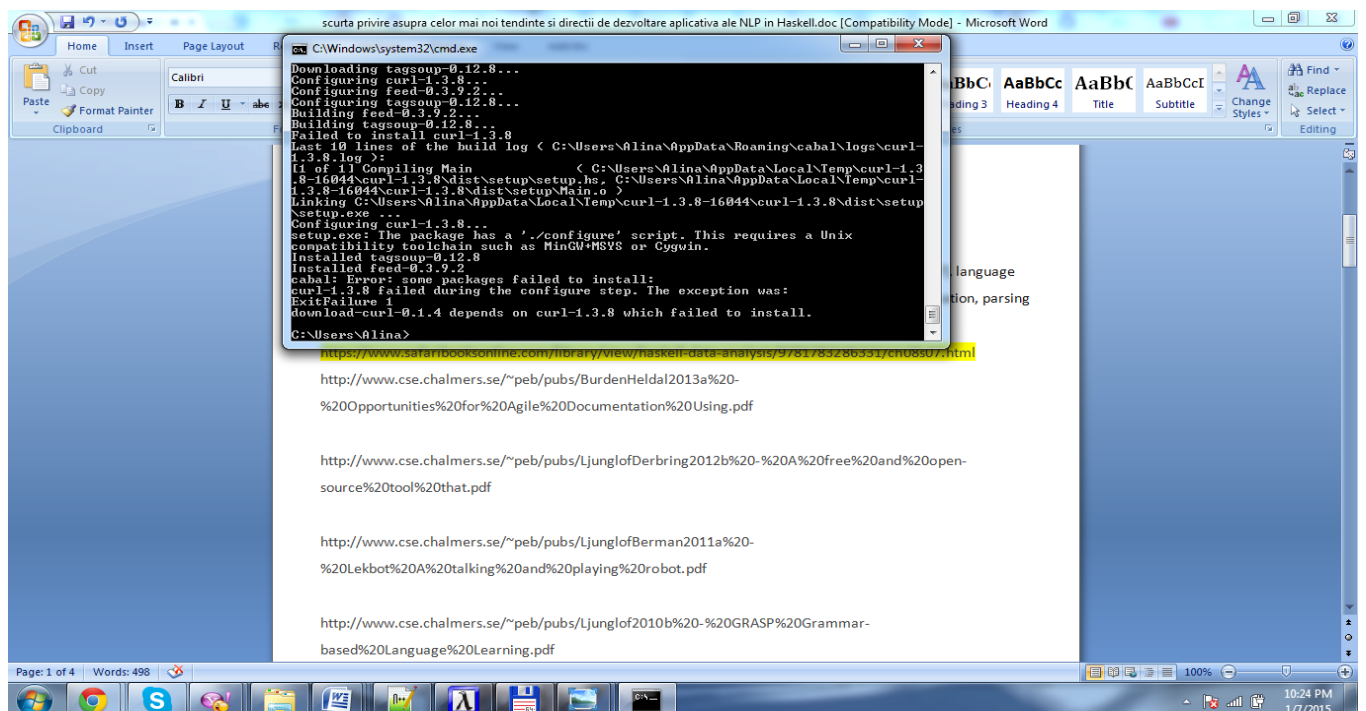
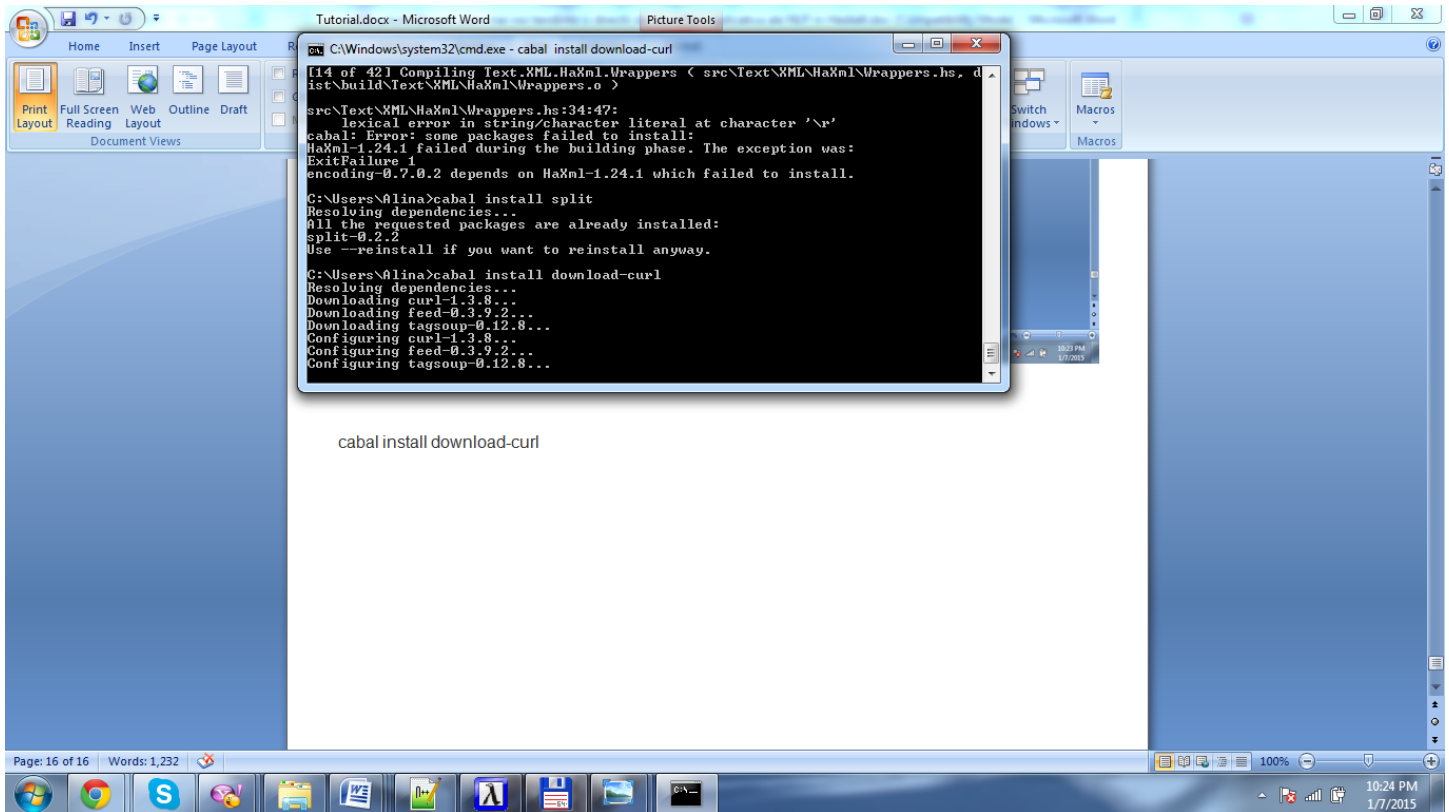




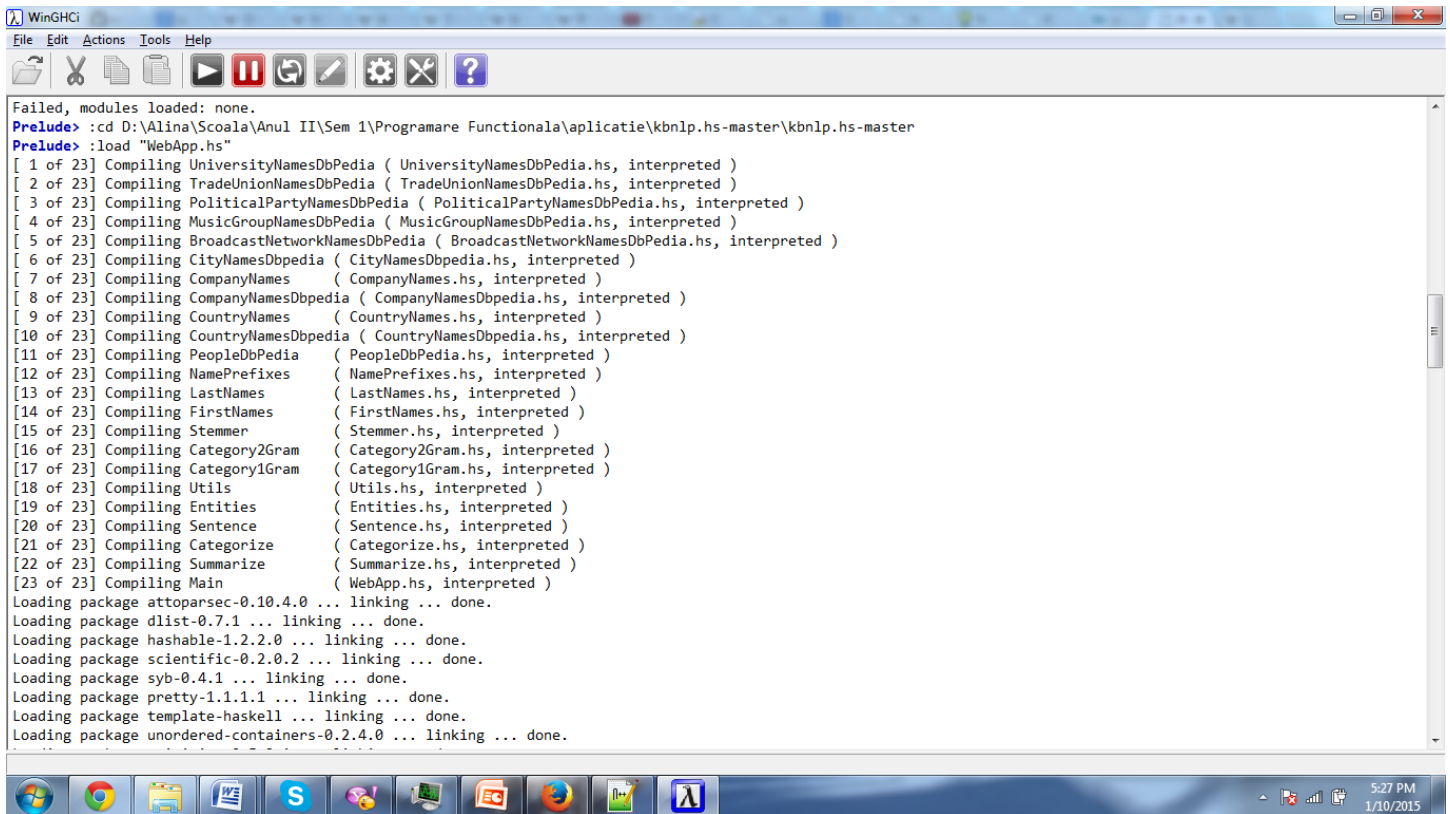
>cabal install split



>cabal install download-curl



Prelude>:load WebApp.hs



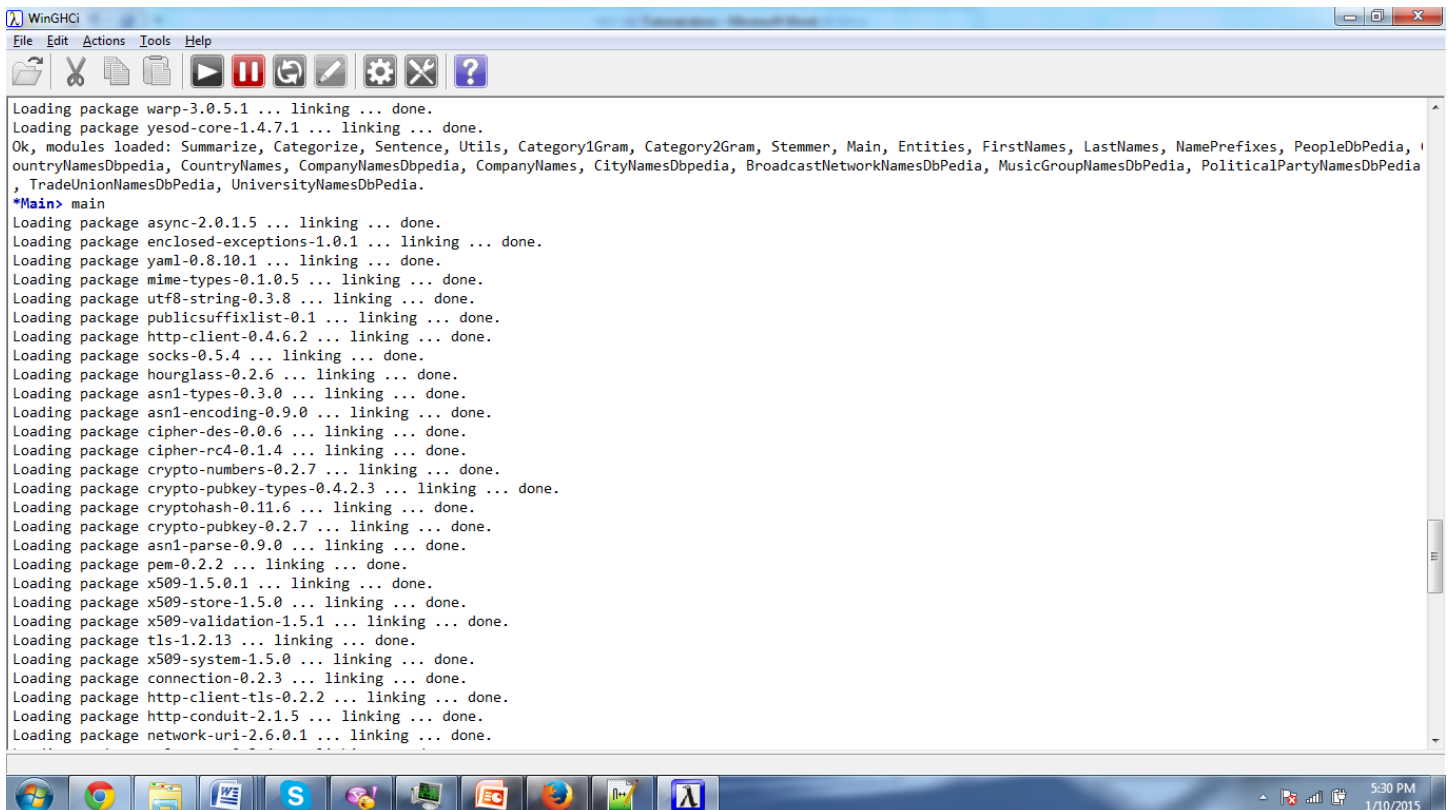
A screenshot of the WinGHC Haskell interpreter window. The title bar reads 'WinGHC'. The menu bar includes 'File', 'Edit', 'Actions', 'Tools', and 'Help'. The toolbar contains icons for file operations and execution. The main text area shows the following output:

```
Failed, modules loaded: none.
Prelude> :cd D:\Alina\Scoala\Anul II\Sem 1\Programare Functionala\aplicatie\kbnlp.hs-master\kbnlp.hs-master
Prelude> :load "WebApp.hs"
[ 1 of 23] Compiling UniversityNamesDbPedia ( UniversityNamesDbPedia.hs, interpreted )
[ 2 of 23] Compiling TradeUnionNamesDbPedia ( TradeUnionNamesDbPedia.hs, interpreted )
[ 3 of 23] Compiling PoliticalPartyNamesDbPedia ( PoliticalPartyNamesDbPedia.hs, interpreted )
[ 4 of 23] Compiling MusicGroupNamesDbPedia ( MusicGroupNamesDbPedia.hs, interpreted )
[ 5 of 23] Compiling BroadcastNetworkNamesDbPedia ( BroadcastNetworkNamesDbPedia.hs, interpreted )
[ 6 of 23] Compiling CityNamesDbpedia ( CityNamesDbpedia.hs, interpreted )
[ 7 of 23] Compiling CompanyNames ( CompanyNames.hs, interpreted )
[ 8 of 23] Compiling CompanyNamesDbpedia ( CompanyNamesDbpedia.hs, interpreted )
[ 9 of 23] Compiling CountryNames ( CountryNames.hs, interpreted )
[10 of 23] Compiling CountryNamesDbpedia ( CountryNamesDbpedia.hs, interpreted )
[11 of 23] Compiling PeopleDbPedia ( PeopleDbPedia.hs, interpreted )
[12 of 23] Compiling NamePrefixes ( NamePrefixes.hs, interpreted )
[13 of 23] Compiling LastNames ( LastNames.hs, interpreted )
[14 of 23] Compiling FirstNames ( FirstNames.hs, interpreted )
[15 of 23] Compiling Stemmer ( Stemmer.hs, interpreted )
[16 of 23] Compiling Category2Gram ( Category2Gram.hs, interpreted )
[17 of 23] Compiling Category1Gram ( Category1Gram.hs, interpreted )
[18 of 23] Compiling Utils ( Utils.hs, interpreted )
[19 of 23] Compiling Entities ( Entities.hs, interpreted )
[20 of 23] Compiling Sentence ( Sentence.hs, interpreted )
[21 of 23] Compiling Categorize ( Categorize.hs, interpreted )
[22 of 23] Compiling Summarize ( Summarize.hs, interpreted )
[23 of 23] Compiling Main ( WebApp.hs, interpreted )
Loading package attoparsec-0.10.4.0 ... linking ... done.
Loading package dlist-0.7.1 ... linking ... done.
Loading package hashable-1.2.2.0 ... linking ... done.
Loading package scientific-0.2.0.2 ... linking ... done.
Loading package syb-0.4.1 ... linking ... done.
Loading package pretty-1.1.1.1 ... linking ... done.
Loading package template-haskell ... linking ... done.
Loading package unordered-containers-0.2.4.0 ... linking ... done.
```

The taskbar at the bottom shows various application icons and the system clock indicating 5:27 PM on 1/10/2015.

pornim serverul Yesod

Main>main

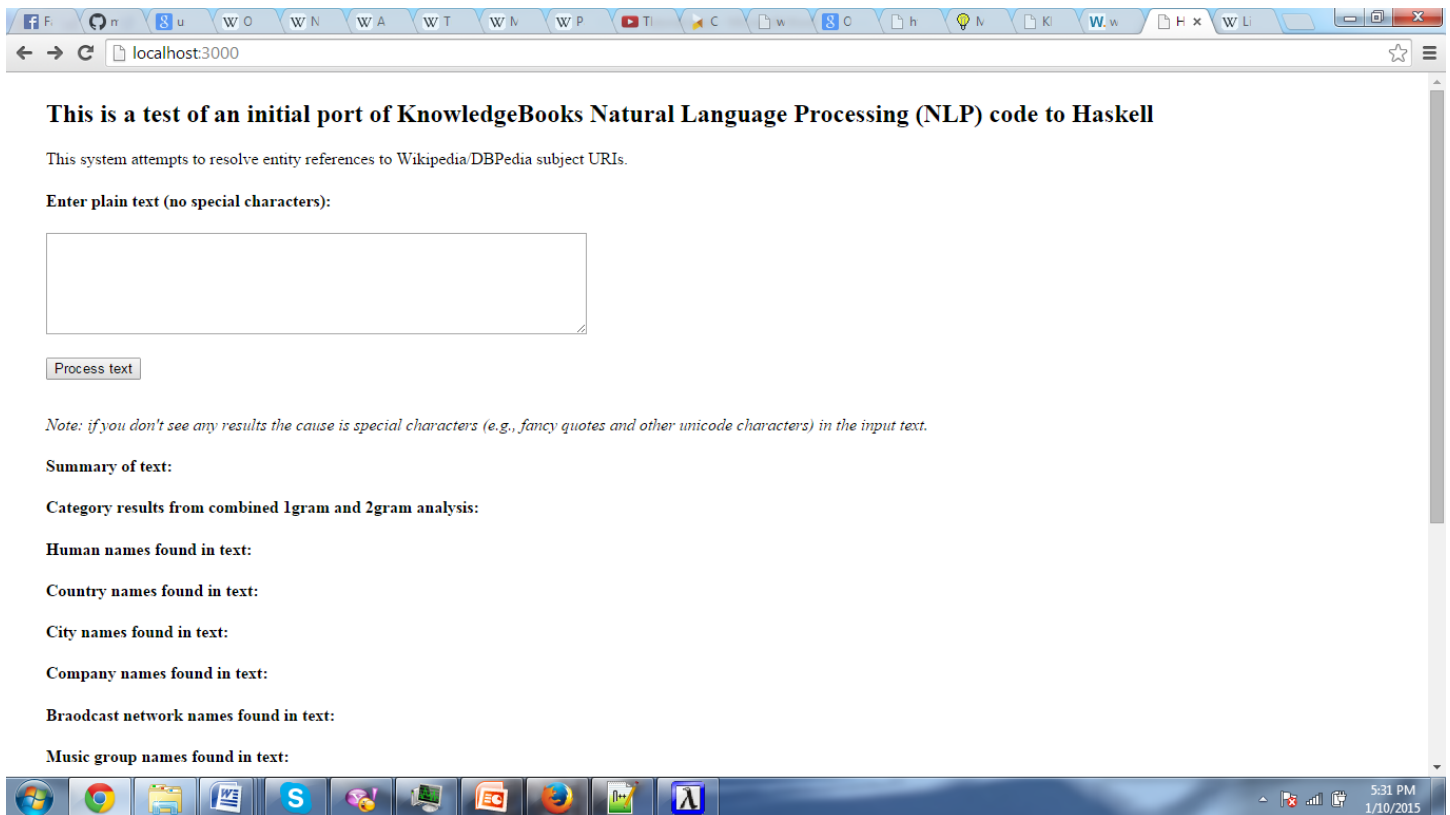


A screenshot of the WinGHC Haskell interpreter window. The title bar reads 'WinGHC'. The menu bar includes 'File', 'Edit', 'Actions', 'Tools', and 'Help'. The toolbar contains icons for file operations and execution. The main text area shows the following output:

```
Loading package warp-3.0.5.1 ... linking ... done.
Loading package yesod-core-1.4.7.1 ... linking ... done.
Ok, modules loaded: Summarize, Categorize, Sentence, Utils, Category1Gram, Category2Gram, Stemmer, Main, Entities, FirstNames, LastNames, NamePrefixes, PeopleDbPedia, CountryNamesDbpedia, CountryNames, CompanyNamesDbpedia, CompanyNames, CityNamesDbpedia, BroadcastNetworkNamesDbPedia, MusicGroupNamesDbPedia, PoliticalPartyNamesDbPedia, TradeUnionNamesDbPedia, UniversityNamesDbPedia.
*Main> main
Loading package async-2.0.1.5 ... linking ... done.
Loading package enclosed-exceptions-1.0.1 ... linking ... done.
Loading package yaml-0.8.10.1 ... linking ... done.
Loading package mime-types-0.1.0.5 ... linking ... done.
Loading package utf8-string-0.3.8 ... linking ... done.
Loading package publicsuffixlist-0.1 ... linking ... done.
Loading package http-client-0.4.6.2 ... linking ... done.
Loading package socks-0.5.4 ... linking ... done.
Loading package hourglass-0.2.6 ... linking ... done.
Loading package asn1-types-0.3.0 ... linking ... done.
Loading package asn1-encoding-0.9.0 ... linking ... done.
Loading package cipher-des-0.0.6 ... linking ... done.
Loading package cipher-rc4-0.1.4 ... linking ... done.
Loading package crypto-numbers-0.2.7 ... linking ... done.
Loading package crypto-pubkey-types-0.4.2.3 ... linking ... done.
Loading package cryptohash-0.11.6 ... linking ... done.
Loading package crypto-pubkey-0.2.7 ... linking ... done.
Loading package asn1-parse-0.9.0 ... linking ... done.
Loading package pem-0.2.2 ... linking ... done.
Loading package x509-1.5.0.1 ... linking ... done.
Loading package x509-store-1.5.0 ... linking ... done.
Loading package x509-validation-1.5.1 ... linking ... done.
Loading package tls-1.2.13 ... linking ... done.
Loading package x509-system-1.5.0 ... linking ... done.
Loading package connection-0.2.3 ... linking ... done.
Loading package http-client-tls-0.2.2 ... linking ... done.
Loading package http-conduit-2.1.5 ... linking ... done.
Loading package network-uri-2.6.0.1 ... linking ... done.
```

The taskbar at the bottom shows various application icons and the system clock indicating 5:30 PM on 1/10/2015.

apoi pornim localhost:3000



site-ul autorului:

<http://markwatson.com/>

← → ↻ kbsportal.com/form

Mark Watson Home page Wikipedia Demo Form demo Pricing Terms Contact

Find entities in text

Categories assigned to text (with relative ranking score):

- chemistry (0.0)
- computers (0.0)
- computers_ai (0.0)

Part of speech tags with (very experimental) anaphora resolution annotations (bold font):

Entities resolved to DBpedia URIs:

Category	Name	DBpedia URI (if available)
----------	------	----------------------------

kbsportal.com/form

5:32 PM 1/10/2015

<http://kbsportal.com/demo>

Wikipedia demo - refresh this page to get more random examples

Categories assigned to text (with relative ranking score):

- religion (0.05)
- religion_christianity (0.05)
- religion_buddhism (0.05)

Short summary:

de:79 v. Chr. lb:-79 lt:79 m.

Long summary:

de:79 v. Chr. lb:-79 lt:79 m. 79 la:79 a.C.n. sk:79 pred Kr.

Part of speech tags with (very experimental) anaphora resolution annotations (bold font**):**

BC/NN, __NOTOC__/NN, Year/NN, 79/NN, BC/NN, was/VBD, a/DT, year/NN, of/IN, the/DT, Roman/NNP, calendar/NN, ./. Events/NNS, By/IN, place/NN, Rome/NNP, Lucius/NNP, Cornelius/NNP, Sulla/NN, renounces/NN, his/PRPS/(**Rome Lucius Cornelius**). Roman/NNP, Cicero/NNP, travels/VBZ, to/TO, Athens/NNP, and/CC, then/RB, to/TO, Rhodes/NNP, to/TO, continue/VB, his/PRPS/(**Rhodes**). studies/NNS, of/IN, philosophy/NN, and/CC, oratory/NN, ./. Births/NNS, Deaths/NNP, Category/NN, 79/NN, BC/NN, lacking/VBG, sources/NNS, Erik9bot/NN, ast/JJ, 79/NN, edC/NN, be/VB, 79/NN, ./. ,. bs/NN, 79/NN, p/NN, ./. ,. ,. ca/MD, 79/NN, ac/NN, cs/NN, 79/NN, p/NN, ./. ,. n/NN, ./. ,. l/NN, ./. ,. cy/NN, 79/NN, CC/NN, da/NNP, 79/NN, f/NN, ./. ,. r/NN, ./. ,. de/FW, 79/NN, v/NN, ./. ,. Chr/NN, ./. ,. el/NN, 79/NN, ./. ,. es/NN, 79/NN, a/DT, ./. ,. C/NN, ./. ,. eo/NN, 79/NN, eu/NN, K/NNP, ./. ,. a/DT, ./. ,. 79/NN, fa/NN, fr/NN, 79/NN, gl/NN, 79/NN, ko/NN, 79/NN, hr/NN, 79/NN, pr/NN, ./. ,. Kr/NN, ./. ,. io/NN, 79/NN, ak/NN, id/NN, 79/NN, SM/NN, is/VBZ, 79/NN, f/NN, ./. ,. t/NN, ./. ,. tl/PRP/(**t**). 79/NN, a/DT, ./. ,. ka/NN, ./. ,. 79/NN, la/FW, 79/NN, a/DT, ./. ,. ,. lb/NN, 79/NN, lt/NN, 79/NN, m/NN, ./. ,. pr/NN, ./. ,. m/NN, ./. ,. e/NN, ./. ,. hu/NN, l/NN, ./. ,. e/NN, ./. ,. 79/NN, mk/NN, 79/NN, ./. ,. ,. ms/NN, 79/NN, SM/NN, nl/NN, 79/NN, v/NN, ./. ,. hr/NN, ./. ,. new/JJ, nap/NN, 79/NN, AC/NN, no/DT, 79/NN, f/NN, ./. ,. r/NN, ./. ,. nn/NN, 79/NN, oc/NN, 79/NN, uz/NN, Mil/NN, ./. ,. av/NN, ./. ,. 79/NN, pl/NN, 79/NN, p/NN, ./. ,. ,. pt/NN, 79/NN, a/DT, ./. ,. ksh/NN, Joohr/NN, 79/NN, f/NN, r/NN, Kr/NN, t/NN, ro/NN, 79/NN, ./. ,. r/NN, ./. ,. tu/NN, 79/NN, ./. ,. ,. sq/JJ, 79/NN, p/NN, ./. ,. ,. sk/NN, 79/NN, pred/NN, Kr/NN, ./. ,. sl/UH, 79/NN, pr/NN, ./. ,. n/NN, ./. ,. t/NN, ./. ,. sr/NN, 79/NN, ./. ,. ,. su/NN, 79/NN, SM/NN, fi/NN, 79/NN, eaa/NN, ./. ,. sv/NN, 79/NN, f/NN, ./. ,. r/NN, ./. ,. t/NN, MA/NN, 79/NN, th/DT, ./. ,. ,. 465/NN, tr/NN, M/NNP, ./. ,. ,. 79/NN, uk/NN, 79/NN, ./. ,. ,. vec/NN, 79/NN, a/DT, ./. ,. ,. vo/NN, 79/NN, b/NN, ./. ,. ,. zh/NN, 79/NN, /NN

Entities resolved to DBpedia URIs:

Category	Name	DBpedia URI (if available)
people	Lucius Cornelius Sulla	http://dbpedia.org/resource/Lucius_Cornelius_Sulla