

lolcode Markdown Language Context Free Grammar

The following is one possible context free (i.e., BNF) grammar for our lolcode Markdown language, described in Project 1.

Terminals

HAI	::=	"#HAI"
KTHXBYE	::=	"#KTHXBYE"
OBTW	::=	"#OBTW"
TLDR	::=	"#TLDR"
MAEK	::=	"#MAEK"
OIC	::=	"#OIC"
GIMMEH	::=	"#GIMMEH"
MKAY	::=	"#MKAY"
HEAD	::=	"HEAD"
TITLE	::=	"TITLE"
PARAGRAF	::=	"PARAGRAF"
BOLD	::=	"BOLD"
ITALICS	::=	"ITALICS"
LIST	::=	"LIST"
ITEM	::=	"ITEM"
NEWLINE	::=	"NEWLINE"
SOUNDZ	::=	"SOUNDZ"
VIDZ	::=	"VIDZ"
IHAZ	::=	"#I HAZ"
ITIZ	::=	"#IT IZ"
LEMMEESEE	::=	"#LEMMEE SEE"
VARDEF	::=	any single word (A-Z, a-z, no spaces)
VARVAL	::=	allowed text characters
TEXT	::=	plain text (letters, digits, punctuation, spaces)
ADDRESS	::=	text without spaces

* Note that these terminals **are not case sensitive**.

* * The only allowed plain text in our language is: A-Z, a-z, 0-9, commas, period, quotes, colons, question marks, underscores and forward slashes.

Production Rules (i.e., non-terminals)

```
<lolcode>      ::=      HAI <comments> < head> <body> KTHXBYE  
  
<comments>    ::=      <comment> <comments>  
                      | ε  
  
<comment>     ::=      OBTW TEXT TLDR  
  
<head>        ::=      MAEK HEAD <title> OIC  
                      | ε  
  
<title>       ::=      GIMMEH TITLE TEXT MKAY  
  
<body>        ::=      <inner-body> <body>  
                      | ε  
  
<inner-body>  ::=      <paragraph>  
                      | <bold>  
                      | <italics>  
                      | <list>  
                      | <audio>  
                      | <video>  
                      | <newline>  
                      | <variable-define>  
                      | <variable-use>  
                      | TEXT  
                      | <comment>  
  
<paragraph>    ::=      MAEK PARAGRAF <variable-define> <inner-paragraph> OIC  
  
<inner-paragraph> ::=      <inner-text> <inner-paragraph>  
                      | ε
```

```
<inner-text> ::= <variable-use>
| <bold>
| <italics>
| <list>
| <audio>
| <video>
| <newline>
| TEXT
| ε

<bold> ::= GIMMEH BOLD TEXT MKAY

<italics> ::= GIMMEH ITALICS TEXT MKAY

<list> ::= MAEK LIST <list-items> OIC

<list-items> ::= <list-item> <list-items>
| ε

<list-item> ::= GIMMEH ITEM <inner-list> MKAY

<inner-list> ::= <bold>
| <italics>
| TEXT
| <variable-use>
| ε

<audio> ::= GIMMEH SOUNDZ ADDRESS MKAY

<video> ::= GIMMEH VIDZ ADDRESS MKAY

<newline> ::= GIMMEH NEWLINE

<variable-define> ::= IHAZ VARDEF ITIZ TEXT MKAY
| ε

<variable-use> ::= LEMME SEE VAR_NAME MKAY
```