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readme-hw7.md

CSCI 320 - Assignment 7

README

How it works:

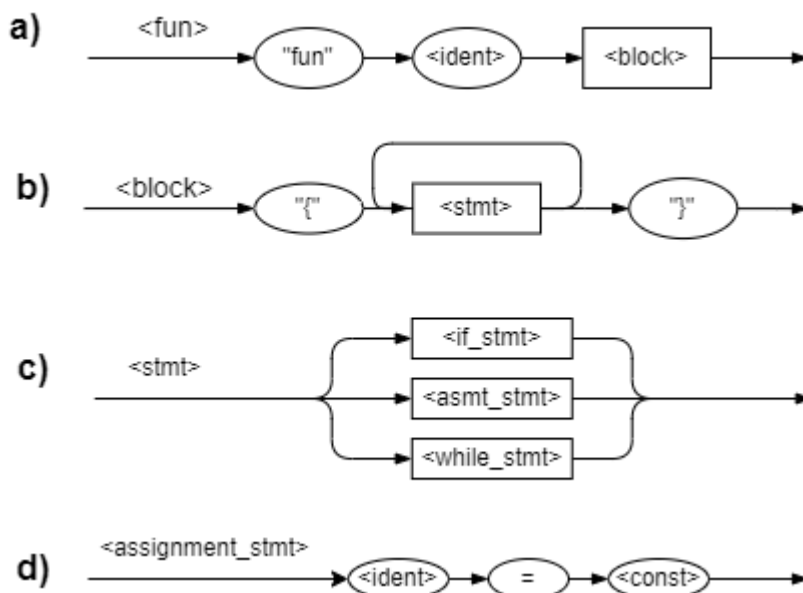
This program demonstrates a kotlin list-processing function that accepts a list of words on the command line. The words are stored in a list, each element being a single word. The list function `map{}` is used to process the list in a meaningful manner. The average word length and standard deviation of word length is calculated using the previously mentioned list function.

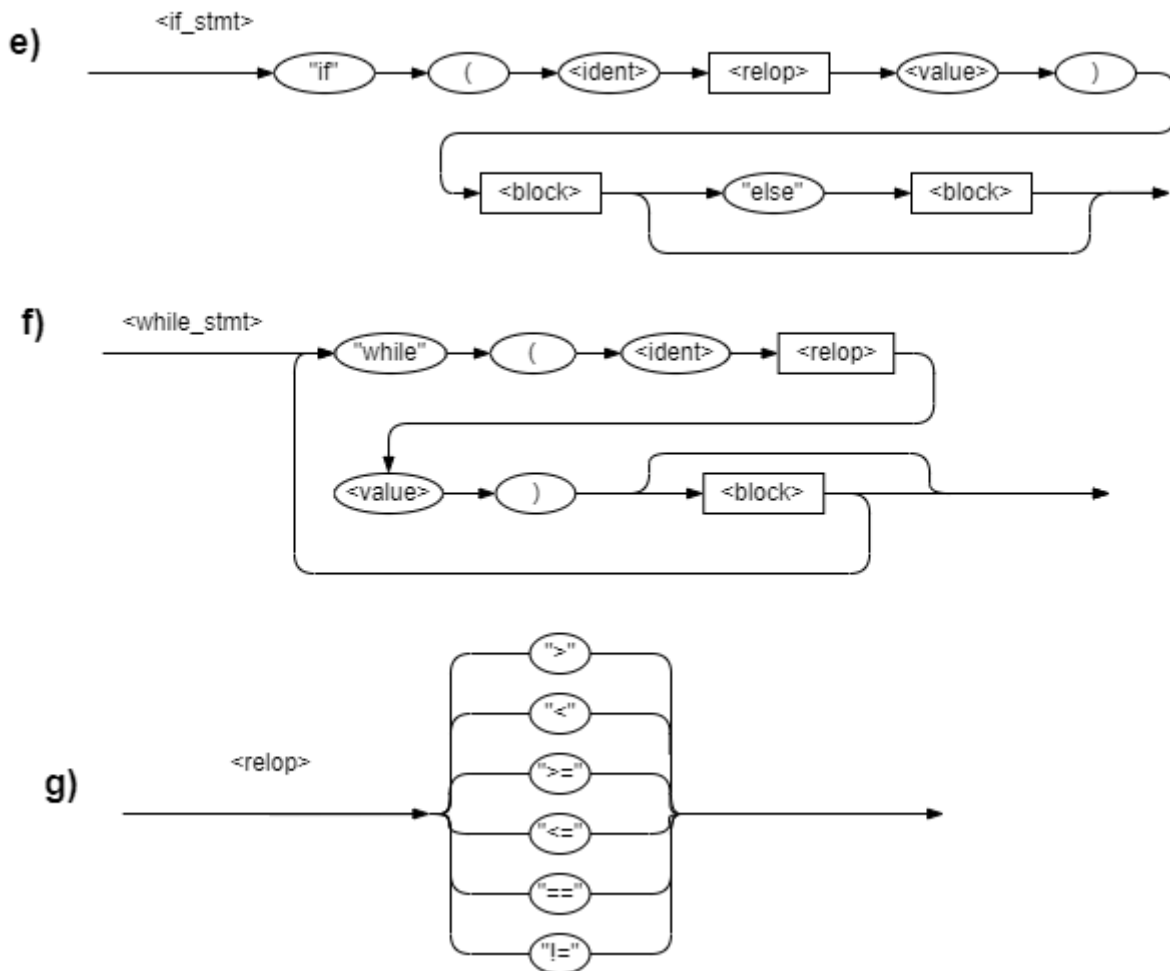
Issues

I did not experience any issues developing this program.

Kotlin Syntax Processing:

1.a. Graphical Syntax Diagrams





1.b Derivation:

Production	->	Derivation
<fun>	->	"fun" <SomeFundNow> block
<block>	->	"{" <stmt> { <stmt> } { <stmt> } { <stmt> } }"
<stmt>	->	"{" <asmt_stmt> { <while_stmt> } { <asmt_stmt> } { <if_stmt> } }"
<asmt_stmt>	->	<idx> "=" <5>
<while_stmt>	->	"while" "(" <idx> <relop> <0> ")" <block>
<relop>	->	">="
<block>	->	"{" <stmt> { <stmt> } }"
<stmt>	->	<print(idx)> <asmt_stmt>
<asmt_stmt>	->	<idx> "=" <idx - 1>
<asmt_stmt>	->	<frodo> "=" <"Kotlin rules">
<if_stmt>	->	"if" "(" <frodo> <relop> <"rules"> ")" <block> ["else"
<relop>	->	"=="
<block>	->	"{" <stmt> }"

Production	->	Derivation
<stmt>	->	<print("Yes")>
<block>	->	"{" <stmt> "}"
<stmt>	->	<print("No")>

```

"fun" <SomeFundNow>
"{" <idx> "=" <5>
{ "while" "(" <idx> ">=" <0> ")" "{" <print(idx)> <idx> "=" <idx - 1> "}" }
{ <frodo> "=" <"Kotlin rules"> }
{ if "(" <frodo> "==" <"rules"> ")" "{" <print("Yes")> "}" ["else" "{"
<print("No")> "}" ]
} "}"

```

1.c Abstract Syntax Tree

