TQLB

Final Report

CSCI 310

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**Chapter 1**

**Introduction**

TQLB is a programming language designed for digital blenders. TQLB has been designed from the ground up to make it as easy as possible.

* 1. **Why is it called TQLB?**

It is Thursday afternoon and an assignment is due Friday. Since the programmer has no opportunity to go to the bar he decides to make a frozen margarita. What is in a margarita? **T**e**q**ui**l**a!

**1.2 Why TQLB?**

Bars, liquor stores, college apartments, stadiums, homes, are common places to find tequila. There are many tequila lovers. In most cases individuals are very unique and want options for their frozen margarita. TQLB is the future of frozen margaritas because it provides sample options which can easily be modified to ones like. The sample options included are thin, regular, thick, and extremely thick. TQLB is easy to use and frozen margaritas can be made in seconds.

* 1. **Design**
* Two slots that can work in parallel.
* Four buttons that work as options

**Chapter 2**

**Language Tutorial: Lexical Breakdown**

**2.1** **Variables**

Variables in TQLB do not need to be declared as a specific type. To use a variable, just assign it to the value you want like this:

*mynumber = 5*

*mystring = "hello"*

**2.2** **Control Flow**

TQLB supports **if elif else** statements:

***if*** *(mybool1): print ("Marvin")*

***elif****(mybool2): print("Rodriguez")*

***else:*** *print("other")*

TQLB supports **for loops**:

***for*** *(i = 0 ; i < 9 ; i++): print (i);*

TQLB also supports while loops:

***while*** *(i > 0): print(i); i = i - 1;*

**2.3 Functions**

* pop() this opens the top

**2.4 Reserved Words**

* ButtonOne this is for thin
* ButtonTwo this is for regular
* ButtonThree this is for thick
* ButtonFour this is for extra thick

**Chapter 3**

**Language Tutorial: Grammar**

**3.1 BNF**

*<TQprogram> ::= <statement> | <statement> <TQprogram>*

*<statement> ::= if\_statement | while\_statement | speed\_statement | int | button\_statement*

*<int> ::= 1 | 2 | 3| 4| 5| 6| 7| 8| 9|*

*<bool\_expresion> ::= T | F*

*<while\_statement> ::= IF(bool\_expresion) THEN: statement*

*<if\_statement> ::= IF(bool\_expresion) THEN: statement*

*<speed\_statement> ::= (int, int)*

*<button\_statement> ::= ButtonOne| ButtonTwo| ButtonThree| ButtonFour*

*<buttonOne>::=(int,int)*

*<buttonTwo>::=(int,int)*

*<buttonThree>::=(int,int)*

*<buttonFour>::=(int,int)*

**Chapter 4**

**Programs**

ButtonOne(slot #, speed) {BOOL} *speed(slot #,speed) 2...8*

Sample 1:

*if(ButtonOne (1,2)): speed(1, 2): pop()*

*elif (ButtonTwo (2,4)): speed(2, 4): pop()*

*else:(ButtonThree (1,6)): speed(1, 6): pop()*

Sample 2 “modification”:

*while(ButtonOne (1,2) = sensor() ): speed(1, 8)*