NGwKs

# Trouble with Tribbles

# The Slot Machine

Version #2.5



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## Table of Contents

## Version History

Version 1.0 – *tribbles1.py*

Functioning text-based mode.
Multiple Bet lines, themed on Star Trek: TOS

Version 2.0 – *tribble2.py*

PyGame GUI incorporated into *tribbles1.py*
Image library for slots and background
Using *Buttons.py* by Simon H. L.

Version 2.5 – *tribble3.py*

Changed odds on slot randomization
Added internal comments

## I. Game Overview

This is a virtual, Star Trek: TOS themed slot machine which uses five bet lines, and includes an increasing jackpot, set bet amounts and a reset button. The User selects a bet amount and 'spins' the reels. Each 'spin' is analyzed and the User is awarded money dependant on the outcome of the 'spin'. The User can continue playing until they close the game with the Close button.

## II. Game Play Mechanics

This game is written using python 2.7 and pygame 1.9.

All of the pygame code is written within the **main()** function. Each graphical entity is created, defined, loaded and printed to the screen in this function. The buttons' creation does call for an external class, *Buttons.py*, but it was **not** written by NGwKs, credit is given to Simon H. Larsen for his code.

After the initial settings have been set a *while* loop is used for continuous gameplay and to refresh the GUI. This part of the game will loop until the User closes the game. Gameplay is driven by mouse clicks and *if* statements. Clicking on a *Bet button* will change the *bet amount*. The bulk of the programming is on the *Spin* button. This checks the User's *credit* and *bet amount*, as well as calls the **Handle_pull()** to spin generate new reels.

**Handle_pull()** calls **reels()** three times(one for each row) and creates a variable for each of the five betlines: *top, middle, bottom, diagonal left,* and *diagonal right lines*. These lines are fed into **check_triple()**, and **check_double()** to determine if any line holds a winning combination. The amount won each 'spin' is determined in those functions and returned to the **main()** to be output to the User using pygame.

If the 'spin' has a winnings line **main()** will call **win_jackpot()** to give the User a chance to win the *Jackpot*. Two numbers are randomly generated, if they match the User wins the *Jackpot* in addition to their winnings combination.

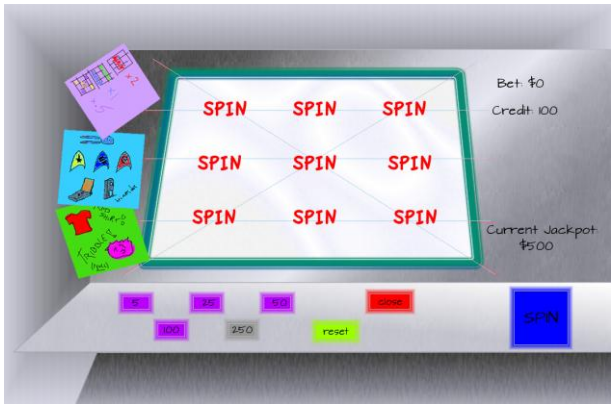
All of this information is fed into the appropriate GUI variables to be printed on the screen.

## III. Controls

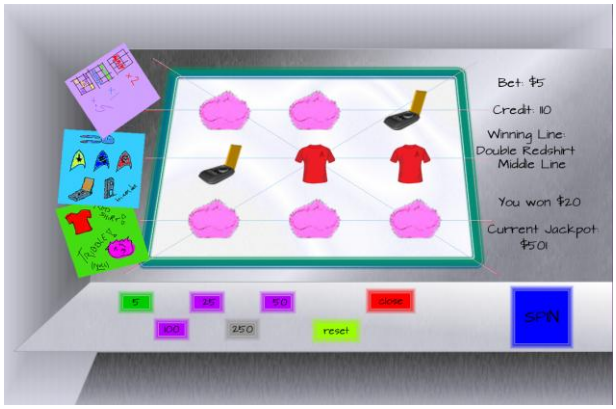
The User controls this game using only the mouse, and only left clicks.

## IV. Interface Sketch

The initial load has five bet buttons, a Reset, a Close and a Spin button. There is a label indicating the *Bet Amount*, the User's *Credit*, and the *Current Jackpot*.



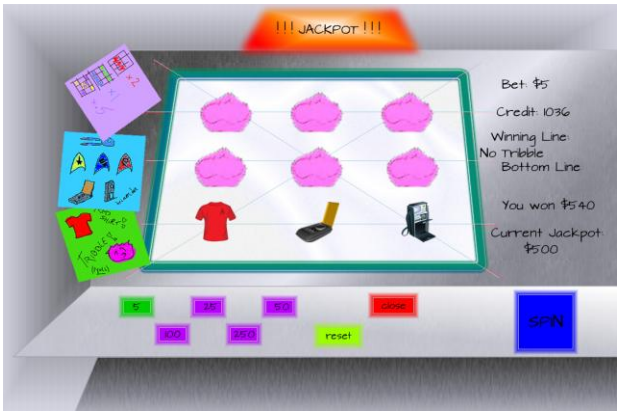

The 'post-it notes' to the side indicate the multiplier bonus on each bet line and the hierarchy of the reel images.




## V. Menu and Screen Descriptions

These additional screen shots are taken at different times during gameplay:

This one shows the User with a winning line. A new label appears to indicate how exactly the User won. In this case, by having two *Redshirts* in a line with no *Tribble*.




This screen shot shows the User winning the *Jackpot*. A light appears at the top of the screen.

And finally these two messages appear in the center of the screen when the User tries something that is not permitted in the game. Either trying to 'spin' without a *bet amount* or without the *credit* to meet the *bet.*


## VI. Scoring

There are three ways to win *credit* in this game: the *Jackpot*, the *Bet Line Multiplier*, and the *Reel Combinations*.

### Reel Combinations

The combinations are checked for by hierarchy, both for order of *bet line* checking and the order of combination checking. If a winning combination is found then the program breaks the *check loop* and only uses that combination and that bet line. As such, any and all **triple** reels trump **double** reels (which only count if there is no *Tribble* in the line). **Double** reels trumps a **Single Enterprise** (with no *Tribble*). The lowest possible win combination is 'a line with no matching reels AND no *Tribble*'. The *bet lines* are checked *middle*, *top*, *bottom*, *diagonal left*, then *diagonal right*.

### Bet Line Multiplier

Once a winning combination is identified, the *bet line* on which it was located can give a bonus multiplier to what was won with the combination. The *Middle bet line* doubles the User's winnings. The *Top* and *Bottom bet lines* do not give a multiplier bonus. The *Diagonal bet lines* halve the amount won by the User.

### The Jackpot

The initial *Jackpot* is $500, this amount increases every 'spin' by adding 15% of the User's bet to the *pot*. The User is given a chance to win the entire *pot* whenever they win a 'spin'. The Game generates two numbers, each between 1 and 50. If these two numbers match the User wins the *pot* which is added to the amount won from the winning combination. The *Jackpot* is then reset to $500.

Multiply these by the *bet amount* to calculate the amount won by the User.

| | Enterprise | | | Command | | | Science | | | Engineering | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M | TB | D | M | TB | D | M | TB | D | M | TB | D |
| **Triple** | 2000 | 1000 | 500 | 600 | 300 | 150 | 400 | 200 | 100 | 200 | 100 | 50 |
| **Double** | 40 | 20 | 10 | 20 | 10 | 5 | 10 | 5 | 2 | 8 | 4 | 2 |
| | **Communicator** | | | **Tricorder** | | | **Redshirt** | | | **Tribble** | | |
| | M | TB | D | M | TB | D | M | TB | D | | | |
| **Triple** | 80 | 40 | 20 | 60 | 30 | 15 | 40 | 20 | 10 | NULL | | |
| **Double** | 6 | 3 | 1 | 4 | 2 | 1 | 4 | 2 | 1 | | | |

M=*Middle* TB=*Top/Bottom* D=*Diagonals*

A *bet line* that has a **Single** *Enterprise* without a *Tribble*, As well as any *bet line* without a *Tribble.*

| M | TB | D |
|---|---|---|
| 4 | 2 | 1 |

## VII. Art Index

These are all the images used in this game. The reel images first, then the background.

*Enterprise.png*

*Command.png*

*Science.png*

*Engineering.png*

*Communicator.png*

*Tricorder.png*

*Redshirt.png*

*Tribble.png*


*Spin.png*

*Background.png*