Method and Class Program Design *b*y Ellis Sentoso

Input

1. In detail indicate what the inputs to this program are?

Bets of 0-50 from the player

2. How do you validate the input

Bets cannot exceed 0-50 range.

3. Pseudocode: Briefly explain how this section will look like

Processing

1. What is this program calculating?

Probability of hitting either BAR, cherries, space, and/or 7 in a slot machine

2. Can we divide the calculations to the smaller "modules"

Create static final variables as private static members like so

int getPayMultiplier(TripleString thePull)

static final BAR_PROB = 0.38;

static final CHERRIES_PROB = 0.40;

static final SPACE_PROB = 0.07;

static final SEVEN_PROB = 0.15;

public string label_cherrie…...ETC

public boolean checkWins()

Cherries Non-Cherries Any is 5x

Cherries Non-Cherries Cherries is 15x

Cherries x 3 is 30x

Bar x 3 is 50x

7s x 3 is 100x

public static int getBet()

- Ask the user how much they want to wage between 0-50 until the value is legal
- Test for illegal value
- Output an error message based on the illegal value
- This method must not end the program but return the input result or 0, and legal value only

public static TripleString pull()

- Simulate the pull of a slot machine
- Generate a string randomly between a cherry, bar, space, and 7
- There will be 3 strings after calling the randString() method a total of 3 times
-

public static void display(TripleString thePull, int winnings) // Why do we need winnings parameter?

- Display the strings, bets, and winnings

String randString() // This is a private class method

- Set an empty string
- Call Math.random() function that that's between 1-1000
- static final BAR_PROB = 0.38;
- static final CHERRIES_PROB = 0.40;

- static final SPACE_PROB = 0.07;
- static final SEVEN_PROB = 0.15;
- public string label_cherrie…...ETC
- 38% is 221 to 600 for BAR string
- 40% is 601 to 1000 for CHERRIE string
- 7% is 1 in 70 so it's 1 to 70 for SPACE string
- 15% is 71 to 220 for 7 string

Int getPayMultiplier(TripleString thePull)

- Find out what is the triple string by calling thePull method
- Return the according payout such as 5x, 15x, 30x,50x, or 100x

3. Pseudocode: Briefly explain how this section will look like – Each module should have its own section.

Output

1. What will this program display to the users?

/* ---------- sample run ----------

How much would you like to bet (1 - 50) or 0 to quit? 2
whirrrrrr .... and your pull is ...
BAR BAR BAR
congratulations, you win: 100

How much would you like to bet (1 - 50) or 0 to quit? 2
whirrrrrr .... and your pull is ...
cherries BAR cherries
congratulations, you win: 10

How much would you like to bet (1 - 50) or 0 to quit? 2
whirrrrrr .... and your pull is ...
7 BAR BAR
sorry, you lose.

How much would you like to bet (1 - 50) or 0 to quit? 2
whirrrrrr .... and your pull is ...
 cherries BAR BAR
congratulations, you win: 10

How much would you like to bet (1 - 50) or 0 to quit? 2
whirrrrrr .... and your pull is ...
 7 BAR BAR
sorry, you lose.

How much would you like to bet (1 - 50) or 0 to quit? 2
whirrrrrr .... and your pull is ...
 BAR cherries BAR
sorry, you lose.

How much would you like to bet (1 - 50) or 0 to quit? 2
whirrrrrr .... and your pull is ...
 (space) BAR 7
sorry, you lose.

How much would you like to bet (1 - 50) or 0 to quit? 2
whirrrrrr .... and your pull is ...
 cherries BAR 7
congratulations, you win: 10

How much would you like to bet (1 - 50) or 0 to quit? 2
whirrrrrr .... and your pull is ...
 cherries (space) BAR
congratulations, you win: 10

How much would you like to bet (1 - 50) or 0 to quit?

(more runs supplied by student)

How much would you like to bet (1 - 50) or 0 to quit? 0
Thanks for coming to Casino Loceff

2. What kind of formatting this output will use (Currency with $ ...)?

3. Pseudocode: Briefly explain how this section will look like