Technical Design Document

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Program Description: This program will first start by asking if the person would like to buy 1-4 tickets, and then would announce that all tickets are sold out after 20 are sold. This program will also accumulate the total amount of buyers.

Functions:

main

Description: This function will ask the user if they would like to buy tickets and how many tickets they would like to buy. It then runs the Tick\_math function and after all tickets have been sold, then it will return the amount of buyers and announce that all tickets have been sold

Parameters: None

Returns: None

Tick\_math

Decription: This function will take in all the variables and then first use TickDiff to check if the number of tickets go under zero. If it doesn’t then it will subtract from the total and then add 1 to the total amount of buyers. If it goes under it then rturns how many tickets they can buy and than returns them to the start.

Parameters: TickAdd, TickAcc, TickDiff, tickpeople

Returns: TickAcc, tickpeople

Variables:

1. TickAcc- is the total amount of tickets which is 20 and then counts down
2. TickAdd- is the amount of tickets that the user want to buy, and will be used in Tick\_math
3. Tickask- asks if the user want to buy tickets
4. tickpeople- this is the accumulator for the total buyers
5. TickDiff- this is the tester to make sure that the total amount of tickets are 20, and not over

Logical Steps:

1. This first starts with asking the user if they would like to buy tickets and while all of this is happening, makes sure that the ticket amount is over 0. If the number of tickets are 0, then it would print that all tickets have been sold out and states the amount of buyers.
2. If the buyer says yes, then it would ask the user how many tickets they would like to buy and then runs the Tick\_math function.
3. In the Tick\_math function, it first uses Tick\_Diff to ensure that the tickets don’t go below 0. If it doesn’t it then subtracts the tickets from the TickAcc and adds 1 to the tickpeople, which both are returned. If it goes under, it then tells how many tickets they can buy and then returns the user to the loop start.
4. This will loop until all tickets are sold and then prints the amount of people that bought tickets and tells all tickets have been sold.

Link to repository: https://github.com/victorhuynh26/COP-2373