**IPO chart:**

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| --- | --- | --- |
| Input: | Processing: | Output: |
| User input for whether they want to calculate the assessed value of a home (Yes or No).  If the response is "Yes," the program prompts for:  User input for the county of the home.  User input for the market value of the home. | The program defines a function calculateAssessedValue to calculate the assessed value based on the provided county and market value. It determines the assessed value percent based on the provided county.  The program uses a while loop to repeatedly prompt the user for input:  If the user's response is "No," the loop ends.  If the user's response is "Yes," the program proceeds to collect the county and market value of the home.  For each "Yes" response, the program calculates the assessed value using the calculateAssessedValue function and displays the county, market value, and assessed value.  The program accumulates the total market values and total assessed values for all homes.  If the user provides an invalid response, the program informs the user.  The program repeats this process until the user responds with "No." | For each "Yes" response, the program displays the county, market value, and assessed value of the home.  After processing all homes, the program displays the total market values and total assessed values of all homes.  If the user provides an invalid response, the program informs the user.  The program ends with a message when the user responds with "No." |

**Code:**

def calculateAssessedValue(county, marketValue):

assessedValuePercent = 0.70

if county == "Cook":

assessedValuePercent = 0.90

elif county == "DuPage":

assessedValuePercent = 0.80

elif county == "McHenry":

assessedValuePercent = 0.75

elif county == "Kane":

assessedValuePercent = 0.60

assessedValue = marketValue \* assessedValuePercent

return assessedValue

totalMarketValues = 0

totalAssessedValues = 0

while True:

response = input("Do you want to calculate the assessed value of a home? (Yes/No): ").strip().lower()

if response == "no":

break

elif response == "yes":

county = input("Enter the county of the home: ").strip()

marketValue = float(input("Enter the market value of the home: "))

assessedValue = calculateAssessedValue(county, marketValue)

print(f"County: {county}")

print(f"Market Value: ${marketValue:.2f}")

print(f"Assessed Value: ${assessedValue:.2f}\n")

totalMarketValues += marketValue

totalAssessedValues += assessedValue

else:

print("Invalid response. Please enter 'Yes' or 'No'.")

print(f"Total Market Values of all Homes: ${totalMarketValues:.2f}")

print(f"Total Assessed Values of all Homes: ${totalAssessedValues:.2f}")

print("Program ended.")