**IPO chart:**

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| --- | --- | --- |
| Input: | Processing: | Output: |
| User input for destination city, miles traveled, and gallons used for each trip.  User input ends when Ctrl+Z is pressed. | Define a function calculateMPG that calculates MPG based on miles traveled and gallons used. It handles the case where gallons used are zero to avoid division by zero.  Initialize variables to keep track of the number of entries (entryCount) and lists to store trip data (destinationCities, milesTraveledList, gallonsUsedList).  Use a while loop to repeatedly ask the user for trip information and perform the following steps for each trip:  Read and store the destination city, miles traveled, and gallons used.  Calculate the MPG using the calculateMPG function.  Store trip data in respective lists.  Display the destination city, miles traveled, and MPG.  Update the entry count.  End input when the user presses Ctrl+Z . | Display the number of entries made (number of trips).  Display the destination city, miles traveled, and MPG for each trip. |

**Code:**

def calculateMPG(miles, gallons):

if gallons == 0:

return 0.0

return miles / gallons

entryCount = 0

destinationCities = []

milesTraveledList = []

gallonsUsedList = []

try:

while True:

destinationCity = input("Enter destination city (Ctrl+Z or Ctrl+D to stop): ")

milesTraveled = float(input("Enter miles traveled: "))

gallonsUsed = float(input("Enter gallons used: "))

mpg = calculateMPG(milesTraveled, gallonsUsed)

destinationCities.append(destinationCity)

milesTraveledList.append(milesTraveled)

gallonsUsedList.append(gallonsUsed)

print(f"Destination City: {destinationCity}")

print(f"Miles Traveled: {milesTraveled:.2f} miles")

print(f"MPG: {mpg:.2f}\n")

entryCount += 1

except EOFError:

pass

print(f"Number of Entries Made: {entryCount}")

for i in range(entryCount):

print(f"Destination City: {destinationCities[i]}")

print(f"Miles Traveled: {milesTraveledList[i]:.2f} miles")

print(f"MPG: {calculateMPG(milesTraveledList[i], gallonsUsedList[i]):.2f}\n")