**IPO chart:**

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| --- | --- | --- |
| Input: | Processing: | Output: |
| User input for whether they want to calculate a train ticket price (Yes or No).  If the response is "Yes," the program prompts for:  User input for the last name.  User input for the miles from downtown Chicago. | The program defines a function calculateTicketPrice to calculate the train ticket price based on the provided miles from downtown Chicago. It determines the ticket price based on the provided criteria.  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 last name and miles from downtown Chicago.  For each "Yes" response, the program calculates the ticket price using the calculateTicketPrice function and displays the last name and ticket price.  The program accumulates the total ticket price for all calculations.  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 last name and the calculated ticket price.  After processing all calculations, the program displays the total price of all tickets.  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 calculateTicketPrice(milesFromDowntown):

if milesFromDowntown >= 30:

ticketPrice = 12

elif milesFromDowntown >= 20:

ticketPrice = 10

elif milesFromDowntown >= 10:

ticketPrice = 8

else:

ticketPrice = 5

return ticketPrice

totalTicketPrice = 0

while True:

response = input("Do you want to calculate a train ticket price? (Yes/No): ").strip().lower()

if response == "no":

break

elif response == "yes":

lastName = input("Enter your last name: ")

milesFromDowntown = int(input("Enter the miles from downtown Chicago: "))

ticketPrice = calculateTicketPrice(milesFromDowntown)

print(f"Last Name: {lastName}")

print(f"Ticket Price: ${ticketPrice}\n")

totalTicketPrice += ticketPrice

else:

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

print(f"Total Price of all Tickets: ${totalTicketPrice}")

print("Program ended.")