PROBLEM

1. Write a program that converts a total number of seconds input by the user into hours, minutes, and seconds. (For example, an input of 3725 seconds would be converted into 1 hour, 2 minutes, and 5 seconds.)

ANALYSIS

IPO Chart

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Type | Input | Processing | Output |
| tseconds | Integer | X |  | X |
| hours | Integer |  | X | X |
| minutes | Integer |  | X | X |
| seconds | Integer |  | X | X |

CONSTANTS

None.

FORMULAS

hours 🡨 [tseconds / 3600]

minutes 🡨 [(tseconds MOD 3600) / 60]

seconds 🡨 ((tseconds MOD 3600) MOD 60)

TEST DATA

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| # | tseconds | hours | minutes | seconds |
| 0 | 0 | 0 | 0 | 0 |
| 1 | 4569 | 1 | 16 | 9 |
| 2 | 3845 | 1 | 4 | 5 |
| 3 | 85473 | 23 | 44 | 33 |

DESIGN (PSEUDOCODE)

**Declare** hours, minutes As Integer

**Declare** tseconds, seconds As Float

**Write** “Please enter total seconds”

**Input** tseconds

**Set** hours 🡨 [tseconds / 3600]

**Set** minutes 🡨 [(tseconds MOD 3600) / 60]

**Set** seconds 🡨 ((tseconds MOD 3600) MOD 60)

**Write** "Total Seconds: "+tseconds

**Write** "The total time is: " + hours + " hour(s), " + minutes + " minute(s), and " + seconds + " second(s)."