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| Scenario 1: Collect Customer Data and Display Monthly Bill |
| Start  Declarations  string name  num base\_fee = 5  num tax\_rate = 0.14  num fee\_per\_message\_101\_to\_300 = 0.03  num fee\_per\_message\_above\_300 = 0.02  input AreaCode  input PhoneNumber  input TotalMessages  if total\_messages <= 100 THEN  additional\_fee = 0  else total\_messages <= 300 THEN  additional\_fee = (total\_messages - 100) \* fee\_per\_message\_101\_to\_300  else  additional\_fee = (200 \* fee\_per\_message\_101\_to\_300) + ((total\_messages - 300) \* fee\_per\_message\_above\_300)  endif  total\_bill\_before\_tax = base\_fee + additional\_fee  total\_bill\_after\_tax = total\_bill\_before\_tax \* (1 + tax\_rate)  output "Area Code: ", area\_code  output "Phone Number: ", phone\_number  output "Total Messages: ", total\_messages  output "Monthly Bill Before Tax: $", total\_bill\_before\_tax  output "Monthly Bill After Tax: $", total\_bill\_after\_tax  end |
| Scenario 2: Collect Data Until Sentinel Value and Display All Details |
| Start  Declarations  num sentinel\_value = -1  num customers = []  while  input area\_code  if area\_code == sentinel\_value then  BREAK  endif  input phone\_number  input total\_messages  add (area\_code, phone\_number, total\_messages, total\_bill\_before\_tax, total\_bill\_after\_tax) TO customers  endwhile  foreach customer in customers do  output customer  endfor  end |
| Scenario 3: Display Details for Customers with Over 100 Messages |
| Start  Declarations  num sentinel\_value = -1  num customers = []  while  input area\_code  if area\_code == sentinel\_value then  break  endif  input phone\_number  input total\_messages  if total\_bill\_after\_tax > 100 then  add (area\_code, phone\_number, total\_messages, total\_bill\_before\_tax, total\_bill\_after\_tax) to customers  endif  endwhile  foreach customer in customers do  output customer  endfor  end |
| Scenario 4: Display Details for Bills Exceeding $10 |
| Start  Declarations  num sentinel\_value = -1  num customers = []  while  input area\_code  if area\_code == sentinel\_value then  break  endif  input phone\_number  input total\_messages  if total\_bill\_after\_tax > 10 then  add (area\_code, phone\_number, total\_messages, total\_bill\_before\_tax, total\_bill\_after\_tax) to customers  endif  endwhile  foreach customer in customers do  output customer  endfor  end |
| Scenario 5: Display Bills from Specific Area Code |
| Start  Declarations  num sentinel\_value = -1  num customers = []  while  input area\_code  if area\_code == sentinel\_value then  break  endif  input phone\_number  input total\_messages  if area\_code == specific\_area\_code then  add (area\_code, phone\_number, total\_messages, total\_bill\_before\_tax, total\_bill\_after\_tax) to customers  endif  endwhile  foreach customer in customers do  output customer  endfor  end |