Algorithm: Newton's Divided Interpolation

- Read n

// Read elements
- For i = 0 to (n-1) in steps of 1 do
  - Read x[i], y[i]

End for

// Create divided difference table
- For j = o to (n-2) in steps of 1 do
  - For j = 0 to (n-j-2) in steps of 1 do
    - If (j == 0) then
      - $d[i][j] = \frac{y[i+1] - y[i]}{x[i+1] - x[i]}$

      Else
      - d[i][j] = $\frac{d[i+1][j-1] - d[i][j-1]}{x[i+j+1] - x[i]}$

      End if

  End for

End for

// Divided Difference Interpolation Formula
- Read x
- Set result = $y_{arr[0]}$
- For i = 0 to (n-2) in steps of 1 do
  - $result \ += \ term(x, x_{arr}, i) * d[0][i]$

End for
- Print result

END

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