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economía()
Prgm
© Fecha: 03-03-2008
© Título: Ingeniería Económica
© Versión: 1.2
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© Creado usando Daisuke-Edit http://www.daisuke.tk
Local
fór,pf,ti,lvar,tx,ltx,nvar,dlogs,k,vark,var,vars,cont,desp,ex,ps,fs,is,ns,iis,ms,ias,as,gs,c
s,ds,bs,vi,ve,mg,me,md,gr,ax,lb,pic
Try
  NewFold economía
Else
  setFold(economía)
EndTry
setMode("Graph","FUNCTION")→mg
setMode("Exact/Approx","APPROXIMATE")→me
setMode("Display Digits","FLOAT 12")→md
PlotsOff
FnOff
ClrDraw
setGraph("Grid","Off")→gr
setGraph("Axes","Off")→ax
setGraph("Labels","Off")→lb
{"p","f","i","n","ii","m","ia","a","g","c","d","b"}→lvar
For k,1,12
  lvar[k]→vark
  If getType(#vark)="NUM"
    string(#vark)→#(vark&"s")
EndFor
ClrIO
Loop
Dialog
  Title "INGENIERÍA ECONÓMICA v1.2"
  Text "Seleccione la Ecuación:"
  DropDown " ",{"Interés Compuesto","Tasas","Anticipada-Vencida","Serie Uniforme","Grad.
Aritmético","Grad. Geométrico","Grad. Escalonado","Flujos Combinados"},fór
  Text ""
  DropDown "Ver Imagen ",{"No","Si"},vi
  DropDown "Ver Ecuación",{"No","Si"},ve
  Text ""
  Text " Por: Froilán A. Morales S."
  Text " <froilan1986@hotmail.com>"
  Text " UIS, Ingeniería Mecánica."
EndDlog
If ok=0
  Exit
If vi=2 Then
  If fó=1 Then
    "inte"→pic
  ElseIf fó=2 Then
    "tasa"→pic
  ElseIf fó=3 Then
    "vean"→pic
  ElseIf fó=4 Then
    "seru"→pic
  ElseIf fó=5 Then
    "arit"→pic
  ElseIf fó=6 Then

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    "geom"→pic
Else
    "esca"→pic
EndIf
If getType(#pic)="PIC" Then
    ClrDraw
    RclPic #pic
    Pause
EndIf
EndIf
If fór≥4 and fór≠8 Then
    Ø→pf
    PopUp {"Presente", "Futuro"}, pf
    If pf=Ø
        Cycle
    EndIf
    If fór=1 Then
        "INTERÉS COMPUESTO"→ti
        {"P", "F", "i", "n"}→lvar
        "F=P*(1+i)^n"→tx
    ElseIf fór=2 Then
        "TASAS"→ti
        {"ii", "i", "m"}→lvar
        "i=(ii+1)^(1/m)-1"→tx
    ElseIf fór=3 Then
        "TASA ANTICIPADA"→ti
        {"i", "ia"}→lvar
        "i=ia/(1-ia)"→tx
    ElseIf fór=4 Then
        "SERIE UNIFORME"→ti
        If pf=1 Then
            {"P", "A", "i", "n"}→lvar
            "P=A*(1-(1+i)^-n)/i"→tx
        Else
            {"F", "A", "i", "n"}→lvar
            "F=A*((1+i)^n-1)/i"→tx
        EndIf
    ElseIf fór=5 Then
        "GRADIENTE ARITMÉTICO"→ti
        If pf=1 Then
            {"P", "G", "i", "n"}→lvar
            "P=G*((1+i)^n-1-n*i)/(i^2*(1+i)^n)"→tx
        Else
            {"F", "G", "i", "n"}→lvar
            "F=G*((1+i)^n-1-n*i)/i^2"→tx
        EndIf
    ElseIf fór=6 Then
        "GRADIENTE GEOMÉTRICO"→ti
        If pf=1 Then
            {"P", "C", "d", "i", "n"}→lvar
            {"P=C*(1-((1+d)/(1+i))^n)/(i-d)", "P=n*C/(1+i)"}→ltx
        Else
            {"F", "C", "d", "i", "n"}→lvar
            {"F=C*((1+i)^n-(1+d)^n)/(i-d)", "F=n*C*(1+i)^(n-1)"}→ltx
        EndIf
    ElseIf fór=7 Then
        "GRADIENTE ESCALONADO"→ti
        If pf=1 Then
            {"P", "B", "d", "i", "m", "n"}→lvar
            {"P=B*((1+i)^m-1)/i*(1-((1+d)/(1+i)^m)^n)/((1+i)^m-1-d)", "P=n*B*(1-(1+i)^-m)/i"}→ltx
        Else

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    {"F","B","d","i","m","n"}→lvar
    {"F=B*((1+i)^m-1)/i*((1+i)^(m*n)-(1+d)^n)/((1+i)^m-1-d)","F=n*B*(1-
(1+i)^-m)/i*(1+i)^(m*n)"}→ltx
EndIf
ElseIf fór=8 Then
    "FLUJOS COMBINADOS"→ti
    {"P","F","B","d","i","m","n"}→lvar
    {"P*(1+i)^(m*n)+B*((1+i)^m-1)/i*((1+i)^(m*n)-(1+d)^n)/((1+i)^m-1-
d)+F=Ø","P*(1+i)^(m*n)+n*B*(1-(1+i)^-m)/i*(1+i)^(m*n)+F=Ø"}→ltx
EndIf
If ve=2 Then
    If fór≤5 Then
        Pause tx
    Else
        If fór=8
            Disp "*Colocar signos adecuados"
            Pause ltx
        EndIf
    EndIf
    dim(lvar)→nvar
    ""→dlogs
    For k,1,nvar
        lvar[k]→vark
        dlogs&":Request """"&vark&"""" "&vark&"s,Ø"→dlogs
    EndFor
    "Dialog:Title """"&ti&""""&dlogs&":EndDialog"→dlogs
    Loop
    expr(dlogs)
    If ok=Ø
        Exit
    Ø→cont
    For k,1,nvar
        lvar[k]→var
        lvar[k]&"s"→vars
        If #vars="" Then
            DelVar #var
            cont+1→cont
            k→desp
        Else
            Try
                expr(#vars)→#var
            Else
                Pause "Error: Revise los valores ingresados ("&var&")."
                Ø→ok
                Exit
            EndTry
        EndIf
    EndFor
    If ok=Ø
        Cycle
    EndIf
    If cont=1 Then
        If fór=6 Then
            ltx[1]→tx
            If desp#3 and desp#4 Then
                If i=d Then
                    ltx[2]→tx
                EndIf
            EndIf
        ElseIf fór=7 Then
            ltx[1]→tx
            If desp#3 and desp#4 and desp#5 Then

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    If  $(1+i)^m-1=d$  Then
        ltx[2]→tx
    EndIf
EndIf
ElseIf fór=8 Then
    ltx[1]→tx
    If desp≠4 and desp≠5 and desp≠6 Then
        If  $(1+i)^m-1=d$  Then
            ltx[2]→tx
        EndIf
    EndIf
EndIf
expr(tx)→ex
lvar[desp]→var
lvar[desp]&"s"→vars
If fór≥4 and fór≠8 and desp≥3 Then
    If fór≥6 and desp=3 Then
        nSolve(ex,d)|d>⁻¹ and d<1→d
    Else
        nSolve(ex,#var)|#var>1.E⁻¹⁰→#var
    EndIf
ElseIf fór=8 and desp≥4 Then
    If desp=4 Then
        nSolve(ex,d)|d>⁻¹ and d<1→d
    Else
        nSolve(ex,#var)|#var>1.E⁻¹⁰→#var
    EndIf
Else
    right(solve(ex,#var))→#var
EndIf
string(#var)→#vars
ElseIf cont=∅ Then
    Pause "Error: Se debe dejar una variable indefinida (en blanco). "
Else
    Pause "Error: Se admite únicamente una variable indefinida (en blanco). "
EndIf
EndLoop
EndLoop
setMode("Graph",mg)
PlotsOn
FnOn
setGraph("Grid",gr)
setGraph("Axes",ax)
setGraph("Labels",lb)
setMode("Exact/Approx",me)
setMode("Display Digits",md)
DispHome
EndPrgm

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