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#Neo Nguyen Data Science Assignment 1 10/5/2021
import sys

   (len(sys.argv)==3):
       :
          (float(sys.argv[1])%1==0):
            term=int(float(sys.argv[1]))
            :
                  ValueError("Invalid Term Input: " + sys.argv[1])
           ValueError:
             ("Invalid Term Input: " + sys.argv[1])
        quit()

       :
        rate=float(sys.argv[2])
           ValueError:
             ("Invalid Rate Input: " +sys.argv[2])
        quit()

      (rate>float(1)):
              ValueError("Invalid Rate Input: " + sys.argv[2])
        (term<1):
              ValueError("Invalid Term Input: " + sys.argv[1])
        (rate==0):
        pv=term
        fv=term
        out=['term', 'interest', 'PV', 'FV']
        put=[term, rate, pv, fv]
             ("{:>10} {:>10} {:>10} {: >10}".format(*out))
             ("{:>10} {:>10} {:>10.4f} {: >10.4f}".format(*put))
        :
        v=1/(1+rate)
        pv=(1-v**term)/rate
        fv=pv/(v**term)
        out=['term', 'interest', 'PV', 'FV']
        put=[term, rate, pv, fv]
             ("{:>10} {:>10} {:>10} {: >10}".format(*out))
             ("{:>10} {:>10} {:>10.4f} {: >10.4f}".format(*put))

    (len(sys.argv)==1):
         ('{:^100}'.format('Present Value of Annuity Immediate'))
    percents=['1%', '2%', '3%', '4%', '5%', '6%','7%','8%','9%']
         ('{:>14}{:>11}{:>11}{:>11}{:>11}{:>11}{:>11}{:>11}{:>11}'.format(*percents))
    termlist=list(range(1,25))
    termlist.extend((30,40,50))
    plist=[i/100     i    range(1,10)]
    ptable=list(range(1,10))
        i    termlist:
            j    range(len(plist)):
            k=plist[j]
            v=1/(1+k)
            pv=(1-v**i)/k
            ptable[j]=pv
             ("{:>3} {:>10.4f} {:>10.4f} {:>10.4f} {:>10.4f} {:>10.4f} {:>10.4f} {:>10.4f}
{:>10.4f} {:>10.4f}".format(i,*ptable))

         ('\n\n')
         ('{:^100}'.format('Future Value of Annuity Immediate'))
         ('{:>14}{:>11}{:>11}{:>11}{:>11}{:>11}{:>11}{:>11}{:>11}'.format(*percents))
        i    termlist:
            j    range(len(plist)):
            k=plist[j]
            v=1/(1+k)
            pv=(1-v**i)/k
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            fv=pv/(v**i)
            ptable[j]=fv
             ("{:>3} {:>10.4f} {:>10.4f} {:>10.4f} {:>10.4f} {:>10.4f} {:>10.4f} {:>10.4f}
{:>10.4f} {:>10.4f}".format(i,*ptable))

    :
          ValueError("Invalid amount of inputs")
```