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# -*- coding: utf-8 -*-  
"""
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Created on Wed Oct 13 16:06:08 2021  
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"""
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class finance(object):  
    ''' financial stats of instance '''  
  
    def __init__(self, name):  
  
        self._name = name  
        print('name: {}'.format(self._name))  
  
    def who(self):  
        ''' docstring to show name associated with instance '''  
        print(self._name)  
  
    def setIncome(self, income):  
        self._income = income  
        print('income: {}'.format(income))  
  
    def setHausPmt(self, pmt):  
        self._hausPmt = pmt  
        print('house pmt: {}'.format(pmt))  
  
    def setTaxRate(self, taxRate):  
        ''' tax rate in percent '''  
        self._taxRate = taxRate/100  
        print('{}%'.format(taxRate))  
        print(self._taxRate)  
  
class loan(finance):  
    ''' sub class of finance '''  
  
    def __init__(self, name):  
        super().__init__(name)  
  
    def setPV(self, PV):  
        ''' set pV.. must be dollars '''  
        self._PV = PV  
        print('present value = ', self._PV)  
  
    def setRate(self, ratePct):  
        ''' set interest rate, percent  
        must be in to interest, apr  
        '''  
        self._ratePct = ratePct  
        print('APR = ', self._ratePct,'%')
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def setMonths(self, months):
    ''' set months to repay, usually an integer '''
    self._months = months
    print(self._months, 'months')

def computePmt(self):
    ''' formula: pmt = PV*(r*(1+r)**n)/((1+r)**months -1)'''
    r = self._ratePct/100/12 # convert % to a decimal/month
    self._Pmt = r*self._PV/(1-(1+r)**(-self._months))
    print('payment = $', round(self._Pmt,2))
    return self._Pmt

def totalAmtPaid(self, ratePct, months, PV):
    pass

class creditcard(loan):

    def __init__(self, name):
        super().__init__(name)

    def setbalance(self, balance):

        self._balance = balance
        print('balance = ', self._balance)

    def setmonthpayment(self, monthpayment):

        self._monthpayment = monthpayment
        print('monthly payment = ', self._monthpayment,'%')

```