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# In Determine the bearing capacity of soil with water table
 BulkDensity -float(input("Inter the value of Bull Density of small "To
 SatDensity = (Loat(input(Titter the value of Saturated Recently of sounds)
 waterDensity - float(input) inter the only weight or water []]
 Die float(isput("Inter the value of depth of footing.
 De * float(input("inter the value of water table above though hence to
 Dals :loat(input(finter the value of water table below the level or restrict
 B = float(input("Inter the value of width of %motions"):
 Nq- finat(input("Inter the value of Nq:"))
 N= float(input("Enter the value of M ganna (N)
 a Calculate Submerged Density
 SubDensity & SatDensity + WaterDensity & Calculate the submerged Density
 print ("Submerged Wight of soil is:", SubDensity)
 a the bearing capacity of soil when water table is at ground
 print ("CASE A")
 nu= (Subbensity Dista) + (0.5.0.8.8.Subbensity*N)
 print (The value of ultimate bearing capacity of smiles.", mu
 mapproximate calculation of Bearing capacity of small is.
Rw= 0.5 + 0.5*(0w/B)
print (The value of En 1st
Ew1 = 0.5 + 0.5 (Dw1/B)
print ("The value of Bwl is:", [bwl)
que (BulkDensity Df Nq Rw) . (0.5 8.8 3 BulkDensity "N Rwl)
print ("The value ultimate braning capacity of soil is:", qu)
a Case B
print ("CASE B")
que (GulkDensity * Df *Nq) * (0.5*0.8*8*Subbensity*N)
print ("The value of ultimate bearing capacity is
De = float(input(Enter the value of water table above footing Dever
Dal a float (input: "Enter the value of water table being the level or annual ())
point (The approximate value of ultimate bearing capacity is
Rw= 0.5 + 0.5*(Dw/B)
print ("The value of Rw is:", Rw)
Rw1= 0.5 + 0.5* (Dw1/B)
print ("The value of Rwl is:", Rwl)
gur (Bulkbens:ty * Df * Ng * Rw) + (8.5*8.8*8*BulkDensity *
print (The approximate value of ultimate hearing Capacity is
print ("CASE C")
x = float(input("Inter the value of depth of water below footing." W
* Assuming BulkDensityOfNg is defined elsewhere
du = (BulkDensity*Df*Nq) + (0.5 *0.8* ((BulkDensity*) + SubDensity
print ("The value of ultimate bearing capacity is:", nul
Da = float(input('Inter the value of water table above finting level' "))
Dal- float(input('Enter the value of water table below the level of th
print ("The approximate value of ultimate bearing capacity is:")
Bw= 0.5 + 0.5*(Dw/B)
print ("The value of Rw is:", Rw)
Bw1 = 0.5 + 0.5^{+}(Dw1/B)
print ("The value of Ral is: ", Ral)
que (BulkDensity * Df * Ng * Rw) + (0.5*8.8*E*BulkDensity **W*Rwil
print ("the value of ultimate bearing capacity is:", mu)
 Enter the value of Bulk Density of soil:18
        Enter the value of Saturated Density of smil:28
        Enter the unit Weight of Water:10
        Enter the value of depth of footing:2
        Enter the value of water table above footing level:0
        Enter the value of Water table below the level of Septimps
        Enter the value of width of footing:3
        Enter the value of Ng:33
        Enter the value of N ganna (N):34
        Submerged Weight of soil is: 18.0
        CASE A
         The value of ultimate bearing capacity of soil is: IBGE.E
         The value of Rw is: 8.5
         The value of Rw1 is: 0.5
        The value ultimate bearing capacity of smil is: 962.2
         The value of ultimate bearing capacity is: 1996.0
        Enter the value of water table above footing level:3
          Inter the value of Water table below the level of facting. &
         The approximate value of ultimate bearing capacity in:
         The value of Rw is: 1.0
         The value of Rw1 is: 0.5
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The approximate value of ultimate hearing capacity is: 1555.7
        Inter the value of depth of water below (coting:)
       The value of ultimate bearing capacity is 1201.2
Total the value of water table above footing level 1
       Inter the value of water table below the level of footing:1
        The approximate value of ultimate bearing capacity is:
       * Is find the ultimate load carring capacity of pile
  UCS = float(input( Enter the value of UCS of soil:"))
  f: - float(input( Enter the value of dimension of pile:"))
  1-float(input("Enter the length of pile:"))
  Alpha = float(input(%inter the value of adhesion factor:"))
  No = float(input( The value of No: "))
  Ab = 8*0
  print ("the Base area of footing Is:", Ab)
  As a 4 18 1
  print ("The value of choheston of soil is:", Cu)
  Opu - Cu'Nc Ab
  print ("'Qpu:", Qpu)
  Qf - Alpha 'Cu'As
  priot ("Qf:", Qf)
  Qu- Qpu + Qf
 print ("the value of load carring capacity of pile is (Qu):", Qu)
   finter the value of UCS of soil:75
       Inter the value of dimension of pile:0.45
       Enter the length of pile:15
       Enter the value of adhesion factor:0.8
       The value of No: 9
       the Base area of footing is: 0.2025
       The value of chohesion of soil is: 37.5
       'Qpu: 68.34375
       Qf: 810.0
       the value of load carring capacity of pile is (Qu): 878.34379
  # To Determine the bearing capacity of soil with water table
  BulkDensity = float (input ("Enter the value of Bulk Density of soil:"))
  SatDensity - float (input ("Enter the value of Saturated Density of soil:"))
  WaterDensity = float (input ("Enter the unit Weight of Water:"))
  tot = float (input ("Enter the value of depth of footing:"))
  B - float (input ("Enter the value of width of footing:"))
  Ng = float (input ("Enter the value of Ng:"))
  N_Gamma - float (Input ("Enter the value of N gamma (N):"))
  SubDensity = SitDensity - WaterDensity
  print ("Submerged Weight of soll is:", SubDensity)
  ማ > int (input("Number of data values of Water table above footing level: "))
  N = int (input("Number of data values of Water table below footing level: "))
 Dir . []
 Dat 1 = []
 for 1 in range (1, 8+1)-:
   print ("Enter the value of water table above footing level measured w.r.t.ground (Dw) : ")
   Depth_Ow * float (input ())
   Dw. append (Depth_Dw)
   Rw = 0.5 + 0.5* (Depth_Dw/8)
   print ("The value of Rw is:", Rw)
 for j-in range (1, N:1):
print ("Enter the value of water-table above footing level measured w.r.t.ground (Dwi): ")
   Depth_Dw1 * float (input())
   Dw. append (Depth Dw1)
  | Rw1 = 0.5 + 0.5*(Depth_Dw1/B)
   print ("The value of Rw1 is:", Rw1)
  qu= (BulkDensity*Df*Nq*Rw) + (0.5*0.8*B*BulkDensity*N_Gamma*Rw1)
  print ("'qu: ", qu, "kN/m^2")
  Enter the value of Bulk Density of soil:18
      Enter the value of Saturated Density of soil:20
      Enter the unit Weight of Water: 10
      Inter the value of depth of footing: 2
      Enter the value of width of footing:3
      Enter the value of Ng:33
      Enter the value of N gamma (N):34
      Submerged Weight of soil is: 10.0
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tamber of data values of mater table above footing level: 1
tamber of data values of water table telow footing level | 1
Enter the value of water table above footing level measured w.c.t.grmund (the)
 The value of Fu it 0.5
inter the value of water table above footing level measured w.r.t.ground (Dw)
 the value of fa is 0 enteconomorator
inter the value of water table above footing level reasoned w.r.t.ground (Dw)
 the value of fig. 18 0.83333333333333333333
 Enter the value of mater table above footing level reasured w.r.t.ground (Dat):
 The Value of Ent 1st 0.5
 'qui 1357.199900000000 kN/#*2
 Enter the value of mater table above footing level reasured w.r.t.ground (Da1):
 The value of Rai is: 0.5
 iqu: 1357,1977999999999 kN/#*!

Inter the value of water table above footing level measured w.r.t.ground (DwI):
                                                          The following the state of the 
The value of and 15 h, production of the fact 1479.6 kN/F 2.
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