Data Warehouse and Data Minig [B]

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Answer to the Question number (1)

Given,
height = 164
weight = 68
K = 5

$E.d(x,1) = \sqrt{(164-158)^2 + (68-58)^2} = 11.66$

$E.d(x,2) = \sqrt{(164-158)^2 + (68-59)^2} = 10.82$

$E.d(x,3) = \sqrt{(164-158)^2 + (68-63)^2} = 7.81$

$E.d(x,4) = \sqrt{(164-160)^2 + (68-59)^2} = 9.85$

$E.d(x,5) = \sqrt{(164-160)^2 + (68-60)^2} = 8.94$

$E.d(x,6) = \sqrt{(164-163)^2 + (68-60)^2} = 8.06$

$E.d(x,7) = \sqrt{(164-163)^2 + (68-61)^2} = 7.07$

$E.d(x,8) = \sqrt{(164-160)^2 + (68-64)^2} = 5.66$

$E.d(x,9) = \sqrt{(164-163)^2 + (68-64)^2} = 4.12$

$E.d(x,10) = \sqrt{(164-165)^2 + (68-61)^2} = 7.07$

$E.d(x,11) = \sqrt{(164-165)^2 + (68-62)^2} = 6.08$

$E.d(x,12) = \sqrt{(164-165)^2 + (68-65)^2} = 3.16$

$E.d(x,13) = \sqrt{(164-168)^2 + (68-62)^2} = 7.21$

$E.d(x,14) = \sqrt{(164-168)^2 + (68-63)^2} = 6.40$

$E.d(x,15) = \sqrt{(164-168)^2 + (68-66)^2} = 4.47$

$E.d(x,16) = \sqrt{(164-170)^2 + (68-63)^2} = 7.81$

$E.d(x,17) = \sqrt{(164-170)^2 + (68-64)^2} = 7.21$

$E.d(x,18) = \sqrt{(164-170)^2 + (68-68)^2} = 6.00$

After sorting:

(x, row 12) = 3.16 → L

(x, row 9) = 4.12 → L

(x, row 15) = 4.47 → L

(x, row 8) = 5.66 → L

(x, row 18) = 6.00 → L

(x, row 11) = 6.08 → L

(x, row 14) = 6.40 → L

(x, row 10) = 7.07 → L

(x, row 7) = 7.07 → M

(x, row 17) = 7.21 → L

(x, row 13) = 7.21 → L

(x, row 16) = 7.81 → L

(x, row 3) = 7.81 → M

(x, row 6) = 8.06 → M

(x, row 5) = 8.94 → M

(x, row 4) = 9.85 → M

(x, row 2) = 10.82 → M

(x, row 1) = 11.66 → M

∴ considering first 5 values

Timothy need L size t-shirt

Answer to the Question number - 2

My ID : 18-36363-1

$\therefore x$ [age = 38, Loan = 88,363]

Given, K = 5

$Ed(x,1) = \sqrt{(38-25)^2 + (88363-40000)^2} = 48363.00$

$E.d(x,2) = \sqrt{(38-35)^2 + (88363-60000)^2} = 28363.00$

$E.d(x,3) = \sqrt{(38-45)^2 + (88363-80000)^2} = 8363.00$

$E.d(x,4) = \sqrt{(38-20)^2 + (88363-25000)^2} = 63363.00$

$E.d(x,5) = \sqrt{(38-35)^2 + (88363-115000)^2} = 26637.00$

$E.d(x,6) = \sqrt{(38-52)^2 + (88363-22000)^2} = 66363.00$

$E.d(x,7) = \sqrt{(38-23)^2 + (88363-90000)^2} = 1637.00$

$E.d(x,8) = \sqrt{(38-37)^2 + (88363-62000)^2} = 26363.00$

$E.d(x,9) = \sqrt{(38-58)^2 + (88363-100000)^2} = 11637.01$

$E.d(x,10) = \sqrt{(38-46)^2 + (88363-250000)^2} = 161637.00$

$E.d(x,11) = \sqrt{(38-31)^2 + (88363-175000)^2} = 86637.00$

After sorting:

(x, row 7) = 1637.00 → Y

(x, row 3) = 8363.00 → N

(x, row 9) = 11637.01 → Y

$(x, \text{row } 8) = 26363.00 \rightarrow Y$

$(x, \text{row } 5) = 26637.00 \rightarrow N$

$(x, \text{row } 2) = 28363.00 \rightarrow N$

$(x, \text{row } 1) = 48363.00 \rightarrow N$

$(x, \text{row } 4) = 63363.00 \rightarrow N$

$(x, \text{row } 6) = 66363.00 \rightarrow N$

$(x, \text{row } 11) = 86637.00 \rightarrow Y$

$(x, \text{row } 10) = 161637.00 \rightarrow Y$

∴ considering first 5 values,

class of x is Y.