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{'train-chennai-sale.csv':

b'PRT_ID,AREA,INT_SQFT,DATE_SALE,DIST_MAINROAD,N_BEDROOM,N_BATHROOM,N_ROOM,SALE_COND,PARK_FACIL,DATE_BUILD,BUILDTYPE,UTILITY_AVAIL,
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Nagar,1986,19-12-2006,26,2,1,5,AbNormal,No,22-12-
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,Gravel,RM,2.2,3.1,3.2,2.89,245693,141746,9449730\r\nP05512,Chrompet,1196,11-02-2010,137,1,1,3,Family,No,16-02-1991,Others,NoSewr
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,Paved,RH,2.2,3.4,3.7,3.19,319141,37546,9386490\r\nP04085,Velachery,1865,11-11-2010,157,3,2,5,Family,No,24-11-
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2009,148,3,2,5,Family,No,14-09-2000,Commercial,NoSewr ,Gravel,RH,3.8,3.8,3.3,1.1,597135,188569,15714080\r\nP06039,Karapakkam,1639,04-
11-2009,175,2,2,4,Normal Sale,Yes,09-11-1991,House,ELO,Gravel,I,2.3,3.2,4.8,3.57,285648,77904,8656000\r\nP02016,Chrompet,796,25-
12-2011,134,1,1,2,AdjLand,Yes,03-01-1975,Commercial,AllPub,No
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1978,Others,AllPub,Paved,A,4.6,2.6,2.9,3.35,323214,49725,8287550\r\nP01372,Anna Nagar,1902,02-07-2012,168,2,1,5,Family,Yes,13-07-
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1999,Others,NoSewr ,Gravel,RH,3.4,4.5,3.4,3.73,327762,262210,10925400\r\nP04665,Chrompet,1074,23-07-2010,100,1,1,3,AbNormal,No,27-
07-1994,Others,NoSewr ,Gravel,RL,3,3,4,4.9,3.73,288821,86646,9627380\r\nP00902,TNagar,1972,13-05-2013,111,2,1,5,AdjLand,No,14-05-
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1981,Commercial,ELO,Paved,RH,2.3,2.5,2.2,2.29,468417,53533,13383350\r\nP04080,Karapakkam,1301,12-11-2010,59,1,1,3,Normal
Sale,Yes,14-11-2003,Others,NoSewr ,Gravel,C,2.8,2.7,3.8,3.17,357283,71457,7939625\r\nP02677,Adyar,730,19-08-
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2013,138,2,1,5,Family,No,27-08-1978,House,NoSeWa,Paved,RH,4.1,5.3,3.8,430852,113382,11338200\r\nP06980,Anna Nagar,1981,01-04-
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2012,117,1,1,4,AdjLand,Yes,31-03-1992,Others,ELO,Paved,RM,2,2,8,2.9,2.605,416483,223116,14874380\r\nP09650,Velachery,1755,28-04-
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11-2009,130,1,1,4,Family,No,24-11-2003,Others,NoSeWa,Gravel,RH,4.8,3.2,4.3,4.2,452501,90500,12928590\r\nP05051,KK Nagar,2114,09-
05-2010,46,3,2,5,AdjLand,Yes,14-05-
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1980,Others,AllPub,Gravel,RH,2.1,4,3,3,9,3.46,376468,238430,12548930\r\nP05245,Karapakkam,940,03-04-2010,167,1,1,3,AdjLand,No,15-
04-1961,House,AllPub,Paved,RH,2.7,2,7,4.1,3.26,263599,64435,5857750\r\nP01690,KK Nagar,1667,26-02-2012,126,2,1,4,Partial,Yes,27-
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1977,Others,ELO,No Access,C,2,3,9,3,4,3,08,211662,55701,5570050\r\nP01934,Karapakkam,545,12-01-2012,154,1,1,2,Partial,No,19-01-
1982,Others,ELO,No Access,RH,3,1,2,2,3,4,2,95,165738,88651,3854375\r\nP06326,Karapakkam,1249,12-09-2009,25,1,1,3,AdjLand,Yes,21-
09-1973,Others,ELO,Gravel,RH,2.8,3,7,3,5,3,35,318010,120328,8594875\r\nP00865,T Nagar,1894,08-06-2013,187,2,1,5,Partial,Yes,19-06-
1968,House,NoSewr ,Gravel,RL,2,3,7,4,4,3,505,406478,162591,15349250\r\nP02088,Karapakkam,1469,12-12-2011,200,2,2,4,AbNormal,No,13-
12-2006,Commercial,NoSewr ,No Access,C,4,7,2,2,4,2,97,284423,132731,9480750\r\nP07770,Adyar,916,08-08-2008,32,1,1,3,Normal
Sale,Yes,15-08-1980,House,ELO,No Access,A,3,6,3,3,9,3,63,228053,23390,5847520\r\nP08118,Chrompet,934,20-04-
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Nagar,2174,31-10-2011,48,3,2,5,Family,Yes,05-11-1988,Others,AllPub,Paved,RM,2,9,2,1,2,3,2,42,548929,313674,13869740\r\nP05304,Anna
Nagar,1589,22-03-2010,39,1,4,Partial,No,02-04-
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Nagar, 1792, 21-02-2011, 41, 1, 1, 4, Family, Yes, 26-02-1990, House, ELO, Gravel, RM, 2.7, 2.6, 2.395, 514532, 250313, 13906270\r\nP01725, Karapakkam, 1378, 19-02-2012, 192, 2, 2, 4, AdjLand, No, 21-02-2003, Others, NoSewr , Gravel, RM, 4.2, 2.8, 2.6, 3.14, 297525, 208268, 9917500\r\nP06570, Karapakkam, 898, 22-07-2009, 72, 1, 1, 3, Partial, Yes, 29-07-1980, Commercial, NoSewr , Paved, RH, 2.4, 3.1, 2.1, 2.49, 345190, 215744, 8629750\r\nP02686, Anna Nagar, 1928, 18-08-2011, 148, 2, 1, 5, Partial, No, 20-08-2001, House, AllPub, No Access, RH, 3.4, 4.1, 2.4, 3.175, 466682, 105003, 11667050\r\nP07789, Chrompet, 1233, 02-08-2008, 24, 2, 1, 4, AbNormal, No, 11-08-1975, House, NoSeWa, Gravel, RM, 2.2, 2.4, 6.2, 84, 245429, 107989, 9817150\r\nP08836, Velachery, 1618, 30-07-2007, 100, 2, 1, 4, AdjLand, Yes, 09-08-1967, Others, NoSewr , Paved, C, 4.4, 3.4, 1.4, 17, 370522, 92631, 9263050\r\nP02716, Karapakkam, 627, 12-08-2011, 49, 1, 1, 2, Family, No, 19-08-1983, House, NoSewr , Gravel, RM, 4.3, 2.8, 2.5, 3.13, 223975, 92225, 6587500\r\nP09780, Velachery, 1563, 16-08-2005, 43, 2, 1, 4, Family, No, 23-08-1977, House, NoSeWa, Gravel, RM, 4.7, 4.5, 2.6, 3.98, 303780, 195987, 9799360\r\nP06528, Karapakkam, 1693, 30-07-2009, 187, 2, 2, 4, Normal Sale, Yes, 01-08-2003, Commercial, NoSewr , Gravel, C, 3.9, 2.1, 3.9, 3.36, 384045, 166420, 12801500\r\nP06989, T Nagar, 1522, 30-03-2009, 85, 1, 1, 4, Partial, No, 10-04-1966, Commercial, AllPub, Gravel, RL, 4.2, 3.6, 3.5, 3.735, 506181, 174545, 17454510\r\nP07824, Adyar, 1090, 21-07-2008, 171, 1, 1, 3, Partial, Yes, 28-07-1980, Others, NoSeWa, Gravel, RH, 3.1, 2.7, 2.3, 2.62, 373632, 98324, 9832420\r\nP00545, Chrompet, 1085, 19-01-2014, 149, 1, 1, 3, AbNormal, Yes, 21-01-2008, Commercial, NoSewr , Gravel, RL, 2.8, 3.8, 4.6, 3, 387815, 100545, 14363500\r\nP06461, T Nagar, 1687, 13-08-2009, 73, 1, 1, 4, AbNormal, No, 16-08-1996, Others, NoSewr , Paved, RH, 4.6, 4.6, 2.3, 43, 411733, 224582, 12476770\r\nP07650, Adyar, 692, 12-09-2008, 62, 1, 1, 2, Normal Sale, Yes, 22-09-1971, Commercial, AllPub, Paved, RH, 4.1, 4.4, 5.4, 61, 394491, 124576, 10381355\r\nP07887, T Nagar, 1518, 03-07-2008, 145, 1, 1, 4, Family, Yes, 13-07-1971, Commercial, AllPub, Paved, RH, 3.7, 3.5, 4.1, 3.83, 457606, 158402, 17600240\r\nP08050, Adyar, 1025, 10-05-2008, 125, 1, 1, 3, Partial, No, 17-05-1983, Commercial, NoSeWa, Paved, I, 2.5, 2.5, 2.7, 2.6, 349916, 142153, 10934875\r\nP04677, KK Nagar, 2170, 20-07-2010, 121, 3, 2, 5, Family, Yes, 22-07-2002, House, NoSewr , Gravel, RL, 3.7, 4.6, 4.4, 09, 593864, 284560, 12372160\r\nP03124, Chrompet, 969, 23-05-2011, 70, 1, 1, 3, Family, Yes, 27-05-1994, Commercial, ELO, No Access, RH, 3.4, 2.4, 4.3, 18, 337463, 146234, 11248750\r\nP08147, KK Nagar, 1546, 09-04-2008, 129, 2, 1, 4, AbNormal, No, 16-04-1981, Commercial, AllPub, Gravel, RM, 2.5, 4.3, 2.8, 3.16, 441475, 142411, 14241140\r\nP06097, KK Nagar, 1709, 24-10-2009, 6, 2, 1, 4, AbNormal, Yes, 29-10-1989, House, NoSeWa, Paved, RL, 4.3, 3.7, 2.3, 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27-07-2002, House, ELO, Gravel, RL, 4.4, 3.7, 4.2, 4.145, 378840, 209015, 13063450\r\nP07681, KK Nagar, 2198, 04-09-2008, 71, 3, 2, 5, Partial, Yes, 10-09-1987, Others, NoSewr , Gravel, RM, 4.8, 4.2, 3.9, 4.26, 679249, 122265, 13584980\r\nP00407, Chrompet, 1293, 09-05-2014, 34, 2, 1, 4, Normal Sale, No, 19-05-1975, Commercial, ELO, No Access, RL, 3.1, 2.2, 3.8, 2.95, 419714, 157393, 13116050\r\nP06126, KK Nagar, 1641, 17-10-2009, 178, 2, 1, 4, Partial, No, 24-10-1980, Others, AllPub, Gravel, RL, 4.6, 4.4, 3.1, 3.94, 460580, 190239, 10012600\r\nP09763, Velachery, 1950, 03-09-2005, 185, 3, 2, 5, AdjLand, Yes, 13-09-1964, Others, NoSeWa, Paved, RL, 5.4, 2.3, 4.4, 16, 411601, 84741, 12105920\r\nP02652, Karapakkam, 1245, 26-08-2011, 106, 1, 1, 3, Partial, No, 02-09-1983, Others, NoSeWa, Paved, A, 4.1, 2.9, 3.5, 3.5, 201653, 113123, 4918375\r\nP096329, Chrompet, 905, 12-09-2009, 144, 1, 1, 3, Family, No, 20-09-1976, Others, ELO, Gravel, RH, 3.8, 3.5, 4.3, 74, 223393, 77032, 7703200\r\nP01701, KK Nagar, 1496, 24-02-2012, 135, 2, 1, 4, Family, No, 27-02-1998, House, NoSewr , Gravel, RM, 3.2, 3.8, 2.8, 3.22, 265641, 137105, 8569080\r\nP09722, Velachery, 1892, 22-11-2005, 38, 3, 2, 5, AdjLand, Yes, 01-12-1969, House, ELO, Gravel, RH, 3.9, 3.5, 4.8, 3.99, 449425, 133613, 12146620\r\nP084743, Velachery, 1517, 05-07-2010, 40, 2, 1, 4, Family, No, 08-07-1999, Commercial, ELO, Paved, C, 4.4, 6.2, 9.3, 94, 408507, 116716, 11671620\r\nP06768, Adyar, 1034, 30-05-2009, 73, 1, 1, 3, AdjLand, Yes, 03-06-1993, Others, ELO, Gravel, C, 3.8, 3.3, 3.5, 277702, 46284, 9256740\r\nP06746, Velachery, 1755, 06-06-2009, 142, 2, 1, 4, Family, Yes, 15-06-1974, Commercial, NoSewr , Gravel, I, 4.6, 4.3, 9.4, 12, 581720, 193907, 14915900\r\nP00934, Anna Nagar, 1622, 20-04-2013, 79, 1, 1, 4, AdjLand, Yes, 22-04-2006, House, NoSeWa, Paved, RM, 2.2, 3.2, 2.4, 475, 406434, 243860, 13547790\r\nP00899, Chrompet, 1092, 13-05-2013, 89, 1, 1, 3, Normal Sale, No, 14-05-2009, Others, AllPub, No 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21-02-2008, 137, 1, 1, 2, Partial, No, 23-02-2000, House, ELO, No Access, RH, 3.3, 3.2, 2.1, 2.9, 158766, 90723, 5670200\r\nP07597, Chrompet, 1135, 25-09-2008, 50, 1, 1, 3, AbNormal, No, 01-10-1985, Others, NoSewr , No Access, RM, 4.9, 2.1, 3.8, 3.45, 296102, 148051, 9253200\r\nP06565, Karapakkam, 939, 23-07-2009, 74, 1, 1, 3, AbNormal, No, 02-08-1971, House, ELO, No Access, I, 4.9, 3.7, 3.3, 3.9, 214700, 38646, 4294000\r\nP06398, Karapakkam, 1586, 27-08-2009, 59, 2, 2, 4, Normal Sale, Yes, 03-09-1981, Commercial, NoSewr , Gravel, RM, 3.9, 3.4, 5.3, 87, 586956, 200424, 14316000\r\nP09293, T Nagar, 1973, 29-01-2007, 63, 2, 1, 5, Family, Yes, 07-02-1972, Commercial, AllPub, Gravel, RM, 2.6, 2.9, 4.9, 3.71, 885666, 116535, 23307000\r\nP09021, Chrompet, 1023, 11-05-2007, 44, 1, 1, 3, Partial, Yes, 15-05-1990, House, AllPub, Paved, RM, 3, 2.8, 3.6, 3.1, 282319, 38941, 9735150\r\nP04325, Chrompet, 884, 22-09-2010, 75, 1, 1, 3, Normal Sale, No, 23-09-2006, Commercial, NoSewr , No Access, RM, 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10, 2, 1, 5, Family, No, 29-12-1977, House, NoSeWa, Gravel, RH, 4.6, 3.1, 2.9, 3, 320599, 61654, 12330740\r\nP00403, Chrompet, 711, 12-05-2014, 116, 1, 1, 2, AdjLand, Yes, 15-05-2002, Others, NoSeWa, No Access, RL, 2.6, 3.2, 2.8, 2.9, 249558, 64402, 8050270\r\nP00717, Chrompet, 885, 19-09-2013, 122, 1, 1, 3, Family, No, 27-09-1981, House, ELO, No Access, RM, 4.6, 2.7, 2.1, 3.09, 237422, 107919, 7194600\r\nP06064, KK Nagar, 1688, 30-10-2009, 148, 2, 1, 4, AbNormal, Yes, 03-11-1994, House, NoSewr , Gravel, RM, 2.5, 4.4, 3.11, 547810, 285318, 11412700\r\nP08625, Adyar, 1236, 17-10-2007, 108, 2, 2, 4, Family, No, 26-10-1970, Commercial, ELO, Gravel, A, 3.7, 3.5, 4.4, 01, 481414, 24071, 12035355\r\nP002917, Karapakkam, 926, 29-06-2011, 98, 1, 1, 3, Family, No, 04-07-1991, House, ELO, Gravel, RL, 4.3, 4.8, 2.9, 3.89, 288834, 68770, 6877000\r\nP06881, KK Nagar, 1686, 30-04-2009, 57, 2, 1, 4, AbNormal, No, 06-05-1985, Others, NoSeWa, Paved, RM, 3.2, 2.7, 3.9, 3.33, 382817, 196582, 10346400\r\nP05823, Karapakkam, 1344, 16-12-2009, 129, 2, 4, AdjLand, No, 29-12-1959, Commercial, NoSewr , Gravel, RH, 4.6, 4.2, 3.3, 3.96, 453999, 259428, 10809500\r\nP01492, KK Nagar, 1437, 02-04-2012, 104, 2, 1, 4, Family, No, 08-04-1989, Others, AllPub, Gravel, RM, 3.8, 4.6, 2.6, 3.56, 489629, 102006, 10200600\r\nP06226, Karapakkam, 1430, 02-10-2009, 17, 2, 2, 4, AbNormal, Yes, 05-10-1999, Others, NoSewr , No Access, A, 4.3, 3.2, 3.8, 2, 238887, 106172, 6635750\r\nP07481, Adyar, 1081, 26-10-2008, 85, 1, 1, 3, Family, No, 03-11-1978, House, AllPub, No Access, C, 3.5, 3.1, 3.2, 2.7, 241416, 6190, 6190150\r\nP05518, Karapakkam, 1352, 09-02-2010, 1, 2, 2, 4, Normal Sale, Yes, 16-02-1983, House, ELO, Gravel, A, 3, 2.3, 5.2, 9, 240768, 123638, 6507250\r\nP096801, KK Nagar, 1986, 19-05-2009, 109, 3, 2, 5, Normal Sale, No, 27-05-1979, House, AllPub, Gravel, RM, 4.9, 3.6, 4.6, 4.39, 476717, 227008, 11350400\r\nP07373, Anna Nagar, 1758, 05-12-2008, 164, 1, 1, 4, Partial, Yes, 16-12-1966, Commercial, AllPub, No Access, RL, 3.5, 2.9, 4.3, 55, 713565, 231426, 19285540\r\nP04399, Karapakkam, 607, 08-09-2010, 121, 1, 1, 2, Normal Sale, No, 19-09-1964, Other, NoSeWa, Gravel, RL, 4.2, 4.9, 2.2, 3.61, 175699, 117133, 5856625\r\nP07490, KK Nagar, 2139, 24-10-2008, 136, 3, 2, 5, Normal Sale, Yes, 30-10-1987, Others, NoSewr , Paved, RL, 2.3, 4.1, 2.4, 2.88, 424048, 249440, 12472000\r\nP05417, KK Nagar, 1488, 28-02-2010, 97, 2, 1, 4, Partial, No, 07-03-1983, Others, AllPub, Paved, RH, 2.3, 5.4, 4.1, 3.83, 405211, 202606, 8441900\r\nP09702, Velachery, 1645, 27-01-2006, 96, 2, 1, 4, Partial, No, 03-02-1980, House, NoSeWa, No Access, RH, 3.7, 4.5, 2.1, 3.58, 250118, 75793, 7579320\r\nP05869, Chrompet, 950, 07-12-2009, 177, 1, 1, 3, Normal Sale, Yes, 14-12-1983, Others, NoSeWa, Gravel, RL, 3.7, 2.6, 3.4, 3.17, 273252, 146385, 9759000\r\nP00534, Chrompet, 928, 25-01-2014, 90, 1, 1, 3, Partial, Yes, 26-01-

https://colab.research.google.com/drive/1NQ12SaL_iEJZwvKdbt5vq5EmSFzzchUT?authuser=1#scrollTo=NCBUnNPQ7n9J&printMode=true 78/84

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00-1970,Commercial,NoSewr ,Gravel,RH,3.0,3.3,2.7,3.303,449414,143012,19703300\r\nP00322,Chrompet,743,01-00-2003,7,1,1,3,Normal
Sale,Yes,11-08-1970,House,ELO,No Access,RL,2.5,2.8,3.1,2.8,222768,122906,7681650\r\nP02304,Karapakkam,502,27-10-
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Sale,Yes,02-04-1989,House,ELO,Gravel,RL,3.6,4.9,2.7,3.92,373319,176289,10369970\r\nP05413,Adyar,873,28-02-
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Nagar,2155,29-11-2008,151,3,2,5,Normal Sale,No,05-12-
1984,House,AllPub,Gravel,RL,3.4,3.4,3,3.24,426264,157045,11217480\r\nP09135,Adyar,647,26-03-2007,28,1,1,2,AdjLand,Yes,30-03-
1991,House,NoSeWa,Paved,I,4.7,4.5,3.3,3.96,244951,28818,7204440\r\nP00142,Chrompet,934,11-11-2014,75,1,1,3,AbNormal,Yes,16-11-
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Access,A,3.7,4.8,4.6,4.39,280645,182040,7585000\r\nP00302,Chrompet,1021,16-07-2014,14,1,1,3,Normal Sale,Yes,20-07-
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Access,RH,2.8,2.2,4.1,2.92,296910,152467,8024600\r\nP00251,Anna Nagar,1979,26-08-2014,83,2,1,5,Normal Sale,No,31-08-
1994,Commercial,NoSewr ,No Access,RH,3.6,3.3,2.1,2.925,727335,161630,20203750\r\nP03353,T Nagar,1926,10-04-2011,100,2,1,5,Normal
Sale,No,17-04-1980,Commercial,AllPub,No Access,RM,4.3,2.4,2,2.79,714235,147048,21006920\r\nP01667,Karapakkam,1347,28-02-
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01-2008,173,1,1,4,Family,Yes,04-02-1979,Commercial,ELO,Paved,RH,4.3,2.6,3.2,3.38,544051,233165,19430380\r\nP05196,KK
Nagar,1776,12-04-2010,95,2,1,4,AdjLand,Yes,18-04-1986,Commercial,NoSewr
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Access,RM,2.9,2.5,4.1,3.1,408662,40866,13622050\r\nP00679,Chrompet,878,22-10-2013,165,1,1,3,Family,No,31-10-1977,Others,NoSewr
,Gravel,RM,4.5,2.8,5,3.97,286735,71684,8960460\r\nP07902,Anna Nagar,1571,30-06-2008,138,1,1,4,Normal Sale,No,09-07-
1974,Commercial,ELO,Paved,RL,3,4,9,3,9,3.835,508745,122801,17542930\r\nP08524,Velachery,1502,25-11-2007,185,2,1,4,Family,No,08-12-
1954,Others,ELO,Paved,I,4.7,2.4,4.4,3.58,247144,82381,7489210\r\nP08449,Velachery,1737,27-12-2007,107,2,1,4,Normal Sale,No,28-12-
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2008,17,1,1,4,Family,No,26-08-
1966,Others,ELO,Paved,RM,2,2,3,3.5,2.92,376415,125472,12547180\r\nP01195,Anna Nagar,1833,01-11-2012,78,2,1,5,Family,Yes,09-11-
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1987,Others,AllPub,Gravel,RL,2,2.4,4.7,3.2,445401,301723,14367780\r\nP02201,Karapakkam,1265,16-11-2011,55,1,1,3,AbNormal,No,18-11-
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11-1989,Others,ELO,Gravel,RM,3.8,3.7,2.1,3.095,418558,294541,15502160\r\nP07879,T Nagar,1902,06-07-2008,21,2,1,5,Normal
Sale,Yes,13-07-1980,Others,NoSewr ,No Access,RH,4.5,2.2,3.6,3.52,427193,124024,13780420\r\nP05507,KK Nagar,1895,12-02-
2010,63,3,2,5,AbNormal,No,18-02-1988,Commercial,NoSeWa,Gravel,RM,3.5,3.1,4.8,3.9,551971,340923,16234440\r\nP07368,KK
Nagar,1531,07-12-2008,188,2,1,4,Partial,Yes,12-12-
1991,Commercial,AllPub,Gravel,RH,4.9,3.5,3.6,3.96,459589,292466,13926940\r\nP03771,Velachery,1838,13-01-
2011,68,3,2,5,AdjLand,No,26-01-1958,Others,ELO,Gravel,I,3.8,3.2,2.2,3.05,367105,67625,9660660\r\nP08192,Adyar,1288,26-03-
2008,64,2,2,4,AbNormal,No,30-03-1995,House,AllPub,Gravel,RL,3.8,2.4,3.8,3.52,403624,74352,10621695\r\nP01213,Anna Nagar,1738,21-
10-2012,19,1,1,4,Partial,No,01-11-
1970,Others,AllPub,Paved,RM,3.2,3.4,3.2,3.25,432461,248993,13104880\r\nP05129,Karapakkam,1010,24-04-2010,197,1,1,3,Normal
Sale,Yes,05-05-1967,Commercial,NoSeWa,No Access,A,4,2.6,4.6,3.82,271490,115383,6787250\r\nP03484,Adyar,909,18-03-
2011,0,1,1,3,AbNormal,No,19-03-2004,Commercial,AllPub,Paved,A,4,4.9,4.1,4.23,294363,137369,9812105\r\nP009577,Velachery,1635,15-09-
2006,35,2,1,4,AdjLand,Yes,24-09-1971,Commercial,ELO,No
Access,RH,2.1,3.5,4.7,3.51,511962,138368,13836800\r\nP01990,Karapakkam,744,01-01-2012,59,1,1,2,AdjLand,No,13-01-
1964,Others,NoSeWa,Gravel,I,2.8,3.7,2.3,2.87,235620,104720,5236000\r\nP01834,Karapakkam,945,30-01-2012,22,1,1,3,AdjLand,No,03-02-
1994,House,NoSeWa,Paved,C,2.4,2.9,2.8,2.71,148230,98820,4941000\r\nP00646,Chrompet,1063,10-11-2013,109,1,1,3,AbNormal,Yes,18-11-
1982,House,ELO,Gravel,RM,2.4,3.2,3.6,3.08,271962,40291,10072650\r\nP05884,Anna Nagar,1823,05-12-2009,22,2,1,5,Normal Sale,No,16-
12-1966,Commercial,NoSeWa,No Access,RL,3.7,3.9,4.9,4.23,573101,305654,19103360\r\nP05455,KK Nagar,1358,21-02-
2010,128,2,1,4,AbNormal,No,25-02-1996,Others,NoSeWa,Gravel,RL,2.4,6.2,1,2.82,428906,111888,9324040\r\nP09648,Velachery,1870,03-05-
2006,164,3,2,5,AdjLand,No,10-05-1977,House,AllPub,Gravel,A,2,3,4,4.3,17,333188,76890,8543280\r\nP04868,Chrompet,1207,15-06-
2010,56,2,1,4,AbNormal,No,23-06-1977,Others,AllPub,Paved,RH,2.5,2.2,4.6,3.01,241092,116081,8929340\r\nP02487,Anna Nagar,1892,25-
09-2011,123,2,1,5,Family,No,26-09-2006,Others,AllPub,No
Access,RH,4.6,3.7,4.1,4.175,484060,248571,13082710\r\nP09843,Velachery,1857,06-03-2005,109,3,2,5,AbNormal,No,14-03-
1974,Others,AllPub,Gravel,RH,2.8,4.8,2.9,3.73,386589,75170,10738570\r\nP04709,Adyar,1296,14-07-2010,39,2,2,4,AbNormal,Yes,21-07-
1983,Others,AllPub,No Access,RM,4.8,4.7,2.2,3.48,466060,151470,11651505\r\nP02160,Chrompet,1012,27-11-
2011,63,1,1,3,AbNormal,Yes,03-12-1984,House,NoSewr ,Paved,RH,2.5,2.5,2.2,2.41,233292,116646,8331850\r\nP07479,Chrompet,733,27-10-
2008,156,1,1,2,AdjLand,No,02-11-1985,House,AllPub,Gravel,RH,3.1,4.3,3.2,3.61,226915,65879,7319850\r\nP03349,Karapakkam,1224,10-04-
2011,129,1,1,3,Partial,Yes,18-04-
1976,Commercial,AllPub,Paved,RM,2.2,3.6,3.7,3.22,415557,277038,11543250\r\nP10008,Velachery,1587,22-03-2004,85,2,1,4,Normal
Sale,No,05-04-1951,Others,ELO,Paved,C,4.4,2.8,2.6,3.14,262786,145992,7299610\r\nP04109,Chrompet,858,05-11-2010,86,1,1,3,Normal
Sale,No,09-11-1992,Others,ELO,Paved,RM,3.8,4,3.4,3.76,241303,146505,8617960\r\nP00779,Chrompet,830,29-07-
2013,176,1,1,3,AbNormal,Yes,08-08-1974,Commercial,NoSewr
,Paved,RM,2.6,2.6,3.2,2.78,343425,201318,11842250\r\nP09892,Velachery,1665,23-11-2004,91,2,1,4,Partial,No,04-12-1960,House,NoSewr
,No Access,RH,3.6,4.8,4.8,4.50,285641,82686,7516880\r\nP07039,Adyar,1003,13-03-2009,49,1,1,3,AdjLand,Yes,20-03-

```

```

import pandas as pd
df = pd.read_csv("/content/train-chennai-sale.csv")
df

```

	PRT_ID	AREA	INT_SQFT	DATE_SALE	DIST_MAINROAD	N_BEDROOM	N_BATHROOM	N_ROOMS
0	P03210	Karapakkam	1004	04-05-2011	131	1.0	1	
1	P09411	Anna Nagar	1986	19-12-2006	26	2.0	1	
2	P01812	Adyar	909	04-02-2012	70	1.0	1	
3	P05346	Velachery	1855	13-03-2010	14	3.0	2	
4	P06210	Karapakkam	1226	05-10-2009	84	1.0	1	
...
7104	P03834	Karapakkam	598	03-01-2011	51	1.0	1	
7105	P10000	Velachery	1897	08-04-2004	52	3.0	2	
7106	P09594	Velachery	1614	25-08-2006	152	2.0	1	
7107	P06508	Karapakkam	787	03-08-2009	40	1.0	1	
7108	P09794	Velachery	1896	13-07-2005	156	3.0	2	

```
#checking null is present or not
df.isnull()
```

	PRT_ID	AREA	INT_SQFT	DATE_SALE	DIST_MAINROAD	N_BEDROOM	N_BATHROOM	N_ROOMS
0	False	False	False	False	False	False	False	False
1	False	False	False	False	False	False	False	False
2	False	False	False	False	False	False	False	False
3	False	False	False	False	False	False	False	False
4	False	False	False	False	False	False	False	False
...
7104	False	False	False	False	False	False	False	False
7105	False	False	False	False	False	False	False	False
7106	False	False	False	False	False	False	False	False
7107	False	False	False	False	False	False	False	False
7108	False	False	False	False	False	False	False	False

7109 rows × 22 columns



```
1992,House,EL0,Gravel,A,4.8,3.4,4.3,4.27,301111,7528,7527770\r\nP08490,Velachery,1607,10-12-2007,85,2,1,4,Family,Yes,15-12-
df['AREA']

0      Karapakkam
1      Anna Nagar
2          Adyar
3      Velachery
4      Karapakkam
...
7104   Karapakkam
7105   Velachery
7106   Velachery
7107   Karapakkam
7108   Velachery
Name: AREA, Length: 7109, dtype: object
```

```
#remove duplicates in Area column using drop
df.drop_duplicates(keep='first',subset=['AREA']);

df #only 17 rows present
```

	PRT_ID	AREA	INT_SQFT	DATE_SALE	DIST_MAINROAD	N_BEDROOM	N_BATHROC
0	P03210	Karapakkam	1004	04-05-2011	131	1.0	1
1	P09411	Anna Nagar	1986	19-12-2006	26	2.0	1
2	P01812	Adyar	909	04-02-2012	70	1.0	1
3	P05346	Velachery	1855	13-03-2010	14	3.0	2
4	P06210	Karapakkam	1226	05-10-2009	84	1.0	1
...
7104	P03834	Karapakkam	598	03-01-2011	51	1.0	1
7105	P10000	Velachery	1897	08-04-2004	52	3.0	2
7106	P09594	Velachery	1614	25-08-2006	152	2.0	1
7107	P06508	Karapakkam	787	03-08-2009	40	1.0	1
7108	P09794	Velachery	1896	13-07-2005	156	3.0	2

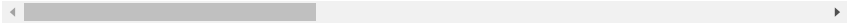
7109 rows × 22 columns

```
#Remove the dulpicates from Area and replace with correct Name
df['AREA'] = df['AREA'].replace ({'Karapakam':'Karapakkam','Adyr':'Adyar','Velchery':'Velachery','Ana Nagar':'Anna Nagar',
                                'Chrompt':'Chrompet','Chrmpt':'Chrompet','KKNagar':'KK Nagar','TNagar':'T Nagar','Ann Nagar':'Anna Nagar'})
```

df

	PRT_ID	AREA	INT_SQFT	DATE_SALE	DIST_MAINROAD	N_BEDROOM	N_BATHROC
0	P03210	Karapakkam	1004	04-05-2011	131	1.0	1
1	P09411	Anna Nagar	1986	19-12-2006	26	2.0	1
2	P01812	Adyar	909	04-02-2012	70	1.0	1
3	P05346	Velachery	1855	13-03-2010	14	3.0	2
4	P06210	Karapakkam	1226	05-10-2009	84	1.0	1
...
7104	P03834	Karapakkam	598	03-01-2011	51	1.0	1
7105	P10000	Velachery	1897	08-04-2004	52	3.0	2
7106	P09594	Velachery	1614	25-08-2006	152	2.0	1
7107	P06508	Karapakkam	787	03-08-2009	40	1.0	1
7108	P09794	Velachery	1896	13-07-2005	156	3.0	2

7109 rows × 22 columns



```
# taken uniques values in Area table
df.AREA.unique()

array(['Karapakkam', 'Anna Nagar', 'Adyar', 'Velachery', 'Chrompet',
      'KK Nagar', 'T Nagar', 'Chormpet'], dtype=object)

df['AREA']
```

```

0      Karapakkam
1      Anna Nagar
2      Adyar
3      Velachery
4      Karapakkam
...
7104   Karapakkam
7105   Velachery
7106   Velachery
7107   Karapakkam
7108   Velachery
Name: AREA, Length: 7109, dtype: object

```

```

#QS_Overall = 48 Null values
#N_Bedroom = 1 Null
#N_Bathroom = 5 null
df.isna().sum()

```

```

PRT_ID      0
AREA         0
INT_SQFT     0
DATE_SALE    0
DIST_MAINROAD 0
N_BEDROOM    1
N_BATHROOM   5
N_ROOM       0
SALE_COND    0
PARK_FACIL   0
DATE_BUILD   0
BUILDTYPE    0
UTILITY_AVAIL 0
STREET       0
MZZONE       0
QS_ROOMS     0
QS_BATHROOM  0
QS_BEDROOM   0
QS_OVERALL   48
REG_FEE      0
COMMIS       0
SALES_PRICE  0
dtype: int64

```

```
df['QS_OVERALL']
```

```

0      4.330
1      3.765
2      3.090
3      4.010
4      3.290
...
7104   2.520
7105   3.920
7106   3.840
7107   4.160
7108   3.640
Name: QS_OVERALL, Length: 7109, dtype: float64

```

```

#QS_Overall = 0 Null
df['QS_OVERALL'].fillna(method='bfill',inplace=True)
df.isna().sum()

```

```

PRT_ID      0
AREA         0
INT_SQFT     0
DATE_SALE    0
DIST_MAINROAD 0
N_BEDROOM    1
N_BATHROOM   5
N_ROOM       0
SALE_COND    0
PARK_FACIL   0
DATE_BUILD   0
BUILDTYPE    0
UTILITY_AVAIL 0
STREET       0
MZZONE       0
QS_ROOMS     0
QS_BATHROOM  0
QS_BEDROOM   0
QS_OVERALL   0
REG_FEE      0
COMMIS       0
SALES_PRICE  0
dtype: int64

```



```
# N_Bathroom having 5 null Replace as 0 null
df['N_BATHROOM'].fillna(2,inplace=True)
df['N_BATHROOM']
df.isna().sum()
```

```
PRT_ID      0
AREA        0
INT_SQFT     0
DATE_SALE    0
DIST_MAINROAD 0
N_BEDROOM    1
N_BATHROOM   0
N_ROOM       0
SALE_COND    0
PARK_FACIL   0
DATE_BUILD   0
BUILDTYPE    0
UTILITY_AVAIL 0
STREET       0
MZZONE       0
QS_ROOMS     0
QS_BATHROOM  0
QS_BEDROOM   0
QS_OVERALL   0
REG_FEE      0
COMMIS       0
SALES_PRICE  0
dtype: int64
```

```
#N_BEDRoom having one null
```

```
df['N_BEDROOM'].fillna('Not Given',inplace=True)
df.isna().sum()
```

```
# No Null values
```

```
PRT_ID      0
AREA        0
INT_SQFT     0
DATE_SALE    0
DIST_MAINROAD 0
N_BEDROOM    0
N_BATHROOM   0
N_ROOM       0
SALE_COND    0
PARK_FACIL   0
DATE_BUILD   0
BUILDTYPE    0
UTILITY_AVAIL 0
STREET       0
MZZONE       0
QS_ROOMS     0
QS_BATHROOM  0
QS_BEDROOM   0
QS_OVERALL   0
REG_FEE      0
COMMIS       0
SALES_PRICE  0
dtype: int64
```

```
#Correct table and save to new CSV files
```

```
Train = df.to_csv("Train.csv")
Train
```