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## TASK 6

### QUESTION\_1.py

```
PS C:\Users\rajashekarreddy\Downloads\cognizance> python -u "c:  
1,Aaa,3.5,Maths  
2,Bbb,4.2,Physics  
3,Ccc,7.62,Chemistry  
4,Ddd,9.55,Biology  
5,Eee,4.0,Social  
6,Fff,7.6,English  
7,Ggg,3.111,Maths  
8,Hhh,9.99,Physics  
9,Iii,1.23,Civics
```

```
demo.csv  
1 1,Aaa,3.5,Maths  
2 2,Bbb,4.2,Physics  
3 3,Ccc,7.62,Chemistry  
4 4,Ddd,9.55,Biology  
5 5,Eee,4.0,Social  
6 6,Fff,7.6,English  
7 7,Ggg,3.111,Maths  
8 8,Hhh,9.99,Physics  
9 9,Iii,1.23,Civics  
10
```

# QUESTION\_2.py

	Id	MSSubClass	MSZoning	LotFrontage	LotArea	Street	Alley	LotShape	LandContour	Utilities	...	MasVnrArea	ExterQual	ExterCond	Foundation	BsmtQual	BsmtCond	BsmtExposure	BsmtFinType1	BsmtFinSF1	BsmtFinType2
0	1	60	RL	65.0	8450	Pave	NaN	Reg	Lvl	AllPub	...	196	Gd	TA	PConc	Gd	TA	No	GLQ	706	Unf
1	2	20	RL	80.0	9600	Pave	NaN	Reg	Lvl	AllPub	...	0	TA	TA	CBlock	Gd	TA	Gd	ALQ	978	Unf
2	3	60	RL	68.0	11250	Pave	NaN	IR1	Lvl	AllPub	...	162	Gd	TA	PConc	Gd	TA	Mn	GLQ	486	Unf
3	4	70	RL	60.0	9550	Pave	NaN	IR1	Lvl	AllPub	...	0	TA	TA	BrkTli	TA	Gd	No	ALQ	216	Unf
4	5	60	RL	84.0	14260	Pave	NaN	IR1	Lvl	AllPub	...	350	Gd	TA	PConc	Gd	TA	Av	GLQ	655	Unf
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
94	95	60	RL	69.0	9337	Pave	NaN	IR1	Lvl	AllPub	...	0	TA	Gd	PConc	Gd	TA	No	GLQ	648	Unf
95	96	60	RL	NaN	9765	Pave	NaN	IR2	Lvl	AllPub	...	68	Ex	Gd	PConc	Gd	Gd	No	ALQ	310	Unf
96	97	20	RL	78.0	10264	Pave	NaN	IR1	Lvl	AllPub	...	183	Gd	TA	PConc	Gd	TA	Av	ALQ	1162	Unf
97	98	20	RL	73.0	10921	Pave	NaN	Reg	HLS	AllPub	...	48	TA	TA	CBlock	TA	TA	No	Rec	520	Unf
98	99	30	RL	85.0	10625	Pave	NaN	Reg	Lvl	AllPub	...	0	TA	TA	BrkTli	TA	TA	No	ALQ	108	Unf

99 rows x 36 columns

```
print(df.isnull().sum())
```

```
Id                0
MSSubClass        0
MSZoning          0
LotFrontage      14
LotArea           0
Street            0
Alley            93
LotShape          0
LandContour       0
Utilities         0
LotConfig         0
LandSlope         0
Neighborhood      0
Condition1        0
Condition2        0
BldgType          0
HouseStyle        0
OverallQual       0
OverallCond       0
YearBuilt         0
YearRemodAdd      0
RoofStyle         0
RoofMatl          0
Exterior1st       0
Exterior2nd       0
MasVnrType        0
MasVnrArea        0
ExterQual         0
ExterCond         0
Foundation        0
BsmtQual          3
BsmtCond          3
BsmtExposure      3
BsmtFinType1      3
BsmtFinSF1        0
BsmtFinType2      3
dtype: int64
```

```
df['LotFrontage'].fillna(1, inplace=True)
```

```
print(df['LotFrontage'])
```

```
0      65.0
1      80.0
2      68.0
3      60.0
4      84.0
...
94     69.0
95      1.0
96     78.0
97     73.0
98     85.0
Name: LotFrontage, Length: 99, dtype: float64
```

```
print(df['Alley'].isnull())
```

```
0      True
1      True
2      True
3      True
4      True
...
94     True
95     True
96     True
97     True
98     True
Name: Alley, Length: 99, dtype: bool
```

```
df['Alley'].fillna('no alley here', inplace=True)
print(df['Alley'])
```

```
0      no alley here
1      no alley here
2      no alley here
3      no alley here
4      no alley here
...
94     no alley here
95     no alley here
96     no alley here
97     no alley here
98     no alley here
Name: Alley, Length: 99, dtype: object
```

```
[ ] df[df['BstQual'].isnull()]
```

	Id	MSSubClass	MSZoning	LotFrontage	LotArea	Street	Alley	LotShape	LandContour	Utilities	...	MasVnrArea	ExterQual	ExterCond	Foundation	BstQual	BstCond	BstExposure	BstFinType1	BstFinSF1	BstFinType2
17	18	90	RL	72.0	10791	Pave	no alley name mentioned	Reg	Lvl	AllPub	...	0	TA	TA	Slab	NaN	NaN	NaN	NaN	0	NaN
39	40	90	RL	65.0	6040	Pave	no alley name mentioned	Reg	Lvl	AllPub	...	0	TA	TA	PConc	NaN	NaN	NaN	NaN	0	NaN
90	91	20	RL	60.0	7200	Pave	no alley name mentioned	Reg	Lvl	AllPub	...	0	TA	TA	Slab	NaN	NaN	NaN	NaN	0	NaN

3 rows × 30 columns

```
[ ] df['BstQual'].fillna('no value', inplace=True)
df.tail(10)
```

	Id	MSSubClass	MSZoning	LotFrontage	LotArea	Street	Alley	LotShape	LandContour	Utilities	...	MasVnrArea	ExterQual	ExterCond	Foundation	BstQual	BstCond	BstExposure	BstFinType1	BstFinSF1	BstFinType2
89	90	20	RL	60.0	8070	Pave	no alley here	Reg	Lvl	AllPub	...	0	TA	TA	PConc	Gd	TA	No	GLQ	588	Unf
90	91	20	RL	60.0	7200	Pave	no alley here	Reg	Lvl	AllPub	...	0	TA	TA	Slab	no value...	NaN	NaN	NaN	0	NaN
91	92	20	RL	65.0	8500	Pave	no alley here	Reg	Lvl	AllPub	...	203	TA	TA	CBlock	TA	TA	No	Rec	600	Unf
92	93	30	RL	80.0	13360	Pave	Grvl	IR1	HLS	AllPub	...	0	TA	Gd	BkTli	Gd	TA	No	ALQ	713	Unf
93	94	190	C (all)	60.0	7200	Pave	no alley here	Reg	Lvl	AllPub	...	0	TA	TA	BkTli	TA	Fa	Mn	Rec	1048	Unf
94	95	60	RL	69.0	9337	Pave	no alley here	IR1	Lvl	AllPub	...	0	TA	Gd	PConc	Gd	TA	No	GLQ	648	Unf
95	96	60	RL	1.0	9765	Pave	no alley here	IR2	Lvl	AllPub	...	68	Ex	Gd	PConc	Gd	Gd	No	ALQ	310	Unf
96	97	20	RL	78.0	10264	Pave	no alley here	IR1	Lvl	AllPub	...	183	Gd	TA	PConc	Gd	TA	Av	ALQ	1162	Unf
97	98	20	RL	73.0	10921	Pave	no alley here	Reg	HLS	AllPub	...	48	TA	TA	CBlock	TA	TA	No	Rec	520	Unf
98	99	30	RL	65.0	10625	Pave	no alley here	Reg	Lvl	AllPub	...	0	TA	TA	BkTli	TA	TA	No	ALQ	108	Unf

10 rows × 30 columns

```
[ ] df[df['BstQual'].isnull()]
```

	Id	MSSubClass	MSZoning	LotFrontage	LotArea	Street	Alley	LotShape	LandContour	Utilities	...	MasVnrArea	ExterQual	ExterCond	Foundation	BstQual	BstCond	BstExposure	BstFinType1	BstFinSF1	BstFinType2
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0 rows × 30 columns

```
df[df['BstCond'].isnull()]
```

	Id	MSSubClass	MSZoning	LotFrontage	LotArea	Street	Alley	LotShape	LandContour	Utilities	...	MasVnrArea	ExterQual	ExterCond	Foundation	BstQual	BstCond	BstExposure	BstFinType1	BstFinSF1	BstFinType2
17	18	90	RL	72.0	10791	Pave	no alley name mentioned	Reg	Lvl	AllPub	...	0	TA	TA	Slab	no value given here	NaN	NaN	NaN	0	NaN
39	40	90	RL	65.0	6040	Pave	no alley name mentioned	Reg	Lvl	AllPub	...	0	TA	TA	PConc	no value given here	NaN	NaN	NaN	0	NaN
90	91	20	RL	60.0	7200	Pave	no alley name mentioned	Reg	Lvl	AllPub	...	0	TA	TA	Slab	no value given here	NaN	NaN	NaN	0	NaN

3 rows × 30 columns

```
[ ] df['BstCond'].fillna('No condition', inplace=True)
df.tail(10)
```

	Id	MSSubClass	MSZoning	LotFrontage	LotArea	Street	Alley	LotShape	LandContour	Utilities	...	MasVnrArea	ExterQual	ExterCond	Foundation	BstQual	BstCond	BstExposure	BstFinType1	BstFinSF1	BstFinType2
89	90	20	RL	60.0	8070	Pave	no alley here	Reg	Lvl	AllPub	...	0	TA	TA	PConc	Gd	TA	No	GLQ	588	Unf
90	91	20	RL	60.0	7200	Pave	no alley here	Reg	Lvl	AllPub	...	0	TA	TA	Slab	no value...	No condition	NaN	NaN	0	NaN
91	92	20	RL	65.0	8500	Pave	no alley here	Reg	Lvl	AllPub	...	203	TA	TA	CBlock	TA	TA	No	Rec	600	Unf
92	93	30	RL	80.0	13360	Pave	Grvl	IR1	HLS	AllPub	...	0	TA	Gd	BkTli	Gd	TA	No	ALQ	713	Unf
93	94	190	C (all)	60.0	7200	Pave	no alley here	Reg	Lvl	AllPub	...	0	TA	TA	BkTli	TA	Fa	Mn	Rec	1048	Unf
94	95	60	RL	69.0	9337	Pave	no alley here	IR1	Lvl	AllPub	...	0	TA	Gd	PConc	Gd	TA	No	GLQ	648	Unf
95	96	60	RL	1.0	9765	Pave	no alley here	IR2	Lvl	AllPub	...	68	Ex	Gd	PConc	Gd	Gd	No	ALQ	310	Unf
96	97	20	RL	78.0	10264	Pave	no alley here	IR1	Lvl	AllPub	...	183	Gd	TA	PConc	Gd	TA	Av	ALQ	1162	Unf
97	98	20	RL	73.0	10921	Pave	no alley here	Reg	HLS	AllPub	...	48	TA	TA	CBlock	TA	TA	No	Rec	520	Unf
98	99	30	RL	65.0	10625	Pave	no alley here	Reg	Lvl	AllPub	...	0	TA	TA	BkTli	TA	TA	No	ALQ	108	Unf

10 rows × 30 columns

```
[ ] df[df['BstCond'].isnull()]
```

	Id	MSSubClass	MSZoning	LotFrontage	LotArea	Street	Alley	LotShape	LandContour	Utilities	...	MasVnrArea	ExterQual	ExterCond	Foundation	BstQual	BstCond	BstExposure	BstFinType1	BstFinSF1	BstFinType2
--	----	------------	----------	-------------	---------	--------	-------	----------	-------------	-----------	-----	------------	-----------	-----------	------------	---------	---------	-------------	-------------	-----------	-------------

0 rows × 30 columns

```
[ ] df[df['BstExposure'].isnull()]
```

	Id	MSSubClass	MSZoning	LotFrontage	LotArea	Street	Alley	LotShape	LandContour	Utilities	...	MasVnrArea	ExterQual	ExterCond	Foundation	BstQual	BstCond	BstExposure	BstFinType1	BstFinSF1	BstFinType2
17	18	90	RL	72.0	10791	Pave	no alley name mentioned	Reg	Lvl	AllPub	...	0	TA	TA	Slab	no value given here	None	NaN	NaN	0	NaN
39	40	90	RL	65.0	6040	Pave	no alley name mentioned	Reg	Lvl	AllPub	...	0	TA	TA	PConc	no value given here	None	NaN	NaN	0	NaN
90	91	20	RL	60.0	7200	Pave	no alley name mentioned	Reg	Lvl	AllPub	...	0	TA	TA	Slab	no value given here	None	NaN	NaN	0	NaN

3 rows × 30 columns

```
df['BstExposure'].fillna('No exposure', inplace=True)
df.tail(10)
```

	Id	MSSubClass	MSZoning	LotFrontage	LotArea	Street	Alley	LotShape	LandContour	Utilities	...	MasVnrArea	ExterQual	ExterCond	Foundation	BstQual	BstCond	BstExposure	BstFinType1	BstFinSF1	BstFinType2
89	90	20	RL	60.0	8070	Pave	no alley here	Reg	Lvl	AllPub	...	0	TA	TA	PConc	Gd	TA	No	GLQ	588	Unf
90	91	20	RL	60.0	7200	Pave	no alley here	Reg	Lvl	AllPub	...	0	TA	TA	Slab	no value...	No condition	No exposure	NaN	0	NaN
91	92	20	RL	65.0	8500	Pave	no alley here	Reg	Lvl	AllPub	...	203	TA	TA	CBlock	TA	TA	No	Rec	600	Unf
92	93	30	RL	80.0	13360	Pave	Grvl	IR1	HLS	AllPub	...	0	TA	Gd	BkTli	Gd	TA	No	ALQ	713	Unf
93	94	190	C (all)	60.0	7200	Pave	no alley here	Reg	Lvl	AllPub	...	0	TA	TA	BkTli	TA	Fa	Mn	Rec	1048	Unf
94	95	60	RL	69.0	9337	Pave	no alley here	IR1	Lvl	AllPub	...	0	TA	Gd	PConc	Gd	TA	No	GLQ	648	Unf
95	96	60	RL	1.0	9765	Pave	no alley here	IR2	Lvl	AllPub	...	68	Ex	Gd	PConc	Gd	Gd	No	ALQ	310	Unf
96	97	20	RL	78.0	10264	Pave	no alley here	IR1	Lvl	AllPub	...	183	Gd	TA	PConc	Gd	TA	Av	ALQ	1162	Unf
97	98	20	RL	73.0	10921	Pave	no alley here	Reg	HLS	AllPub	...	48	TA	TA	CBlock	TA	TA	No	Rec	520	Unf
98	99	30	RL	65.0	10625	Pave	no alley here	Reg	Lvl	AllPub	...	0	TA	TA	BkTli	TA	TA	No	ALQ	108	Unf

10 rows × 30 columns

```
[ ] df[df['BstExposure'].isnull()]
```

	Id	MSSubClass	MSZoning	LotFrontage	LotArea	Street	Alley	LotShape	LandContour	Utilities	...	MasVnrArea	ExterQual	ExterCond	Foundation	BstQual	BstCond	BstExposure	BstFinType1	BstFinSF1	BstFinType2
--	----	------------	----------	-------------	---------	--------	-------	----------	-------------	-----------	-----	------------	-----------	-----------	------------	---------	---------	-------------	-------------	-----------	-------------

0 rows × 30 columns

```
[ ] df[df['BuseFinType1'].isnull()]
```

	Id	MSSubClass	MSZoning	LotFrontage	LotArea	Street	Alley	LotShape	LandContour	Utilities	...	MasVnrArea	ExterQual	ExterCond	Foundation	BsmtQual	BsmtCond	BsmtExposure	BsmtFinType1	BsmtFinSF1	BsmtFinType2
17	18	90	RL	72.0	10791	Pave	no alley name mentioned	Reg	Lvl	AllPub	...	0	TA	TA	Slab	NaN	NaN	No given exposure	NaN	0	NaN
39	40	90	RL	85.0	8040	Pave	no alley name mentioned	Reg	Lvl	AllPub	...	0	TA	TA	PConc	NaN	NaN	No given exposure	NaN	0	NaN
90	91	20	RL	80.0	7200	Pave	no alley name mentioned	Reg	Lvl	AllPub	...	0	TA	TA	Slab	NaN	NaN	No given exposure	NaN	0	NaN

3 rows x 38 columns

```
df['BuseFinType1'].fillna('value not assigned', inplace=True)
df.tail(10)
```



	Id	MSSubClass	MSZoning	LotFrontage	LotArea	Street	Alley	LotShape	LandContour	Utilities	...	MasVnrArea	ExterQual	ExterCond	Foundation	BsmtQual	BsmtCond	BsmtExposure	BsmtFinType1	BsmtFinSF1	BsmtFinType2
89	90	20	RL	80.0	8070	Pave	no alley here	Reg	Lvl	AllPub	...	0	TA	TA	PConc	Gd	TA	No	GLQ	588	Unf
90	91	20	RL	80.0	7200	Pave	no alley here	Reg	Lvl	AllPub	...	0	TA	TA	Slab	no value...	No condition	No exposure	values not assigned	0	NaN
91	92	20	RL	85.0	8500	Pave	no alley here	Reg	Lvl	AllPub	...	203	TA	TA	CBlock	TA	TA	No	Rec	600	Unf
92	93	30	RL	80.0	13360	Pave	Gnl	IR1	HLS	AllPub	...	0	TA	Gd	BkTl	Gd	TA	No	ALQ	713	Unf
93	94	190	C (all)	80.0	7200	Pave	no alley here	Reg	Lvl	AllPub	...	0	TA	TA	BkTl	TA	Fa	Mn	Rec	1048	Unf
94	95	80	RL	89.0	9337	Pave	no alley here	IR1	Lvl	AllPub	...	0	TA	Gd	PConc	Gd	TA	No	GLQ	648	Unf
95	96	80	RL	1.0	9765	Pave	no alley here	IR2	Lvl	AllPub	...	68	Ex	Gd	PConc	Gd	Gd	No	ALQ	310	Unf
96	97	20	RL	78.0	10284	Pave	no alley here	IR1	Lvl	AllPub	...	183	Gd	TA	PConc	Gd	TA	Av	ALQ	1182	Unf
97	98	20	RL	73.0	10621	Pave	no alley here	Reg	HLS	AllPub	...	48	TA	TA	CBlock	TA	TA	No	Rec	520	Unf
98	99	30	RL	85.0	10625	Pave	no alley here	Reg	Lvl	AllPub	...	0	TA	TA	BkTl	TA	TA	No	ALQ	108	Unf

10 rows x 38 columns

```
[ ] df[df['BuseFinType1'].isnull()]
```

	Id	MSSubClass	MSZoning	LotFrontage	LotArea	Street	Alley	LotShape	LandContour	Utilities	...	MasVnrArea	ExterQual	ExterCond	Foundation	BsmtQual	BsmtCond	BsmtExposure	BsmtFinType1	BsmtFinSF1	BsmtFinType2
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0 rows x 38 columns

```
[ ] df[df['BuseFinType2'].isnull()]
```

	Id	MSSubClass	MSZoning	LotFrontage	LotArea	Street	Alley	LotShape	LandContour	Utilities	...	MasVnrArea	ExterQual	ExterCond	Foundation	BsmtQual	BsmtCond	BsmtExposure	BsmtFinType1	BsmtFinSF1	BsmtFinType2
17	18	90	RL	72.0	10791	Pave	no alley name mentioned	Reg	Lvl	AllPub	...	0	TA	TA	Slab	no value given here	None	No given exposure	Values yet to be updated	0	NaN
39	40	90	RL	85.0	8040	Pave	no alley name mentioned	Reg	Lvl	AllPub	...	0	TA	TA	PConc	no value given here	None	No given exposure	Values yet to be updated	0	NaN
90	91	20	RL	80.0	7200	Pave	no alley name mentioned	Reg	Lvl	AllPub	...	0	TA	TA	Slab	no value given here	None	No given exposure	Values yet to be updated	0	NaN

3 rows x 38 columns

```
df['BuseFinType2'].fillna('values not found', inplace=True)
df.tail(10)
```



	Id	MSSubClass	MSZoning	LotFrontage	LotArea	Street	Alley	LotShape	LandContour	Utilities	...	MasVnrArea	ExterQual	ExterCond	Foundation	BsmtQual	BsmtCond	BsmtExposure	BsmtFinType1	BsmtFinSF1	BsmtFinType2
89	90	20	RL	80.0	8070	Pave	no alley here	Reg	Lvl	AllPub	...	0	TA	TA	PConc	Gd	TA	No	GLQ	588	Unf
90	91	20	RL	80.0	7200	Pave	no alley here	Reg	Lvl	AllPub	...	0	TA	TA	Slab	no value...	No condition	No exposure	values not assigned	0	values not found
91	92	20	RL	85.0	8500	Pave	no alley here	Reg	Lvl	AllPub	...	203	TA	TA	CBlock	TA	TA	No	Rec	600	Unf
92	93	30	RL	80.0	13360	Pave	Gnl	IR1	HLS	AllPub	...	0	TA	Gd	BkTl	Gd	TA	No	ALQ	713	Unf
93	94	190	C (all)	80.0	7200	Pave	no alley here	Reg	Lvl	AllPub	...	0	TA	TA	BkTl	TA	Fa	Mn	Rec	1048	Unf
94	95	80	RL	89.0	9337	Pave	no alley here	IR1	Lvl	AllPub	...	0	TA	Gd	PConc	Gd	TA	No	GLQ	648	Unf
95	96	80	RL	1.0	9765	Pave	no alley here	IR2	Lvl	AllPub	...	68	Ex	Gd	PConc	Gd	Gd	No	ALQ	310	Unf
96	97	20	RL	78.0	10284	Pave	no alley here	IR1	Lvl	AllPub	...	183	Gd	TA	PConc	Gd	TA	Av	ALQ	1182	Unf
97	98	20	RL	73.0	10621	Pave	no alley here	Reg	HLS	AllPub	...	48	TA	TA	CBlock	TA	TA	No	Rec	520	Unf
98	99	30	RL	85.0	10625	Pave	no alley here	Reg	Lvl	AllPub	...	0	TA	TA	BkTl	TA	TA	No	ALQ	108	Unf

10 rows x 38 columns

+ Code + Text

```
[ ] df[df['BuseFinType2'].isnull()]
```

	Id	MSSubClass	MSZoning	LotFrontage	LotArea	Street	Alley	LotShape	LandContour	Utilities	...	MasVnrArea	ExterQual	ExterCond	Foundation	BsmtQual	BsmtCond	BsmtExposure	BsmtFinType1	BsmtFinSF1	BsmtFinType2
--	----	------------	----------	-------------	---------	--------	-------	----------	-------------	-----------	-----	------------	-----------	-----------	------------	----------	----------	--------------	--------------	------------	--------------

0 rows x 38 columns

```
print(df.isnull().sum())
```

```
Id 0
MSSubClass 0
MSZoning 0
LotFrontage 0
LotArea 0
Street 0
Alley 0
LotShape 0
LandContour 0
Utilities 0
LotConfig 0
LandSlope 0
Neighborhood 0
Condition1 0
Condition2 0
BldgType 0
HouseStyle 0
OverallQual 0
OverallCond 0
YearBuilt 0
YearRemodAdd 0
RoofStyle 0
RoofMatl 0
Exterior1st 0
Exterior2nd 0
MasVnrType 0
MasVnrArea 0
ExterQual 0
ExterCond 0
Foundation 0
BsmtQual 0
BsmtCond 0
BsmtExposure 0
BsmtFinType1 0
BsmtFinSF1 0
BsmtFinType2 0
dtype: int64
```

# QUESTION\_3.py

```
PS C:\Users\rajashekarreddy\Downloads\cognizance> python -i
the words with atleast 6 letters :
Python
almost
analysis
Python
Pandas
Matplotlib
Most frequently used word is : Python
frequency : 4
```