In [1]:
```python
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

In [2]:
```python
df = pd.read_csv('Job_Placement_Data.csv')
df
```

Out[2]:

	gender	ssc_percentage	ssc_board	hsc_percentage	hsc_board	hsc_subject	degree_percentage	undergrad_degree	work_experience	emp_test_percentage	specialisation	mba_percent	status
0	M	67.00	Others	91.00	Others	Commerce	58.00	Sci&Tech	No	55.0	Mkt&HR	58.80	Placed
1	M	79.33	Central	78.33	Others	Science	77.48	Sci&Tech	Yes	86.5	Mkt&Fin	66.28	Placed
2	M	65.00	Central	68.00	Central	Arts	64.00	Comm&Mgmt	No	75.0	Mkt&Fin	57.80	Placed
3	M	56.00	Central	52.00	Central	Science	52.00	Sci&Tech	No	66.0	Mkt&HR	59.43	Not Placed
4	M	85.80	Central	73.60	Central	Commerce	73.30	Comm&Mgmt	No	96.8	Mkt&Fin	55.50	Placed
...	...	...	...	...	...	...	...	...	...	...	...	...	...
210	M	80.60	Others	82.00	Others	Commerce	77.60	Comm&Mgmt	No	91.0	Mkt&Fin	74.49	Placed
211	M	58.00	Others	60.00	Others	Science	72.00	Sci&Tech	No	74.0	Mkt&Fin	53.62	Placed
212	M	67.00	Others	67.00	Others	Commerce	73.00	Comm&Mgmt	Yes	59.0	Mkt&Fin	69.72	Placed
213	F	74.00	Others	66.00	Others	Commerce	58.00	Comm&Mgmt	No	70.0	Mkt&HR	60.23	Placed
214	M	62.00	Central	58.00	Others	Science	53.00	Comm&Mgmt	No	89.0	Mkt&HR	60.22	Not Placed

215 rows × 13 columns

In [3]:
```python
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 215 entries, 0 to 214
Data columns (total 13 columns):
 #   Column               Non-Null Count  Dtype  
---  ------               --------------  -----  
 0   gender               215 non-null    object 
 1   ssc_percentage       215 non-null    float64
 2   ssc_board            215 non-null    object 
 3   hsc_percentage       215 non-null    float64
 4   hsc_board            215 non-null    object 
 5   hsc_subject          215 non-null    object 
 6   degree_percentage    215 non-null    float64
 7   undergrad_degree     215 non-null    object 
 8   work_experience      215 non-null    object 
 9   emp_test_percentage  215 non-null    float64
 10  specialisation       215 non-null    object 
 11  mba_percent          215 non-null    float64
 12  status               215 non-null    object 
dtypes: float64(5), object(8)
memory usage: 22.0+ KB
```

In [4]:
```python
df.describe()
```

Out[4]:

	ssc_percentage	hsc_percentage	degree_percentage	emp_test_percentage	mba_percent
count	215.000000	215.000000	215.000000	215.000000	215.000000
mean	67.303395	66.333163	66.370186	72.100558	62.278186
std	10.827205	10.897509	7.358743	13.275956	5.833385
min	40.890000	37.000000	50.000000	50.000000	51.210000
25%	60.600000	60.900000	61.000000	60.000000	57.945000
50%	67.000000	65.000000	66.000000	71.000000	62.000000
75%	75.700000	73.000000	72.000000	83.500000	66.255000
max	89.400000	97.700000	91.000000	98.000000	77.890000

In [5]:
```python
# calculate rows and columns
df.shape
```

Out[5]:
```
(215, 13)
```

In [6]:
```python
# to calculate top 5 entries
df.head()
```

Out[6]:

	gender	ssc_percentage	ssc_board	hsc_percentage	hsc_board	hsc_subject	degree_percentage	undergrad_degree	work_experience	emp_test_percentage	specialisation	mba_percent	status
0	M	67.00	Others	91.00	Others	Commerce	58.00	Sci&Tech	No	55.0	Mkt&HR	58.80	Placed
1	M	79.33	Central	78.33	Others	Science	77.48	Sci&Tech	Yes	86.5	Mkt&Fin	66.28	Placed
2	M	65.00	Central	68.00	Central	Arts	64.00	Comm&Mgmt	No	75.0	Mkt&Fin	57.80	Placed
3	M	56.00	Central	52.00	Central	Science	52.00	Sci&Tech	No	66.0	Mkt&HR	59.43	Not Placed
4	M	85.80	Central	73.60	Central	Commerce	73.30	Comm&Mgmt	No	96.8	Mkt&Fin	55.50	Placed

In [7]:
```python
# To calulate bottom 5 entries
df.tail()
```

Out[7]:

	gender	ssc_percentage	ssc_board	hsc_percentage	hsc_board	hsc_subject	degree_percentage	undergrad_degree	work_experience	emp_test_percentage	specialisation	mba_percent	status
210	M	80.6	Others	82.0	Others	Commerce	77.6	Comm&Mgmt	No	91.0	Mkt&Fin	74.49	Placed
211	M	58.0	Others	60.0	Others	Science	72.0	Sci&Tech	No	74.0	Mkt&Fin	53.62	Placed
212	M	67.0	Others	67.0	Others	Commerce	73.0	Comm&Mgmt	Yes	59.0	Mkt&Fin	69.72	Placed
213	F	74.0	Others	66.0	Others	Commerce	58.0	Comm&Mgmt	No	70.0	Mkt&HR	60.23	Placed
214	M	62.0	Central	58.0	Others	Science	53.0	Comm&Mgmt	No	89.0	Mkt&HR	60.22	Not Placed

In above data we have 215 candidates job placement details

In [8]:
```python
# To find missing data from dataset
df.isna().sum()
```

Out[8]:
```
gender                 0
ssc_percentage         0
ssc_board              0
hsc_percentage         0
hsc_board              0
hsc_subject            0
degree_percentage      0
undergrad_degree       0
work_experience        0
emp_test_percentage    0
specialisation         0
mba_percent            0
status                 0
dtype: int64
```

In [9]:
```python
# how many Male and Female candidate
df['gender'].value_counts()
```

Out[9]:
```
M    139
F     76
Name: gender, dtype: int64
```

Above data have 139 male candidate and 76 female candidate

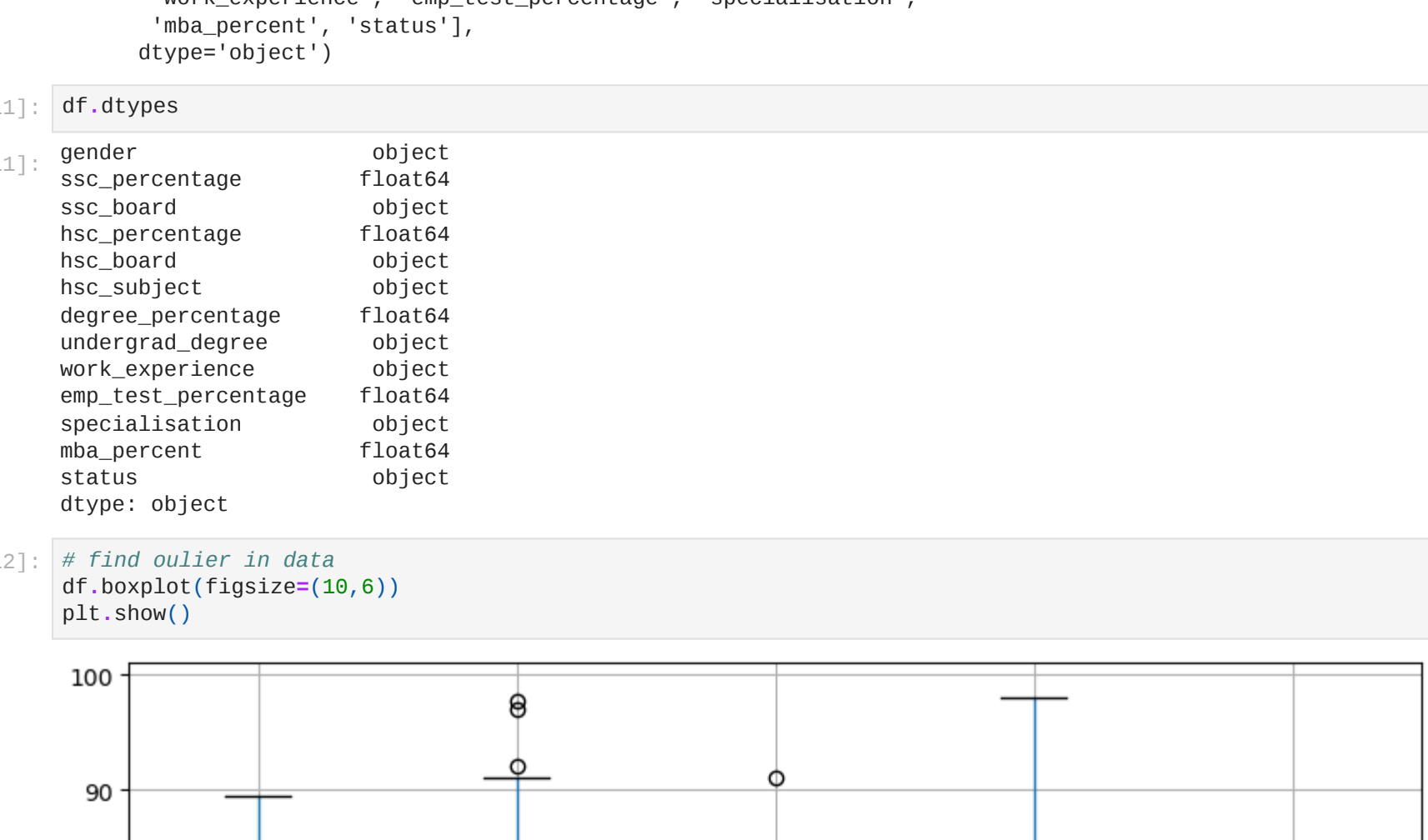
In [10]:
```python
# columns details
df.columns
```

Out[10]:
```
Index(['gender', 'ssc_percentage', 'ssc_board', 'hsc_percentage', 'hsc_board',
       'hsc_subject', 'degree_percentage', 'undergrad_degree',
       'work_experience', 'emp_test_percentage', 'specialisation',
       'mba_percent', 'status'],
      dtype='object')
```

In [11]:
```python
df.dtypes
```

Out[11]:
```
gender                  object
ssc_percentage         float64
ssc_board               object
hsc_percentage         float64
hsc_board               object
hsc_subject             object
degree_percentage      float64
undergrad_degree        object
work_experience         object
emp_test_percentage    float64
specialisation          object
mba_percent            float64
status                  object
dtype: object
```

In [12]:
```python
# find oulier in data
df.boxplot(figsize=(10,6))
plt.show()
```



Above boxplot shows outlier in hsc_percantage and degree percantage

In [13]:
```python
a = df[df.hsc_percentage >85.0]
a
```

Out[13]:

	gender	ssc_percentage	ssc_board	hsc_percentage	hsc_board	hsc_subject	degree_percentage	undergrad_degree	work_experience	emp_test_percentage	specialisation	mba_percent	status
0	M	67.00	Others	91.00	Others	Commerce	58.00	Sci&Tech	No	55.00	Mkt&HR	58.80	Placed
13	F	77.00	Central	87.00	Central	Commerce	59.00	Comm&Mgmt	No	68.00	Mkt&Fin	68.63	Placed
24	M	76.50	Others	97.70	Others	Science	78.86	Sci&Tech	No	97.40	Mkt&Fin	74.01	Placed
43	M	87.00	Others	87.00	Others	Commerce	68.00	Comm&Mgmt	No	95.00	Mkt&HR	62.90	Placed
78	M	84.00	Others	90.90	Others	Science	64.50	Sci&Tech	No	86.04	Mkt&Fin	59.42	Placed
85	F	83.84	Others	89.83	Others	Commerce	77.20	Comm&Mgmt	Yes	78.74	Mkt&Fin	76.18	Placed
90	F	85.00	Others	90.00	Others	Commerce	82.00	Comm&Mgmt	No	92.00	Mkt&Fin	68.03	Placed
107	M	82.00	Others	90.00	Others	Commerce	83.00	Comm&Mgmt	No	80.00	Mkt&HR	73.52	Placed
129	M	76.70	Central	89.70	Others	Commerce	66.00	Comm&Mgmt	Yes	90.00	Mkt&Fin	68.55	Placed
134	F	77.44	Central	92.00	Others	Commerce	72.00	Comm&Mgmt	Yes	94.00	Mkt&Fin	67.13	Placed
148	F	77.00	Central	86.00	Central	Arts	56.00	Others	No	57.00	Mkt&Fin	64.08	Placed
162	M	74.20	Central	87.60	Others	Commerce	77.25	Comm&Mgmt	Yes	75.20	Mkt&Fin	66.06	Placed
177	F	73.00	Central	97.00	Others	Commerce	79.00	Comm&Mgmt	Yes	89.00	Mkt&Fin	70.81	Placed

In [14]:
```python
# change value of outlier
median=df['hsc_percentage'].median()
median
```

Out[14]:
```
65.0
```

In [15]:
```python
df.loc[df.hsc_percentage>90,'hsc_percentage']= np.nan
```

In [16]:
```python
df.fillna(median,inplace=True)
```

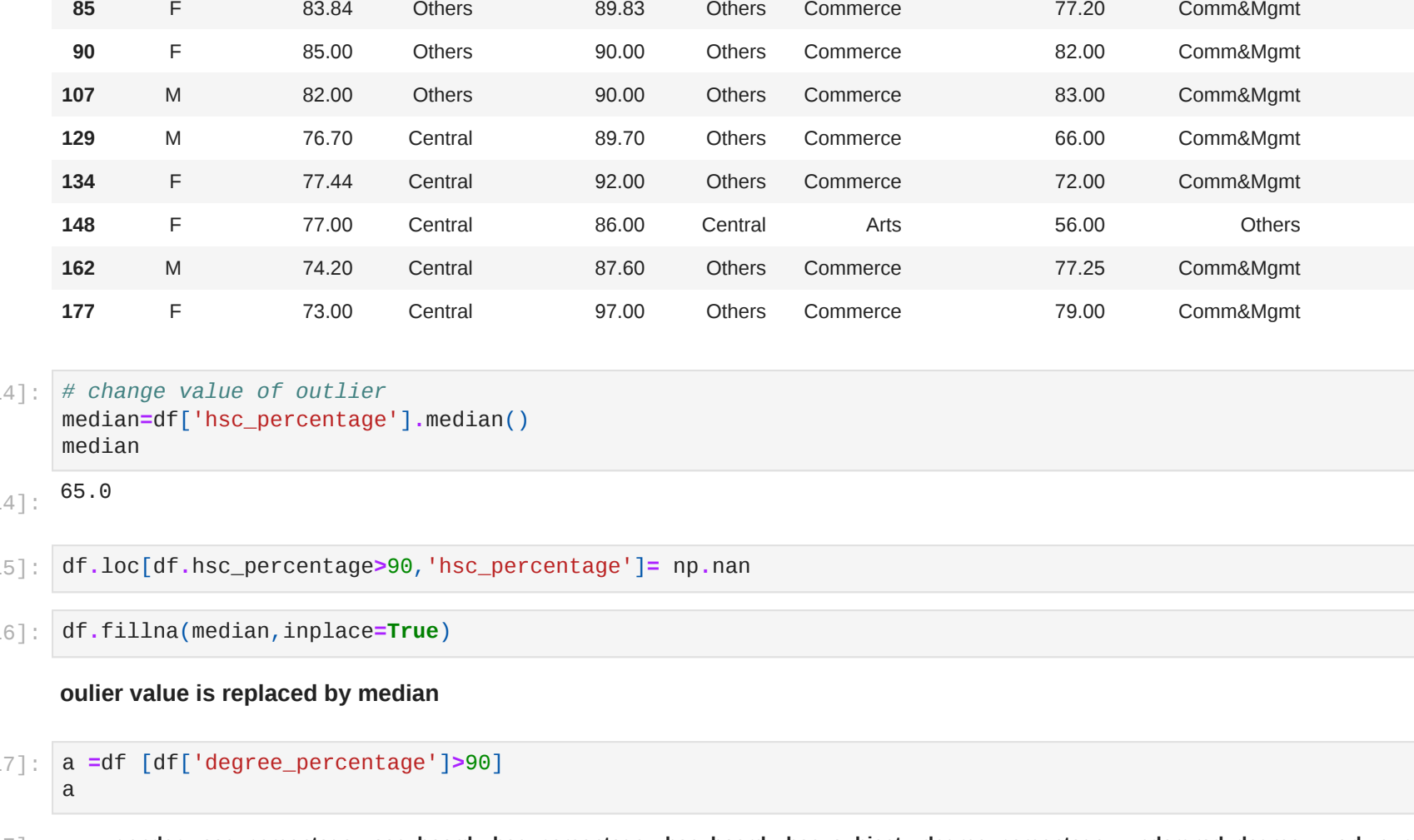
oulier value is replaced by median

In [17]:
```python
a =df [df['degree_percentage']>90]
a
```

Out[17]:

	gender	ssc_percentage	ssc_board	hsc_percentage	hsc_board	hsc_subject	degree_percentage	undergrad_degree	work_experience	emp_test_percentage	specialisation	mba_percent	status
197	F	83.96	Others	53.0	Others	Science	91.0	Sci&Tech	No	59.32	Mkt&HR	69.71	Placed

In [18]:
```python
df.boxplot(figsize=(10,6))
plt.show()
```



NO more outlier present in data

In [21]:
```python
# how many male candidate placed
a = df.groupby(['gender','status']).get_group(('M','Placed'))
a
```

Out[21]:

	gender	ssc_percentage	ssc_board	hsc_percentage	hsc_board	hsc_subject	degree_percentage	undergrad_degree	work_experience	emp_test_percentage	specialisation	mba_percent	status
0	M	67.00	Others	65.00	Others	Commerce	58.00	Sci&Tech	No	55.00	Mkt&HR	58.80	Placed
1	M	79.33	Central	78.33	Others	Science	77.48	Sci&Tech	Yes	86.50	Mkt&Fin	66.28	Placed
2	M	65.00	Central	68.00	Central	Arts	64.00	Comm&Mgmt	No	75.00	Mkt&Fin	57.80	Placed
4	M	85.80	Central	73.60	Central	Commerce	73.30	Comm&Mgmt	No	96.80	Mkt&Fin	55.50	Placed
7	M	82.00	Central	64.00	Central	Science	66.00	Sci&Tech	Yes	67.00	Mkt&Fin	62.14	Placed
...	...	...	...	...	...	...	...	...	...	...	...	...	...
207	M	83.33	Central	78.00	Others	Commerce	61.00	Comm&Mgmt	Yes	88.56	Mkt&Fin	71.55	Placed
209	M	62.00	Central	72.00	Central	Commerce	65.00	Comm&Mgmt	No	67.00	Mkt&Fin	56.49	Placed
210	M	80.60	Others	82.00	Others	Commerce	77.60	Comm&Mgmt	No	91.00	Mkt&Fin	74.49	Placed
211	M	58.00	Others	60.00	Others	Science	72.00	Sci&Tech	No	74.00	Mkt&Fin	53.62	Placed
212	M	67.00	Others	67.00	Others	Commerce	73.00	Comm&Mgmt	Yes	59.00	Mkt&Fin	69.72	Placed

100 rows × 13 columns

In [22]:
```python
a.shape
```

Out[22]:
```
(100, 13)
```

100 Male candidates are placed out of 139

In [23]:
```python
df.nunique()
```

Out[23]:
```
gender                   2
ssc_percentage         103
ssc_board                2
hsc_percentage          92
hsc_board                2
hsc_subject              3
degree_percentage       89
undergrad_degree         3
work_experience          2
emp_test_percentage    100
specialisation           2
mba_percent            205
status                   2
dtype: int64
```

In [24]:
```python
# How many Female candudate placed
b = df.groupby(['gender','status']).get_group(('F','Placed'))
b
```

Out[24]:

	gender	ssc_percentage	ssc_board	hsc_percentage	hsc_board	hsc_subject	degree_percentage	undergrad_degree	work_experience	emp_test_percentage	specialisation	mba_percent	status
13	F	77.00	Central	87.00	Central	Commerce	59.00	Comm&Mgmt	No	68.00	Mkt&Fin	68.63	Placed
15	F	65.00	Central	75.00	Central	Commerce	69.00	Comm&Mgmt	Yes	72.00	Mkt&Fin	64.66	Placed
21	F	79.00	Others	76.00	Others	Commerce	85.00	Comm&Mgmt	No	95.00	Mkt&Fin	69.06	Placed
22	F	69.80	Others	60.80	Others	Science	72.23	Sci&Tech	No	55.53	Mkt&HR	68.81	Placed
23	F	77.40	Others	60.00	Others	Science	64.74	Sci&Tech	Yes	92.00	Mkt&Fin	63.62	Placed
30	F	64.00	Central	73.50	Central	Commerce	73.00	Comm&Mgmt	No	52.00	Mkt&HR	56.70	Placed
32	F	61.00	Central	81.00	Central	Commerce	66.40	Comm&Mgmt	No	50.89	Mkt&HR	62.21	Placed
33	F	87.00	Others	65.00	Others	Science	81.00	Comm&Mgmt	Yes	88.00	Mkt&Fin	72.78	Placed
35	F	69.00	Central	78.00	Central	Commerce	72.00	Comm&Mgmt	No	71.00	Mkt&HR	62.74	Placed
37	F	79.00	Central	76.00	Central	Science	65.60	Sci&Tech	No	58.00	Mkt&HR	55.47	Placed
38	F	73.00	Others	58.00	Others	Science	66.00	Comm&Mgmt	No	53.70	Mkt&HR	56.86	Placed
40	F	78.00	Central	77.00	Others	Commerce	80.00	Comm&Mgmt	No	60.00	Mkt&Fin	66.72	Placed
44	F	77.00	Others	73.00	Others	Commerce	81.00	Comm&Mgmt	Yes	89.00	Mkt&Fin	69.70	Placed
50	F	75.20	Central	73.20	Central	Science	68.40	Comm&Mgmt	No	65.00	Mkt&HR	62.98	Placed
54	F	74.00	Central	60.00	Others	Science	69.00	Comm&Mgmt	No	78.00	Mkt&HR	65.56	Placed
62	F	86.50	Others	64.20	Others	Science	67.40	Sci&Tech	No	59.00	Mkt&Fin	59.69	Placed
76	F	66.50	Others	70.40	Central	Arts	71.93	Comm&Mgmt	No	61.00	Mkt&Fin	64.27	Placed
80	F	69.00	Others	62.00	Others	Commerce	69.00	Comm&Mgmt	Yes	67.00	Mkt&HR	62.35	Placed
85	F	83.84	Others	89.83	Others	Commerce	77.20	Comm&Mgmt	Yes	78.74	Mkt&Fin	76.18	Placed
88	F	66.00	Central	62.00	Central	Commerce	73.00	Comm&Mgmt	No	58.00	Mkt&HR	64.36	Placed
89	F	84.00	Others	75.00	Others	Science	69.00	Sci&Tech	Yes	62.00	Mkt&HR	62.36	Placed
90	F	85.00	Others	90.00	Others	Commerce	82.00	Comm&Mgmt	No	92.00	Mkt&Fin	68.03	Placed
92	F	60.23	Central	69.00	Central	Science	66.00	Comm&Mgmt	No	72.00	Mkt&Fin	59.47	Placed
96	F	76.00	Central	70.00	Central	Science	76.00	Comm&Mgmt	Yes	66.00	Mkt&Fin	64.44	Placed
98	F	69.00	Central	73.00	Central	Commerce	65.00	Comm&Mgmt	No	70.00	Mkt&Fin	57.31	Placed
102	F	77.00	Others	61.00	Others	Commerce	68.00	Comm&Mgmt	Yes	57.50	Mkt&Fin	61.31	Placed
110	F	69.50	Central	70.00	Central	Science	72.00	Sci&Tech	No	57.20	Mkt&HR	54.80	Placed
113	F	73.96	Others	79.00	Others	Commerce	67.00	Comm&Mgmt	No	72.15	Mkt&Fin	63.08	Placed
115	F	73.00	Others	63.00	Others	Science	66.00	Comm&Mgmt	No	89.00	Mkt&Fin	60.50	Placed
121	F	64.00	Central	67.00	Others	Science	69.60	Sci&Tech	Yes	55.67	Mkt&HR	71.49	Placed
122	F	66.50	Central	66.80	Central	Arts	69.30	Comm&Mgmt	Yes	80.40	Mkt&Fin	71.00	Placed
125	F	84.00	Central	73.00	Central	Commerce	73.00	Comm&Mgmt	No	75.00	Mkt&Fin	73.33	Placed
126	F	79.00	Others	61.00	Others	Science	75.50	Sci&Tech	Yes	70.00	Mkt&Fin	68.20	Placed
127	F	72.00	Others	60.00	Others	Science	69.00	Comm&Mgmt	No	55.50	Mkt&HR	58.40	Placed
131	F	74.90	Others	57.00	Others	Science	62.00	Others	Yes	80.00	Mkt&Fin	60.78	Placed
134	F	77.44	Central	65.00	Others	Commerce	72.00	Comm&Mgmt	Yes	94.00	Mkt&Fin	67.13	Placed
135	F	72.00	Central	56.00	Others	Science	69.00	Comm&Mgmt	No	55.60	Mkt&HR	65.63	Placed
138	F	82.00	Others	64.00	Others	Science	73.00	Sci&Tech	Yes	96.00	Mkt&Fin	71.77	Placed
148	F	77.00	Central	86.00	Central	Arts	56.00	Others	No	57.00	Mkt&Fin	64.08	Placed
152	F	75.40	Others	60.50	Central	Science	84.00	Sci&Tech	No	98.00	Mkt&Fin	65.25	Placed
164	F	67.16	Central	72.50	Central	Commerce	63.35	Comm&Mgmt	No	53.04	Mkt&HR	65.52	Placed
176	F	59.00	Central	60.00	Others	Commerce	56.00	Comm&Mgmt	No	55.00	Mkt&HR	57.90	Placed
177	F	73.00	Central	65.00	Others	Commerce	79.00	Comm&Mgmt	Yes	89.00	Mkt&Fin	70.81	Placed
185	F	88.00	Central	72.00	Central	Science	78.00	Others	No	82.00	Mkt&HR	71.43	Placed
193	F	60.00	Central	63.00	Central	Arts	56.00	Others	Yes	80.00	Mkt&HR	56.63	Placed
197	F	83.96	Others	53.00	Others	Science	91.00	Sci&Tech	No	59.32	Mkt&HR	69.71	Placed
204	F	74.00	Others	73.00	Others	Commerce	73.00	Comm&Mgmt	No	80.00	Mkt&Fin	67.69	Placed
213	F	74.00	Others	66.00	Others	Commerce	58.00	Comm&Mgmt	No	70.00	Mkt&HR	60.23	Placed

In [25]:
```python
b.shape
```

Out[25]:
```
(48, 13)
```

48 Female candidates are placed out of 73

39 Male candidates and 25 Female candidates are not placed

In [27]:
```python
# How many male candidate placed have work experiance.
c = df.groupby(['gender','work_experience']).get_group(('M','Yes'))
c
```

Out[27]:

	gender	ssc_percentage	ssc_board	hsc_percentage	hsc_board	hsc_subject	degree_percentage	undergrad_degree	work_experience	emp_test_percentage	specialisation	mba_percent	status
1	M	79.33	Central	78.33	Others	Science	77.48	Sci&Tech	Yes	86.50	Mkt&Fin	66.28	Placed
5	M	55.00	Others	49.80	Others	Science	67.25	Sci&Tech	Yes	55.00	Mkt&Fin	51.58	Not Placed
7	M	82.00	Central	64.00	Central	Science	66.00	Sci&Tech	Yes	67.00	Mkt&Fin	62.14	Placed
10	M	58.00	Central	61.00	Central	Commerce	60.00	Comm&Mgmt	Yes	62.00	Mkt&HR	60.85	Placed
11	M	69.60	Central	68.40	Central	Commerce	78.30	Sci&Tech	Yes	60.00	Mkt&Fin	63.70	Placed
16	M	63.00	Central	66.20	Central	Commerce	65.60	Comm&Mgmt	Yes	60.00	Mkt&Fin	62.54	Placed
19	M	60.00	Others	67.00	Others	Arts	70.00	Comm&Mgmt	Yes	50.48	Mkt&Fin	77.89	Placed
26	M	71.00	Others	79.00	Others	Commerce	66.00	Comm&Mgmt	Yes	94.00	Mkt&Fin	57.55	Placed
28	M	76.76	Others	76.50	Others	Commerce	67.50	Comm&Mgmt	Yes	73.35	Mkt&Fin	64.15	Placed
47	M	63.00	Central	60.00	Central	Commerce	57.00	Comm&Mgmt	Yes	78.00	Mkt&Fin	54.55	Placed
60	M	74.00	Central	70.00	Central	Science	72.00	Comm&Mgmt	Yes	60.00	Mkt&Fin	57.24	Placed
69	M	73.00	Central	73.00	Central	Science	66.00	Sci&Tech	Yes	70.00	Mkt&Fin	68.07	Placed
77	M	64.00	Others	80.00	Others	Science	65.00	Sci&Tech	Yes	69.00	Mkt&Fin	57.65	Placed
81	M	81.70	Others	63.00	Others	Science	67.00	Comm&Mgmt	Yes	86.00	Mkt&Fin	70.20	Placed
83	M	84.00	Others	79.00	Others	Science	68.00	Sci&Tech	Yes	84.00	Mkt&Fin	66.69	Placed
84	M	70.00	Central	63.00	Others	Science	70.00	Sci&Tech	Yes	55.00	Mkt&Fin	62.00	Placed
95	M	73.00	Central	78.00	Others	Commerce	65.00	Sci&Tech	Yes	95.46	Mkt&Fin	62.16	Placed
103	M	73.00	Central	78.00	Central	Science	73.00	Sci&Tech	Yes	85.00	Mkt&HR	65.83	Placed
104	M	69.00	Central	63.00	Others	Science	65.00	Comm&Mgmt	Yes	55.00	Mkt&HR	58.23	Placed
109	M	52.00	Central	63.00	Others	Science	65.00	Sci&Tech	Yes	86.00	Mkt&HR	56.09	Not Placed
116	M	68.20	Central	72.80	Central	Commerce	66.60	Comm&Mgmt	Yes	96.00	Mkt&Fin	70.85	Placed
118	M	76.00	Central	80.00	Central	Science	78.00	Sci&Tech	Yes	97.00	Mkt&HR	70.48	Placed
119	M	60.80	Central	68.40	Central	Commerce	64.60	Comm&Mgmt	Yes	82.66	Mkt&Fin	64.34	Placed
123	M	74.00	Others	59.00	Others	Commerce	73.00	Comm&Mgmt	Yes	60.00	Mkt&HR	56.70	Placed
124	M	67.00	Central	71.00	Central	Science	64.33	Others	Yes	64.00	Mkt&HR	61.26	Placed
128	M	80.40	Central	73.40	Central	Science	77.72	Sci&Tech	Yes	81.20	Mkt&HR	76.26	Placed
129	M	76.70	Central	89.70	Others	Commerce	66.00	Comm&Mgmt	Yes	90.00	Mkt&Fin	68.55	Placed
132	M	67.00	Others	68.00	Others	Commerce	64.00	Comm&Mgmt	Yes	74.40	Mkt&HR	53.49	Placed
133	M	73.00	Central	64.00	Central	Commerce	77.00	Comm&Mgmt	Yes	65.00	Mkt&HR	60.98	Placed
139	M	77.00	Central	70.00	Central	Commerce	59.00	Comm&Mgmt	Yes	58.00	Mkt&Fin	54.43	Placed
140	M	65.00	Central	64.80	Others	Commerce	69.50	Comm&Mgmt	Yes	56.00	Mkt&Fin	56.94	Placed
142	M	85.00	Central	60.00	Others	Science	73.43	Sci&Tech	Yes	60.00	Mkt&Fin	61.29	Placed
149	M	44.00	Central	58.00	Central	Arts	55.00	Comm&Mgmt	Yes	64.25	Mkt&HR	58.54	Not Placed
150	M	71.00	Central	58.66	Central	Science	58.00	Sci&Tech	Yes	56.00	Mkt&Fin	61.30	Placed
153	M	49.00	Others	59.00	Others	Science	65.00	Sci&Tech	Yes	86.00	Mkt&Fin	62.48	Placed
154	M	53.00	Central	63.00	Others	Science	60.00	Comm&Mgmt	Yes	70.00	Mkt&Fin	53.20	Placed
155	M	51.57	Others	74.66	Others	Commerce	59.90	Comm&Mgmt	Yes	56.15	Mkt&HR	65.99	Not Placed
156	M	84.20	Central	69.40	Central	Science	65.00	Sci&Tech	Yes	80.00	Mkt&HR	52.72	Placed
160	M	87.00	Central	74.00	Central	Science	65.00	Sci&Tech	Yes	75.00	Mkt&HR	72.29	Placed
162	M	74.20	Central	87.60	Others	Commerce	77.25	Comm&Mgmt	Yes	75.20	Mkt&Fin	66.06	Placed
166	M	62.00	Others	62.00	Others	Commerce	60.00	Comm&Mgmt	Yes	63.00	Mkt&HR	52.38	Placed
167	M	67.90	Others	62.00	Others	Science	67.00	Sci&Tech	Yes	58.10	Mkt&Fin	75.71	Not Placed
171	M	80.00	Others	80.00	Others	Commerce	72.00	Comm&Mgmt	Yes	63.79	Mkt&Fin	66.04	Placed
174	M	73.24	Others	50.83	Others	Science	64.27	Sci&Tech	Yes	64.00	Mkt&Fin	66.23	Placed
180	M	65.00	Central	71.50	Others	Commerce	62.80	Comm&Mgmt	Yes	57.00	Mkt&Fin	56.60	Placed
182	M	52.00	Central	65.00	Others	Arts	57.00	Others	Yes	75.00	Mkt&Fin	59.81	Not Placed
187	M	78.50	Central	65.50	Central	Science	67.00	Sci&Tech	Yes	95.00	Mkt&Fin	64.86	Placed
192	M	65.20	Central	61.40	Central	Commerce	64.80	Comm&Mgmt	Yes	93.40	Mkt&Fin	57.34	Placed
195	M	66.00	Central	76.00	Central	Commerce	72.00	Comm&Mgmt	Yes	84.00	Mkt&HR	58.95	Placed
196	M	72.00	Others	63.00	Others	Science	77.50	Sci&Tech	Yes	78.00	Mkt&Fin	54.48	Placed
207	M	83.33	Central	78.00	Others	Commerce	61.00	Comm&Mgmt	Yes	88.56	Mkt&Fin	71.55	Placed
212	M	67.00	Others	67.00	Others	Commerce	73.00	Comm&Mgmt	Yes	59.00	Mkt&Fin	69.72	Placed

In [28]:
```python
c.shape
```

Out[28]:
```
(52, 13)
```

only 52 candidates having work experince out of 100 placed candidates

In [29]:
```python
# How many Female candidate placed have work experiance
d = df.groupby(['gender','work_experience']).get_group(('F','Yes'))
d
```

Out[29]:

	gender	ssc_percentage	ssc_board	hsc_percentage	hsc_board	hsc_subject	degree_percentage	undergrad_degree	work_experience	emp_test_percentage	specialisation	mba_percent	status
15	F	65.00	Central	75.00	Central	Commerce	69.00	Comm&Mgmt	Yes	72.00	Mkt&Fin	64.66	Placed
23	F	77.40	Others	60.00	Others	Science	64.74	Sci&Tech	Yes	92.00	Mkt&Fin	63.62	Placed
25	F	52.58	Others	54.60	Central	Commerce	50.20	Comm&Mgmt	Yes	76.00	Mkt&Fin	65.33	Not Placed
33	F	87.00	Others	65.00	Others	Science	81.00	Comm&Mgmt	Yes	88.00	Mkt&Fin	72.78	Placed
41	F	74.00	Others	63.16	Others	Commerce	65.00	Comm&Mgmt	Yes	65.00	Mkt&HR	69.76	Not Placed
44	F	77.00	Others	73.00	Others	Commerce	81.00	Comm&Mgmt	Yes	89.00	Mkt&Fin	69.70	Placed
80	F	69.00	Others	62.00	Others	Commerce	69.00	Comm&Mgmt	Yes	67.00	Mkt&HR	62.35	Placed
85	F	83.84	Others	89.83	Others	Commerce	77.20	Comm&Mgmt	Yes	78.74	Mkt&Fin	76.18	Placed
89	F	84.00	Others	75.00	Others	Science	69.00	Sci&Tech	Yes	62.00	Mkt&HR	62.36	Placed
96	F	76.00	Central	70.00	Central	Science	76.00	Comm&Mgmt	Yes	66.00	Mkt&Fin	64.44	Placed
100	F	45.00	Others	57.00	Others	Commerce	58.00	Comm&Mgmt	Yes	56.39	Mkt&HR	64.95	Not Placed
102	F	77.00	Others	61.00	Others	Commerce	68.00	Comm&Mgmt	Yes	57.50	Mkt&Fin	61.31	Placed
121	F	64.00	Central	67.00	Others	Science	69.60	Sci&Tech	Yes	55.67	Mkt&HR	71.49	Placed
122	F	66.50	Central	66.80	Central	Arts	69.30	Comm&Mgmt	Yes	80.40	Mkt&Fin	71.00	Placed
126	F	79.00	Others	61.00	Others	Science	75.50	Sci&Tech	Yes	70.00	Mkt&Fin	68.20	Placed
131	F	74.90	Others	57.00	Others	Science	62.00	Others	Yes	80.00	Mkt&Fin	60.78	Placed
134	F	77.44	Central	65.00	Others	Commerce	72.00	Comm&Mgmt	Yes	94.00	Mkt&Fin	67.13	Placed
138	F	82.00	Others	64.00	Others	Science	73.00	Sci&Tech	Yes	96.00	Mkt&Fin	71.77	Placed
168	F	48.00	Central	51.00	Central	Commerce	58.00	Comm&Mgmt	Yes	60.00	Mkt&HR	58.79	Not Placed
177	F	73.00	Central	65.00	Others	Commerce	79.00	Comm&Mgmt	Yes	89.00	Mkt&Fin	70.81	Placed
193	F	60.00	Central	63.00	Central	Arts	56.00	Others	Yes	80.00	Mkt&HR	56.63	Placed
204	F	74.00	Others	73.00	Others	Commerce	73.00	Comm&Mgmt	Yes	80.00	Mkt&Fin	67.69	Placed

In [30]:
```python
d.shape
```

Out[30]:
```
(22, 13)
```

only 22 Female are experienced out of 48 placed female candidate

26 Female and 48 Male candidates are Fresher

In [31]:
```python
# how many candidate are placed
e = df.groupby(['status']).get_group(('Placed'))
e
```

Out[31]:

	gender	ssc_percentage	ssc_board	hsc_percentage	hsc_board	hsc_subject	degree_percentage	undergrad_degree	work_experience	emp_test_percentage	specialisation	mba_percent	status
0	M	67.00	Others	65.00	Others	Commerce	58.00	Sci&Tech	No	55.0	Mkt&HR	58.80	Placed
1	M	79.33	Central	78.33	Others	Science	77.48	Sci&Tech	Yes	86.5	Mkt&Fin	66.28	Placed
2	M	65.00	Central	68.00	Central	Arts	64.00	Comm&Mgmt	No	75.0	Mkt&Fin	57.80	Placed
4	M	85.80	Central	73.60	Central	Commerce	73.30	Comm&Mgmt	No	96.8	Mkt&Fin	55.50	Placed
7	M	82.00	Central	64.00	Central	Science	66.00	Sci&Tech	Yes	67.0	Mkt&Fin	62.14	Placed
...	...	...	...	...	...	...	...	...	...	...	...	...	...
209	M	62.00	Central	72.00	Central	Commerce	65.00	Comm&Mgmt	No	67.0	Mkt&Fin	56.49	Placed
210	M	80.60	Others	82.00	Others	Commerce	77.60	Comm&Mgmt	No	91.0	Mkt&Fin	74.49	Placed
211	M	58.00	Others	60.00	Others	Science	72.00	Sci&Tech	No	74.0	Mkt&Fin	53.62	Placed
212	M	67.00	Others	67.00	Others	Commerce	73.00	Comm&Mgmt	Yes	59.0	Mkt&Fin	69.72	Placed
213	F	74.00	Others	66.00	Others	Commerce	58.00	Comm&Mgmt	No	70.0	Mkt&HR	60.23	Placed

148 rows × 13 columns

In [32]:
```python
e.shape
```

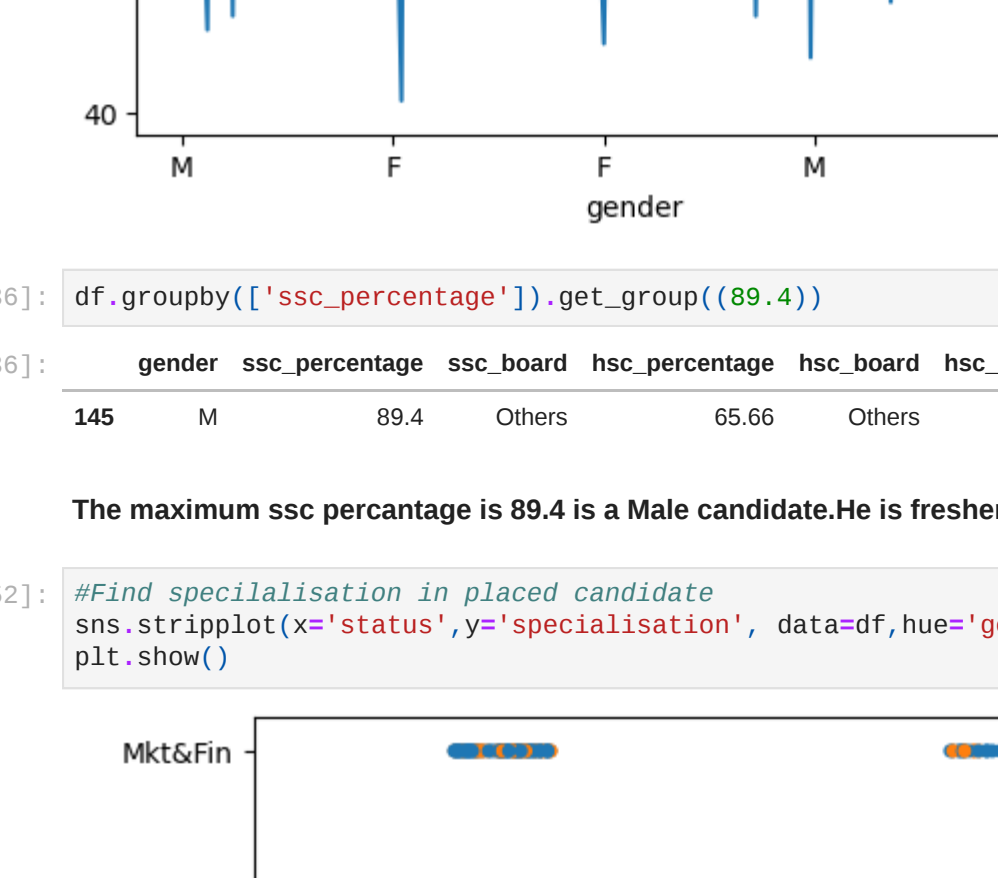
Out[32]:
```
(148, 13)
```

Total 74 freshers and 74 experinced candidate out of 148 placed candidate

In [34]:
```python
# calculate max ssc percantage
a =df['ssc_percentage'].max()
a
```

Out[34]:
```
89.4
```

In [35]:
```python
df.plot(x='gender',y='ssc_percentage')
plt.show()
```



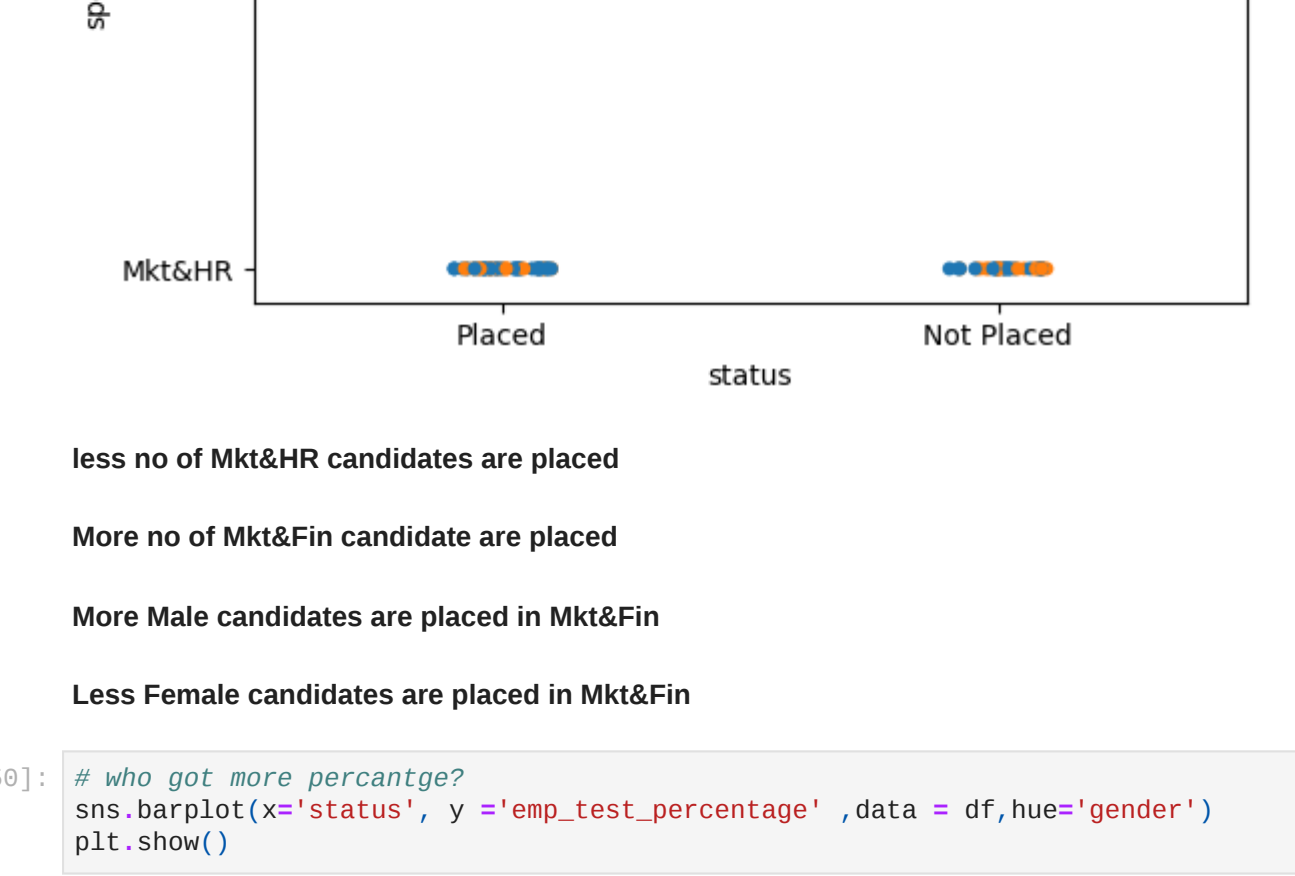
In [36]:
```python
df.groupby(['ssc_percentage']).get_group((89.4))
```

Out[36]:

	gender	ssc_percentage	ssc_board	hsc_percentage	hsc_board	hsc_subject	degree_percentage	undergrad_degree	work_experience	emp_test_percentage	specialisation	mba_percent	status
145	M	89.4	Others	65.66	Others	Science	71.25	Sci&Tech	No	72.0	Mkt&HR	63.23	Placed

The maximum ssc percentage is 89.4 is a Male candidate.He is fresher and placed candidate and specialisation in Mkt&HR

In [52]:
```python
#Find specilaisation in placed candidate
sns.stripplot(x='status',y='specialisation', data=df,hue='gender')
plt.show()
```



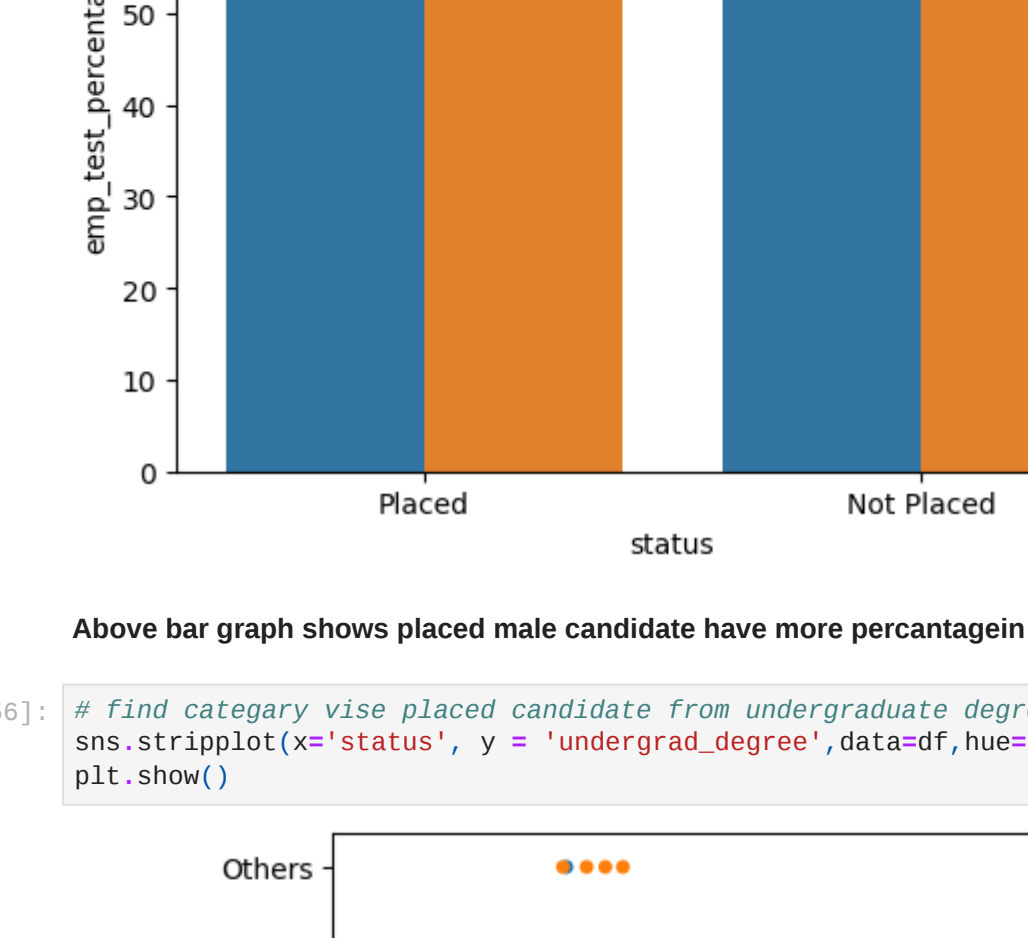
less no of Mkt&HR candidates are placed

More no of Mkt&Fin candidate are placed

More Male candidates are placed in Mkt&Fin

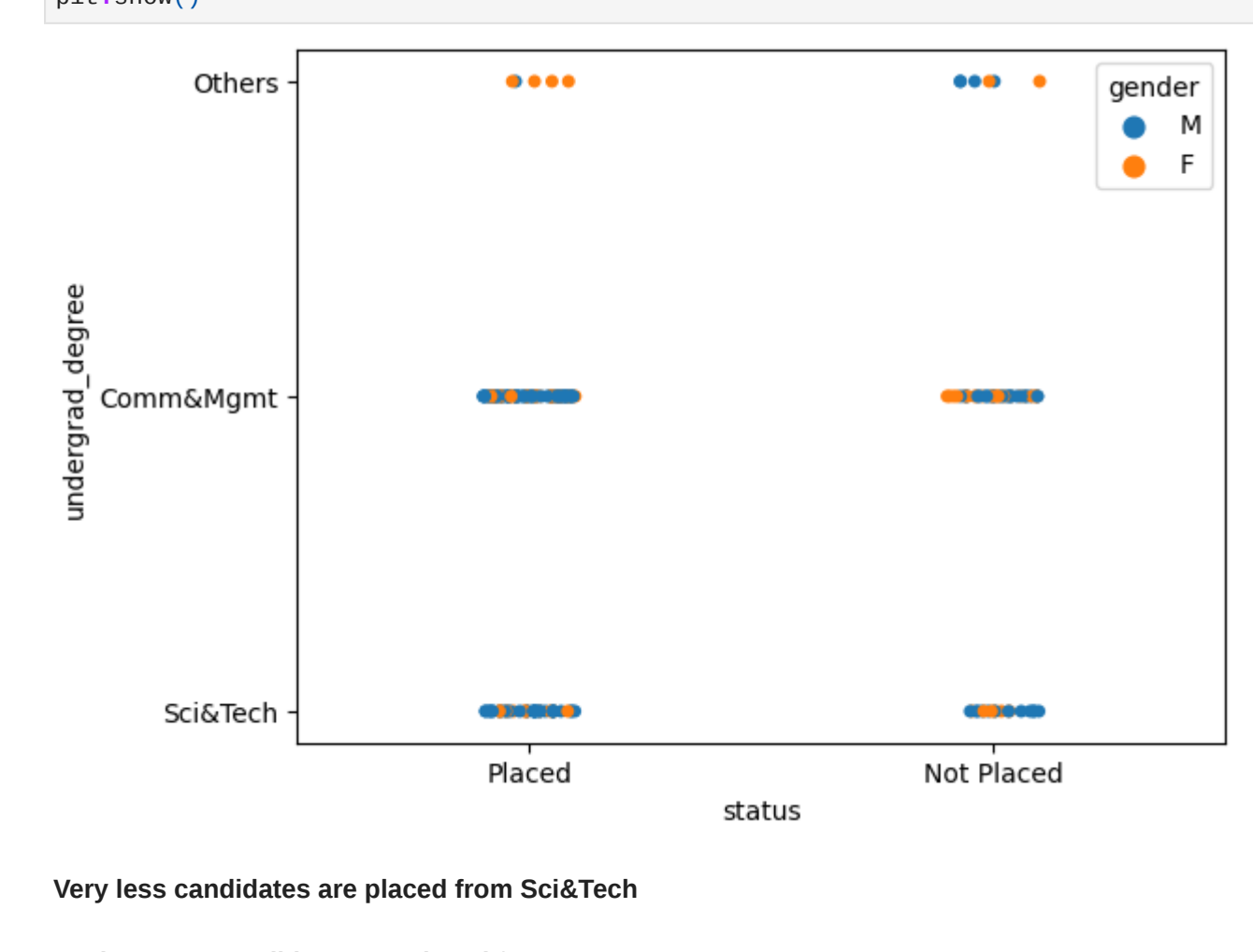
Less Female candidates are placed in Mkt&Fin

In [50]:
```python
# who got more percantge?
sns.barplot(x='status', y ='emp_test_percentage' ,data = df,hue='gender')
plt.show()
```



Above bar graph shows placed male candidate have more percantagein emp test

In [56]:
```python
# find category vise placed candidate from undergraduate degree
sns.stripplot(x='status', y = 'undergrad_degree',data=df,hue='gender')
plt.show()
```



Very less candidates are placed from Sci&Tech

Moderate no candidates are placed from comm&Mgmt

maximum no candidates are placed from other categary

maximum no of male candidates are placed from Sci&Tech and comm&Mgmt

less no of male candidates are placed from other categary

maximum no of Female candidates are placed from other categary

In [ ]: