```
In [1]:
          import numpy as np
          import pandas as pd
          import matplotlib.pyplot as plt
          %matplotlib inline
          import seaborn as sns
In [2]:
          df = pd.read csv('EDA Practice Dataset 2 Telemarketingtopic added1627027202s p1515805800.csv')
In [3]:
          df.head()
Out[3]:
            Call ID
                     Sale
                          Agent_ID Age Product_ID Timezone Phone_code First_Name Last_Name Area_Code Gender Call_Count
         0 9545434 False
                              5265
                                     42
                                               147
                                                           2
                                                                    37.0
                                                                                 Jk
                                                                                            Jk
                                                                                                     2302
                                                                                                             Male
                                                                                                                          1
                                                           2
                                                                                                                         10
         1 9211206 False
                              5226
                                     74
                                               146
                                                                    37.0
                                                                                Fm
                                                                                            Sh
                                                                                                     1501
                                                                                                             Male
         2 8873010 False
                              4452
                                     35
                                               144
                                                          2
                                                                    37.0
                                                                                 ВΙ
                                                                                            MI
                                                                                                     1550
                                                                                                             Male
                                                                                                                          9
           9852034 False
                              5461
                                     40
                                               149
                                                          2
                                                                    37.0
                                                                                WT
                                                                                            LI
                                                                                                     1401
                                                                                                             Male
                                                                                                                          6
                                                          2
                                                                                                                         12
         4 9416548 False
                              5298
                                     26
                                               147
                                                                    37.0
                                                                                ΙA
                                                                                            ΙΑ
                                                                                                      125 Female
          df.info()
```

```
In [4]:
```

<class 'pandas.core.frame.DataFrame'> RangeIndex: 100000 entries, 0 to 99999 Data columns (total 12 columns):

Column Non-Null Count Dtype 0 Call ID 100000 non-null int64 99968 non-null Sale object 1 2 Agent_ID 97685 non-null object 3 100000 non-null int64 Age 4 Product_ID 100000 non-null int64 Timezone 100000 non-null int64 6 Phone code 99972 non-null float64 First Name 99318 non-null object 8 Last Name 99319 non-null object Area Code 99540 non-null object 10 Gender 100000 non-null object 11 Call Count 100000 non-null int64 dtypes: float64(1), int64(5), object(6) memory usage: 9.2+ MB

In [5]: df.describe()

Out[5]: Call ID Age Product ID Timezone Phone code Call Count **count** 1.000000e+05 100000.000000 100000.000000 100000.000000 99972.0 100000.00000 mean 9.562981e+06 52.558530 147.216690 1.999420 37.0 3.26866 std 4 618927e+05 16 144553 2 182815 0.034054 0.0 2 96882 min 8.432514e+06 25.000000 142.000000 0.000000 37.0 1.00000 9.230592e+06 39.000000 146.000000 2.000000 37.0 1.00000 50% 9 527831e+06 53 000000 147 000000 2 000000 37.0 2 00000 9.919197e+06 66.000000 149.000000 2.000000 37.0 4.00000 max 1.047664e+07 80.000000 151.000000 2.000000 37.0 55.00000

```
In [6]:
         df.shape
```

Out[6]: (100000, 12)

```
In [7]:
           print(df['Sale'].unique())
           print(df['Agent ID'].unique())
           print(df['Phone_code'].unique())
print(df['First_Name'].unique())
           print(df['Last Name'].unique())
```

```
[False True nan]
          ['5265' '5226' '4452' '5461' '5298' '5139' '4828' '5292' '5044' '4912'
           '5230' '5002' '5053' '5312' '5214' '4926' '5425' '5077' '5357' '4722'
           '5076' '4994' '5051' '5472' '5296' '5207' '5386' '5209' '5208' '4866' nan
           '5297' '4995' '5313' '4958' '5073' '5028' '4804' '5341' '4876' '5382'
           '5405' '5146' '5181' '4702' '5272' '4894' '5065' '5403' '5459' '5424'
           '4971' '4677' '4748' '4899' '5266' '5035' '5460' '4968' '4865' '5252'
           '5399' '5061' '4706' '4955' '5220' '4956' '5216' '5032' '5406' '5224'
           '5462' '4121' '5271' '5407' '5206' '5001' '5005' '5287' '5396' '5464'
           '5294' '5052' '5423' '5421' '4827' '4483' '4709' '5384' '5416' '5089' '5429' '5428' '5245' '5401' '4970' '5366' '5381' '5367' '5302' '5368'
           '5106' '5495' '5393' '5062' '5143' '5055' '5268' '5042' '5210' '4867'
           '5286' '5470' '5310' '4888' '5218' '5467' '5404' '5455' '5471' '4734'
           '5342' '5205' '5267' '5221' '5327' '5398' '4539' '5417' '5420' '5466' '5374' '5441' '4893' '5400' '5299' '5150' '5114' '5246' '5088' '5397'
           '5295' '5426' '5219' 'QUEUE5065' '5457' '5358' '4959' '5356' '5270'
           '5264' '5515' '5369' '5275' '5365' '5064' '5273' '5254' '5293' '4966'
           'QUEUE5404' '5349' '5319' '5383' '5153' '5456' '5303' '5306' '5458'
           '4829' '5427' '5500' 'QUEUE5457' '5364' '5473' '5377' '5503' 'QUEUE5028'
           '5350' '4717' 'QUEUE5341' '4425' '5347' 'QUEUE5002' '5152' '5419' '5415'
           '5380' '5274' '5348' '5155' '5430' '5215' '5203' '5320' '5204' '5225
           '5351' '5502' '5354' 'QUEUE5456' '5217' '5370' '5373' '5340' '5494'
           '5385' '5179' '5463' '5234' '5322' '5518' '5211' '0UEUE4702' '0UEUE4748'
           '5256' '5344' '4992' '5516' '5321' 'QUEUE5181' 'QUEUE4968' '5355' '5376'
           'QUEUE4912' '5519' '5517' 'QUEUE5459' 'QUEUE5381' '4219' '5394' '5343'
           'QUEUE4804' '5269' '5501' '5123' 'QUEUE4971' '4304' '5063' 'QUEUE5405'
           '5390' 'QUEUE5472' '4033' 'QUEUE5386']
          [37. nan]
          ['Jk' 'Em' 'BI' ... 'Qw' 'Yz' 'XC']
['Jk' 'Sh' 'MI' ... 'Yz' 'h ' 'mR']
          ['2302' '1501' '1550' ... '5421' '4013' '3486']
 In [8]:
          print(df['Call_ID'].unique())
print(df['Age'].unique())
          print(df['Product ID'].unique())
          print(df['Timezone'].unique())
          print(df['Gender'].unique())
          print(df['Call_Count'].unique())
          [9545434 9211206 8873010 ... 9299394 9549720 9702206]
          [42 74 35 40 26 33 70 41 72 34 73 30 53 67 79 63 39 25 49 69 55 56 59 58
           43 68 45 62 29 47 46 65 38 54 27 64 71 57 50 48 78 60 32 31 66 36 76 77
           28 75 61 51 80 37 44 52]
          [147 146 144 149 150 151 145 143 148 142]
          [2 0]
          ['Male' 'Female' 'Others']
          [ 1 10 9 6 12 3 7 8 11 2 5 4 15 14 13 16 17 29 38 21 19 22 55]
 In [9]:
          df.isnull().sum()
Out[9]: Call ID
                           32
          Sale
          Agent_ID
                         2315
          Age
                            0
          Product ID
                            Θ
          Timezone
                           28
          Phone_code
          First_Name
                          682
          Last_Name
                          681
          Area Code
                          460
          Gender
                            0
          Call Count
          dtype: int64
In [10]:
          df['Sale'].mode()
Out[10]: 0
             False
          dtype: object
In [11]: df['Sale'].fillna(df['Sale'].mode()[0], inplace=True)
```

print(df['Area_Code'].unique())

```
In [12]:
          df.isnull().sum()
Out[12]: Call ID
                           0
         Sale
                        2315
         Agent_ID
                           0
         Age
         Product_ID
                           0
                           0
         Timezone
         Phone_code
                          28
                         682
         First Name
         Last Name
                         681
         Area Code
                         460
         Gender
                           0
         Call Count
                           0
         dtype: int64
In [13]:
          df['Phone code'].fillna(df['Phone_code'].mean(), inplace=True)
In [14]:
          df.isnull().sum()
Out[14]: Call_ID
                           0
         Sale
                           0
                        2315
         Agent ID
         Age
                           0
         Product ID
                           0
         Timezone
                           0
         Phone code
                           0
                         682
         First_Name
         Last Name
                         681
         Area Code
                         460
         Gender
         Call Count
                           0
         dtype: int64
In [15]:
          df['Agent ID'] = df['Agent ID'].replace('QUEUE','', regex=True)
          print(df['Agent ID'].unique())
         ['5265' '5226' '4452' '5461' '5298' '5139' '4828' '5292' '5044' '4912'
          '5230' '5002' '5053' '5312' '5214' '4926' '5425' '5077' '5357' '4722'
          '5076' '4994' '5051' '5472' '5296' '5207' '5386' '5209' '5208' '4866' nan
           '5297' '4995' '5313' '4958' '5073' '5028' '4804' '5341' '4876' '5382'
          '5405' '5146' '5181' '4702' '5272' '4894' '5065' '5403' '5459' '5424'
          '4971' '4677' '4748' '4899' '5266' '5035' '5460' '4968' '4865' '5252'
          '5399' '5061' '4706' '4955' '5220' '4956' '5216' '5032' '5406' '5224'
          '5462' '4121' '5271' '5407' '5206' '5001' '5005' '5287' '5396' '5464'
          '5294' '5052' '5423' '5421' '4827' '4483' '4709' '5384' '5416' '5089'
          '5429' '5428' '5245' '5401' '4970' '5366' '5381' '5367' '5302' '5368'
          '5106' '5495' '5393' '5062' '5143' '5055' '5268' '5042' '5210' '4867'
           '5286' '5470' '5310' '4888' '5218' '5467' '5404' '5455' '5471' '4734'
          '5342' '5205' '5267' '5221' '5327' '5398' '4539' '5417' '5420' '5466'
          '5374' '5441' '4893' '5400' '5299' '5150' '5114' '5246' '5088' '5397'
          '5295' '5426' '5219' '5457' '5358' '4959' '5356' '5270' '5264' '5515'
          '5369' '5275' '5365' '5064' '5273' '5254' '5293' '4966' '5349' '5319'
          '5383' '5153' '5456' '5303' '5306' '5458' '4829' '5427' '5500' '5364'
          '5473' '5377' '5503' '5350' '4717' '4425' '5347' '5152' '5419' '5415'
          '5380' '5274' '5348' '5155' '5430' '5215' '5203' '5320' '5204' '5225'
          '5351' '5502' '5354' '5217' '5370' '5373' '5340' '5494' '5385' '5179'
          '5463' '5234' '5322' '5518' '5211' '5256' '5344' '4992' '5516' '5321'
          '5355' '5376' '5519' '5517' '4219' '5394' '5343' '5269' '5501' '5123'
          '4304' '5063' '5390' '4033']
In [16]:
          df.isnull().sum()
Out[16]: Call ID
                           0
         Sale
                           0
         Agent_ID
                        2315
         Age
                           0
         Product ID
                           0
         Timezone
                           0
         Phone_code
```

First Name 682 681 Last_Name Area Code 460 Gender 0 Call Count 0

dtype: int64

In [17]: df = df.dropna()

Out[17]:

:	Call_ID	Sale	Agent_ID	Age	Product_ID	Timezone	Phone_code	First_Name	Last_Name	Area_Code	Gender	Call_Count
0	9545434	False	5265	42	147	2	37.0	Jk	Jk	2302	Male	1
1	9211206	False	5226	74	146	2	37.0	Em	Sh	1501	Male	10
2	8873010	False	4452	35	144	2	37.0	ВІ	MI	1550	Male	9
3	9852034	False	5461	40	149	2	37.0	WT	LI	1401	Male	6
4	9416548	False	5298	26	147	2	37.0	LA	LA	125	Female	12
99995	10249682	False	5404	65	150	2	37.0	ly	Rn	4068	Female	1
99996	8955506	False	5181	37	144	2	37.0	ZA	OE	4450	Female	6
99997	9299394	False	5077	69	146	2	37.0	Wm	Vr	1759	Male	1
99998	9549720	False	5028	67	147	2	37.0	Ze	Ze	1475	Male	1
99999	9702206	False	5464	63	148	2	37.0	EH	MA	1864	Female	15

96118 rows × 12 columns

```
In [18]:
          df.isnull().sum()
```

Out[18]: Call_ID

0 Sale 0 Agent_ID 0 0 Age Product ID 0 Timezone 0 Phone code 0 First_Name 0 Last Name 0 Area Code 0 Gender 0 Call Count 0 dtype: int64

```
In [19]:
          df.shape
```

Out[19]: (96118, 12)

In [20]:

df.dtypes

Out[20]: Call_ID

int64 Sale bool ${\tt Agent_ID}$ object Age int64 ${\tt Product_ID}$ int64 Timezone int64 float64 Phone_code First Name object Last Name object Area Code object Gender object Call Count int64 dtype: object

In [21]: df['Agent_ID'] = df['Agent_ID'].astype(int)

```
df.dtypes
Out[22]: Call_ID
                             int64
          Sale
                             bool
                             int32
          Agent_ID
          Age
                             int64
          Product ID
                             int64
                             int64
          Timezone
          Phone code
                          float64
          First Name
                           object
          Last_Name
                           object
          {\sf Area\_Code}
                            object
          Gender
                            object
          Call Count
                             int64
          dtype: object
In [23]:
           df['Area_Code'] = pd.to_numeric(df['Area_Code'], errors='coerce')
In [24]:
           df = df.dropna()
           df
Out[24]:
                   Call_ID
                           Sale Agent_ID Age Product_ID Timezone Phone_code First_Name Last_Name Area_Code Gender Call_Count
                  9545434 False
                                    5265
                                           42
                                                      147
                                                                 2
                                                                           37.0
                                                                                        Jk
                                                                                                   Jk
                                                                                                          2302.0
                                                                                                                    Male
                                                                                                                                 1
                                           74
                                                                 2
                                                                           37.0
                                                                                                   Sh
                                                                                                                                 10
                  9211206 False
                                    5226
                                                      146
                                                                                       Em
                                                                                                          1501.0
                                                                                                                    Male
              2
                  8873010 False
                                    4452
                                           35
                                                      144
                                                                 2
                                                                           37.0
                                                                                        ВΙ
                                                                                                   MI
                                                                                                          1550.0
                                                                                                                    Male
                                                                                                                                 9
                  9852034
                          False
                                    5461
                                           40
                                                      149
                                                                 2
                                                                           37.0
                                                                                       WT
                                                                                                   LI
                                                                                                          1401.0
                                                                                                                    Male
                                                                                                                                 6
                                                                 2
                  9416548 False
                                    5298
                                           26
                                                      147
                                                                           37.0
                                                                                       LA
                                                                                                  LA
                                                                                                           125.0
                                                                                                                 Female
                                                                                                                                 12
                                                                 2
          99995
                 10249682 False
                                    5404
                                           65
                                                      150
                                                                           37.0
                                                                                        ly
                                                                                                  Rn
                                                                                                          4068.0
                                                                                                                 Female
                                                                                                                                  1
                                                                 2
          99996
                  8955506 False
                                    5181
                                           37
                                                      144
                                                                           37.0
                                                                                       ZΑ
                                                                                                  OE
                                                                                                          4450.0 Female
                                                                                                                                 6
                                                                 2
                                                                                       Wm
          99997
                  9299394 False
                                    5077
                                           69
                                                      146
                                                                           37.0
                                                                                                   Vr
                                                                                                          1759.0
                                                                                                                    Male
                                                                                                                                  1
          99998
                  9549720 False
                                    5028
                                           67
                                                      147
                                                                 2
                                                                           37.0
                                                                                       Ze
                                                                                                   Ze
                                                                                                          1475.0
                                                                                                                    Male
          99999
                  9702206 False
                                                                 2
                                                                           37.0
                                                                                                                                 15
                                    5464
                                           63
                                                      148
                                                                                       EΗ
                                                                                                  MA
                                                                                                          1864.0 Female
          96114 rows × 12 columns
In [25]:
           df['Area_Code'].astype(int)
                    2302
Out[25]: 0
                     1501
                    1550
          2
                     1401
                     125
          4
          99995
                    4068
          99996
                     4450
          99997
                    1759
          99998
                     1475
          99999
                    1864
          Name: Area Code, Length: 96114, dtype: int32
In [26]:
           df.dtypes
Out[26]: Call_ID
                             int64
          Sale
                             bool
          Agent ID
                             int32
          Age
                             int64
                             int64
          Product ID
          Timezone
                             int64
          Phone code
                          float64
          First_Name
                            object
          Last_Name
                           object
```

In [22]:

Area_Code

Gender

float64

object

Call_Count int64 dtype: object

In [27]: df.shape

Out[27]: (96114, 12)

In [28]: df.describe()

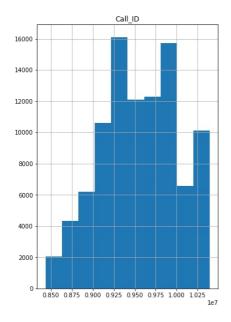
Out[28]:

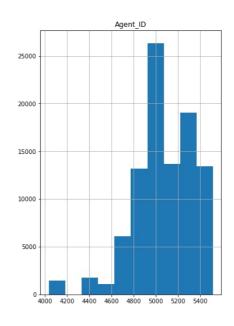
di describe(

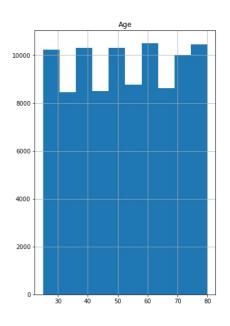
	Call_ID	Agent_ID	Age	Product_ID	Timezone	Phone_code	Area_Code	Call_Count
count	9.611400e+04	96114.000000	96114.000000	96114.000000	96114.000000	96114.0	9.611400e+04	96114.000000
mean	9.557849e+06	5071.442204	52.556006	147.193375	1.999750	37.0	4.160567e+03	3.271074
std	4.611897e+05	260.300428	16.136000	2.180240	0.022346	0.0	1.487234e+05	2.974950
min	8.432514e+06	4033.000000	25.000000	142.000000	0.000000	37.0	0.000000e+00	1.000000
25%	9.228832e+06	4926.000000	39.000000	146.000000	2.000000	37.0	1.619000e+03	1.000000
50%	9.521530e+06	5065.000000	53.000000	147.000000	2.000000	37.0	3.201000e+03	2.000000
75%	9.913814e+06	5271.000000	66.000000	149.000000	2.000000	37.0	6.045000e+03	4.000000
max	1.039830e+07	5519.000000	80.000000	151.000000	2.000000	37.0	4.610361e+07	55.000000

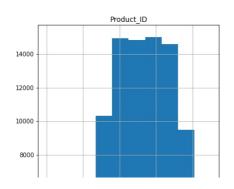
In [29]: df.hist(figsize=(20,30))

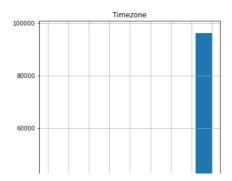
dtype=object)

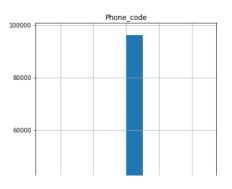


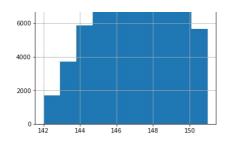


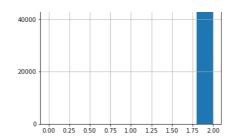


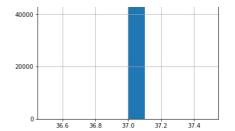


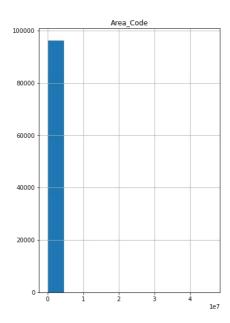


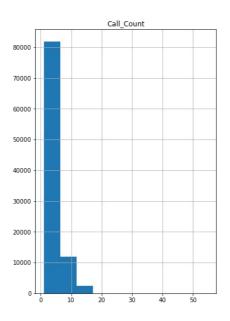






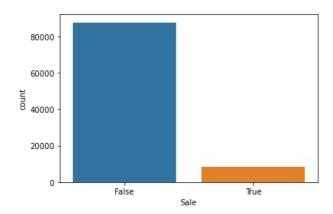






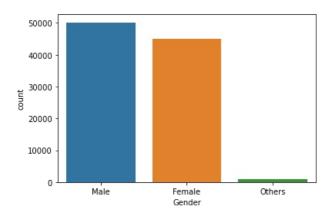
In [30]: sns.countplot(x='Sale',data=df)

Out[30]: <AxesSubplot:xlabel='Sale', ylabel='count'>



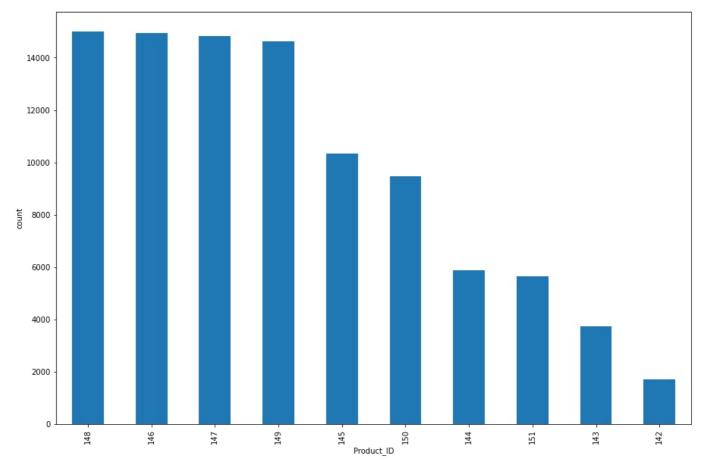
In [31]: sns.countplot(x='Gender',data=df)

Out[31]: <AxesSubplot:xlabel='Gender', ylabel='count'>



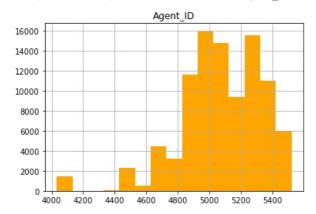
```
In [32]:
    df.Product_ID.value_counts().plot(kind='bar', figsize=(15,10))
    plt.xlabel('Product_ID')
    plt.ylabel('count')
```

Out[32]: Text(0, 0.5, 'count')



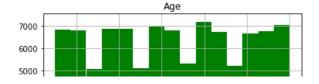
```
In [33]: df.hist(column='Agent_ID', bins=15, color='orange')
```

Out[33]: array([[<AxesSubplot:title={'center':'Agent_ID'}>]], dtype=object)



```
In [34]:
    df.hist(column='Age', bins=15, color='green')
```

Out[34]: array([[<AxesSubplot:title={'center':'Age'}>]], dtype=object)



```
3000
2000
1000
0
30 40 50 60 70 80
```

```
in [35]: corr = df.corr()
corr
```

Out[35]:

	Call_ID	Sale	Agent_ID	Age	Product_ID	Timezone	Phone_code	Area_Code	Call_Count
Call_ID	1.000000	0.015440	0.138804	0.001010	0.991769	-0.000060	NaN	-0.001095	-0.410631
Sale	0.015440	1.000000	-0.040038	-0.003272	0.015214	-0.026223	NaN	-0.001244	-0.047179
Agent_ID	0.138804	-0.040038	1.000000	0.001888	0.129293	0.025122	NaN	0.001522	0.173343
Age	0.001010	-0.003272	0.001888	1.000000	0.001070	-0.003597	NaN	0.005505	-0.002786
Product_ID	0.991769	0.015214	0.129293	0.001070	1.000000	0.002700	NaN	-0.000280	-0.405538
Timezone	-0.000060	-0.026223	0.025122	-0.003597	0.002700	1.000000	NaN	0.000074	0.005400
Phone_code	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
Area_Code	-0.001095	-0.001244	0.001522	0.005505	-0.000280	0.000074	NaN	1.000000	-0.001611
Call_Count	-0.410631	-0.047179	0.173343	-0.002786	-0.405538	0.005400	NaN	-0.001611	1.000000

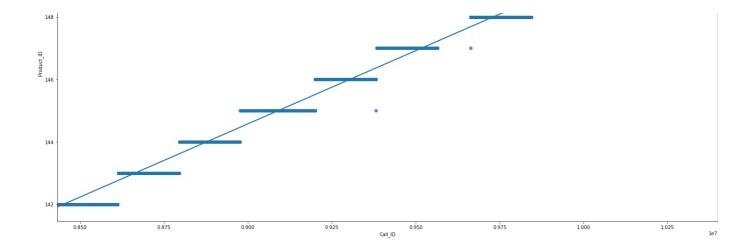
```
In [36]:
   plt.rcParams['figure.figsize']=(30,15)
   sns.heatmap(corr,annot=True,)
```

Out[36]: <AxesSubplot:>

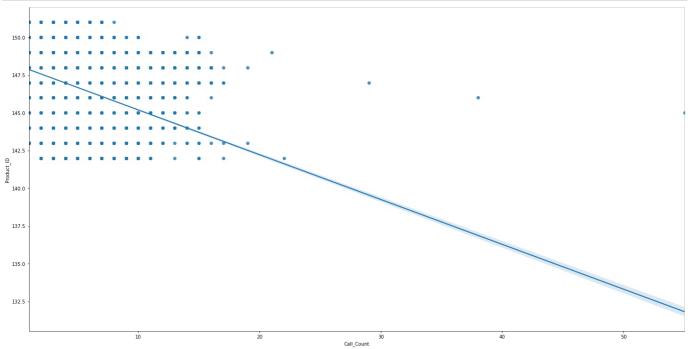
150



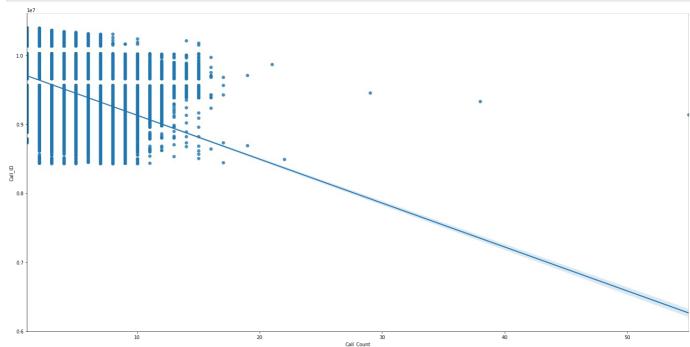
```
In [77]:
sns.lmplot(x='Call_ID',y='Product_ID',data=df, height=10, aspect=2);
```





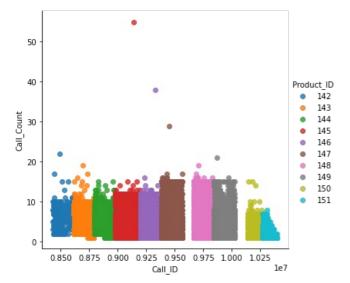






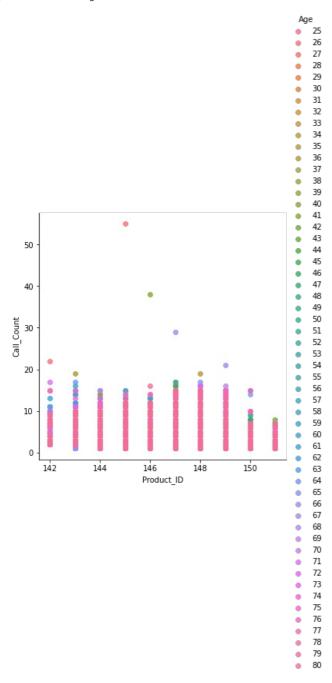
sns.lmplot(x='Call_ID', y="Call_Count", data=df, hue="Product_ID",fit_reg=False)

Out[79]: <seaborn.axisgrid.FacetGrid at 0x16a8a980cd0>



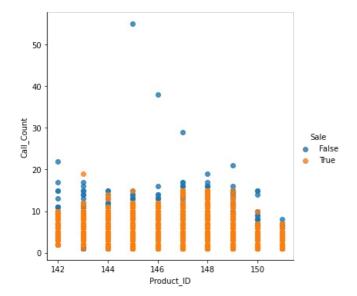
```
In [41]: sns.lmplot(x='Product_ID', y="Call_Count", data=df, hue="Age",fit_reg=False)
```

Out[41]: <seaborn.axisgrid.FacetGrid at 0x16a859ce0a0>



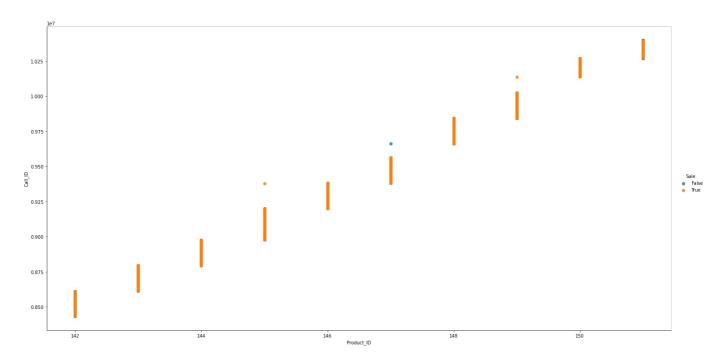
```
In [42]: sns.lmplot(x='Product_ID', y="Call_Count", data=df, hue="Sale",fit_reg=False)
```

Out[42]: <seaborn.axisgrid.FacetGrid at 0x16a85851310>

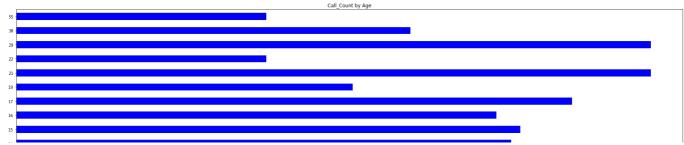


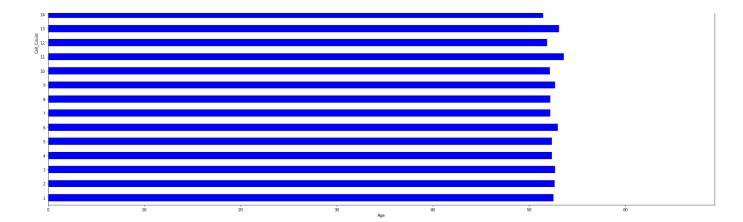
```
In [92]: sns.lmplot(x='Product_ID', y="Call_ID", data=df, hue="Sale",fit_reg=False, height=10, aspect=2)
```

Out[92]: <seaborn.axisgrid.FacetGrid at 0x16a902c3af0>

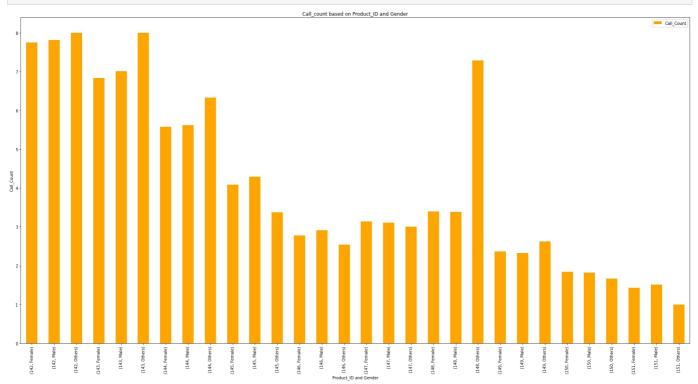


```
In [90]:
    df.groupby('Call_Count')['Age'].mean().plot(kind='barh', color = 'blue')
    plt.title("Call_Count by Age")
    plt.ylabel('Call_Count')
    plt.xlabel('Age');
```

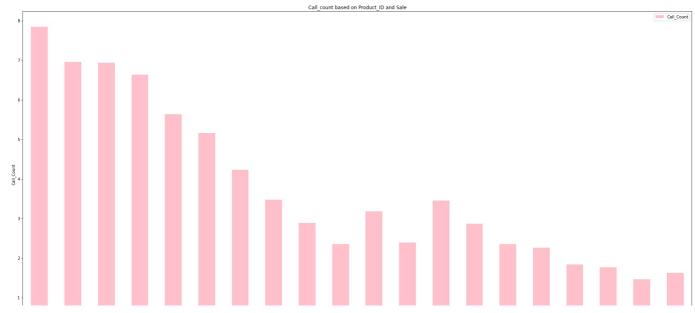




```
pd.pivot_table(df,index=['Product_ID','Gender'], values='Call_Count').plot(kind='bar',color='orange')
plt.title("Call_count based on Product_ID and Gender")
plt.ylabel('Call_Count')
plt.xlabel('Product_ID and Gender');
```

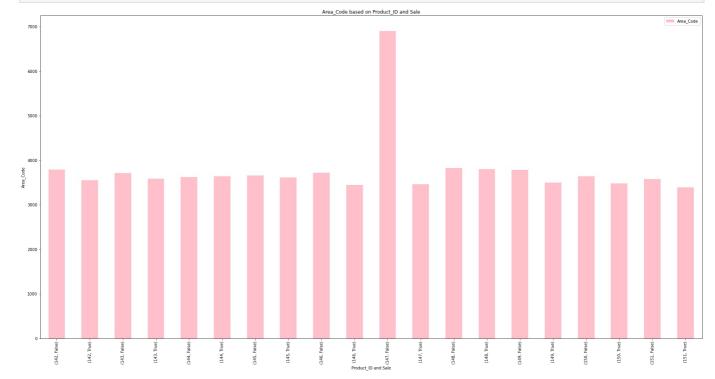


```
pd.pivot_table(df,index=['Product_ID','Sale'], values='Call_Count').plot(kind='bar',color='pink')
plt.title("Call_count based on Product_ID and Sale")
plt.ylabel('Call_Count')
plt.xlabel('Product_ID and Sale');
```

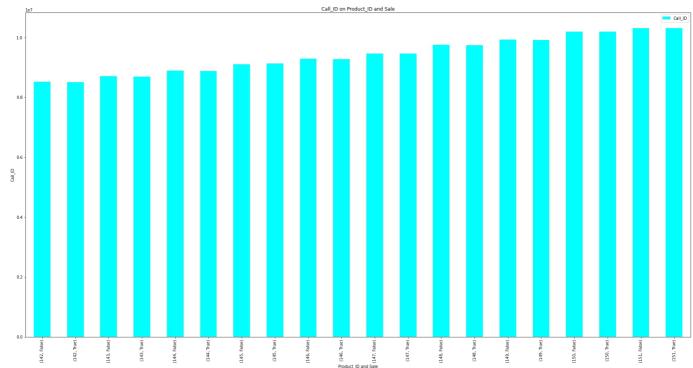


```
(142, False) - (143, False) - (144, False) - (145, False) - (146, False) - (146, False) - (146, False) - (146, False) - (148, False) - (148,
```

```
pd.pivot_table(df,index=['Product_ID','Sale'], values='Area_Code').plot(kind='bar',color='pink')
plt.title("Area_Code based on Product_ID and Sale")
plt.ylabel('Area_Code')
plt.xlabel('Product_ID and Sale');
```

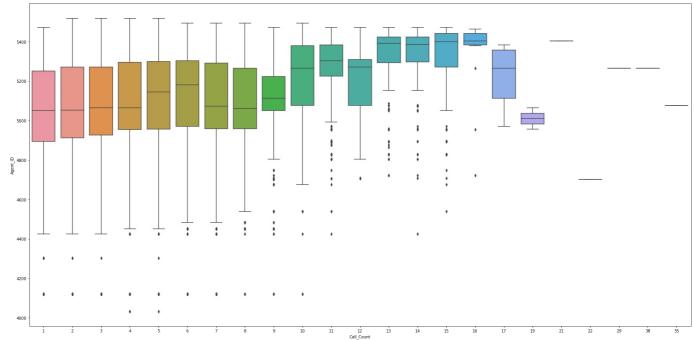


```
pd.pivot_table(df,index=['Product_ID','Sale'], values='Call_ID').plot(kind='bar',color='cyan')
plt.title("Call_ID on Product_ID and Sale")
plt.ylabel('Call_ID')
plt.xlabel('Product_ID and Sale');
```



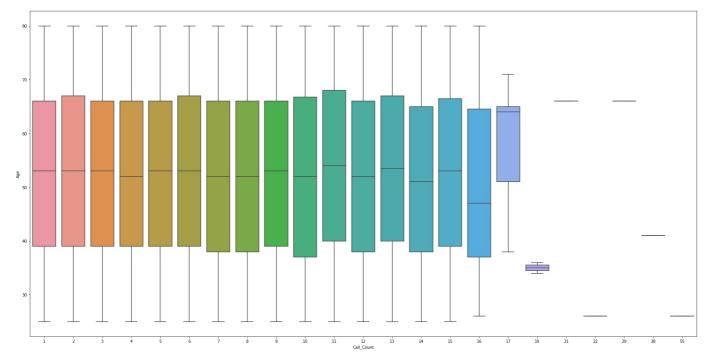
```
In [48]: sns.boxplot(x='Call_Count', y='Agent_ID', data=df)
```

Out[48]: <AxesSubplot:xlabel='Call Count', vlabel='Agent ID'>



```
In [49]: sns.boxplot(x='Call_Count', y='Age', data=df)
```

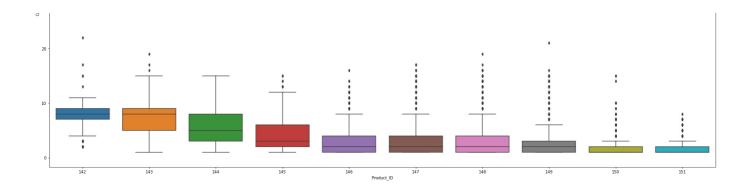
Out[49]: <AxesSubplot:xlabel='Call_Count', ylabel='Age'>



```
In [50]: sns.boxplot(x='Product_ID', y='Call_Count', data=df)
```

Out[50]: <AxesSubplot:xlabel='Product_ID', ylabel='Call_Count'>

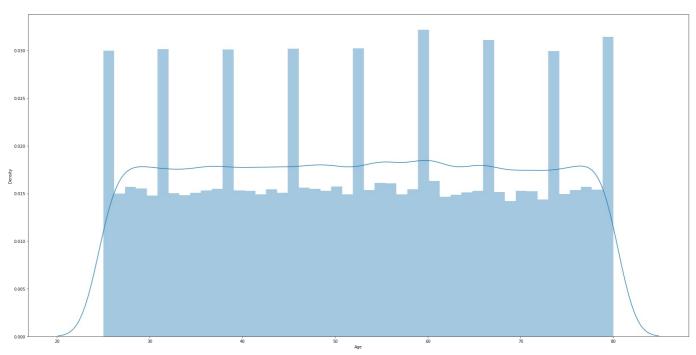




```
import warnings
warnings.filterwarnings("ignore")

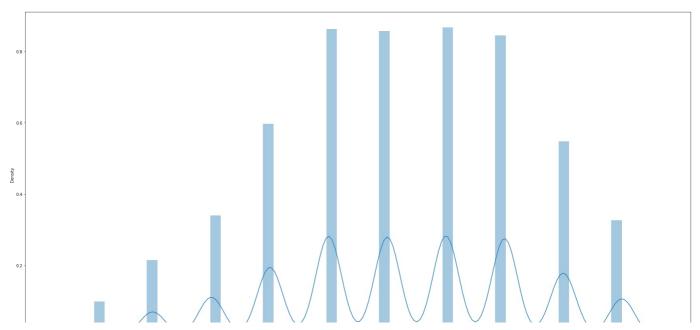
sns.distplot(df['Age'])
print('This distribution has skew' ,df['Age'].skew())
print('This distribution has kurtosis' ,df['Age'].kurt())
```

This distribution has skew -0.0027345736206543223 This distribution has kurtosis -1.1906311325526457



```
In [52]: sns.distplot(df['Product_ID'])
```

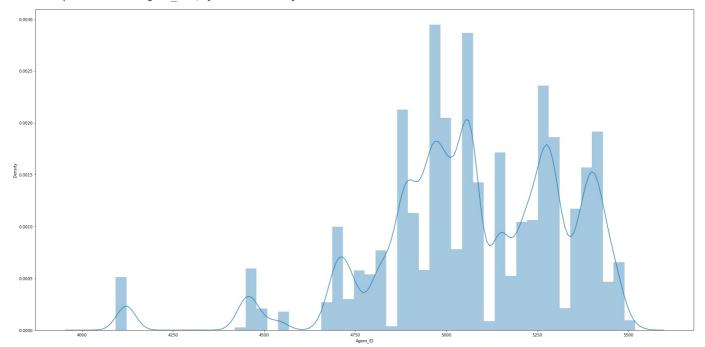
Out[52]: <AxesSubplot:xlabel='Product_ID', ylabel='Density'>



```
0.0 142 144 146 Product ID 148 150 152
```

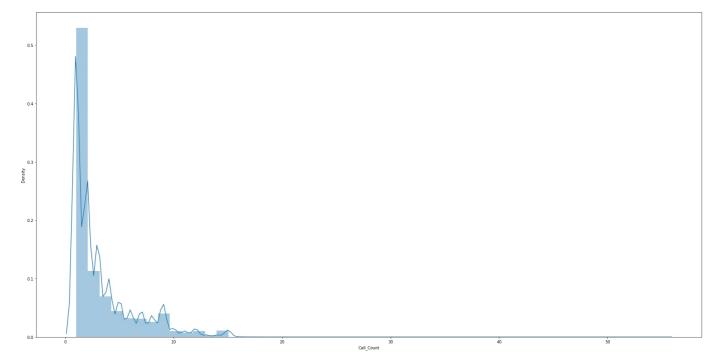
```
In [53]:
sns.distplot(df['Agent_ID'])
```

Out[53]: <AxesSubplot:xlabel='Agent_ID', ylabel='Density'>



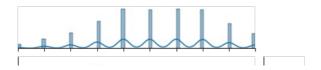
```
In [54]: sns.distplot(df['Call_Count'])
```

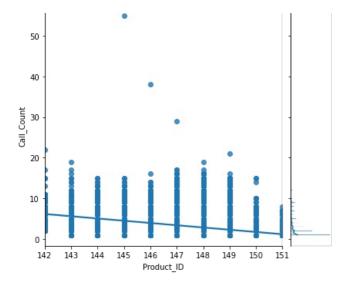
Out[54]: <AxesSubplot:xlabel='Call_Count', ylabel='Density'>



```
In [56]: sns.jointplot(x='Product_ID',y='Call_Count',data=df, kind='reg')
```

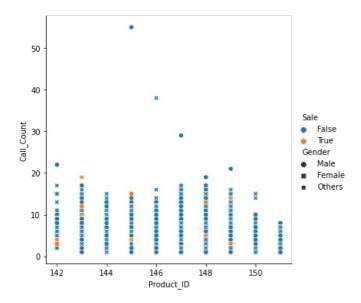
Out[56]: <seaborn.axisgrid.JointGrid at 0x16a88ea5e20>





```
In [57]: sns.relplot(x='Product_ID', y="Call_Count", data=df, hue="Sale", style='Gender')
```

Out[57]: <seaborn.axisgrid.FacetGrid at 0x16a88f3c220>



Loading [MathJax]/jax/output/CommonHTML/fonts/TeX/fontdata.js