EDA on Project Dataset :- PUBG Game Data Analysis

1) Importing Libraries

```
In [1]:  import pandas as pd
         import numpy as np
         import matplotlib.pyplot as plt
         import matplotlib as mlt
         import seaborn as sns
         import warnings
         warnings.filterwarnings("ignore")
```

```
In [2]:  sns.set_style("darkgrid")
         plt.rcParams['figure.figsize'] = (14,8)
```

2) Read a Dataset CSV files

```
In [3]:  # import / read the csv or dataset file
         data1 = pd.read_csv(r'H:\Downloads\Symboisis Skills\PUBG Data Analysis\pubg.csv')
```

```
In [4]:  # import / read the csv or dataset file
         data2 = pd.read_csv('H:\Downloads\Symboisis Skills\PUBG Data Analysis\Responses.csv'
```

```
In [5]:  data1
```

Out[5]:

	Id	groupId	matchId	assists	boosts	damageDealt	DBNOs	he
0	2f262dd9795e60	78437bcd91d40e	d5db3a49eb2955	0	0	0.0	0	
1	a32847cf5bf34b	85b7ce5a12e10b	65223f05c7fdb4	0	0	163.2	1	
2	1b1900a9990396	edf80d6523380a	1cadec4534f30a	0	3	278.7	2	
3	f589dd03b60bf2	804ab5e5585558	c4a5676dc91604	0	0	191.9	1	
4	c23c4cc5b78b35	b3e2cd169ed920	cd595700a01bfa	0	0	100.0	1	
...	...	...	...	...	...	...	...	
9995	ef4f474acd8e85	2eca2a8391f75d	492ecdfae90b46	0	3	204.5	1	
9996	cf0bf82fb4d80e	2eaf2765f93adb	14bffd71e96320	0	0	0.0	0	
9997	a0a31a0b1dcbe1	8d50c64ccc5071	147e4bbb62e3bb	0	0	0.0	0	
9998	f6874657399d69	d31843d7e62ccb	662567dcf280f5	0	0	0.0	0	
9999	90359b0b8f8b0d	61d5b1bb8da43f	258bfa48d88014	0	0	0.0	0	

10000 rows × 29 columns
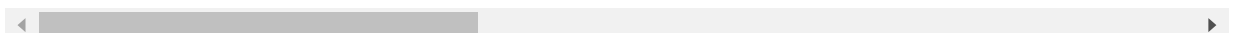
In [87]: `data2.head(10)`

Out[87]:

	Age	Gender	Do you play PUBG game	How long have you been playing this game	How often do you play this Game	How much time you spent daily	How affect this game on students	Positive effects of playing PUBG	Negative effects of playing PUBG	What are reasons that you dont play PUBG	affec gam stude
0	21	Female	Yes	Less than 1 year	Several in a week	Upto 1 hour	Positive	Leadership Qualities	Affects mental health	NaN	
1	24	Male	Yes	Less than 1 year	Several in a day	Upto 1 hour	Negative	Alertness, Co-ordination, Leadership Qualities	Addiction, Anti-social, Poor physical health, ...	NaN	
2	22	Male	Yes	1 - 2 years	Several in a week	1 - 2 hours	Negative	Alertness	Violent tendency, Addiction, Poor physical hea...	NaN	
3	23	Male	Yes	1 - 2 years	Several in a week	1 - 2 hours	Positive	Alertness, Co-ordination, Leadership Qualities	Addiction	NaN	
4	21	Female	Yes	Less than 1 year	Several in a day	Less than 30 minute	Negative	Alertness	Violent tendency, Addiction, Anti-social, Poor...	NaN	
5	24	Male	Yes	Less than 1 year	Several in a week	Less than 30 minute	Positive	Alertness, Co-ordination, Cognition, Leadershi...	Addiction, Disturb sleep pattern	NaN	
6	22	Male	Yes	More than 2 years	Several in a month	Less than 30 minute	Negative	Alertness, Co-ordination, Cognition, Leadershi...	Violent tendency, Addiction, Anti-social, Poor...	NaN	
7	22	Female	Yes	Less than 1 year	Several in a month	Less than 30 minute	Negative	Alertness	Addiction, Affects mental health	NaN	
8	24	Male	Yes	Less than 1 year	Several in a week	Upto 1 hour	Negative	Concentration	Poor physical health, Affects mental health, B...	NaN	

	Age	Gender	Do you play PUBG game	How long have you been playing this game	How often do you play this Game	How much time you spent daily	How affect this game on students	Positive effects of playing PUBG	Negative effects of playing PUBG	What are reasons that you dont play PUBG	affec gam stude
9	26	Male	Yes	Less than 1 year	Several in a day	Upto 1 hour	Negative	Alertness, Co-ordination, Leadership Qualities...	Violent tendency, Addiction, Anti-social, Poor...	NaN	

In [7]:
```python
# shows the first 5 rows from dataset
data1.head()
```

Out[7]:

	Id	groupId	matchId	assists	boosts	damageDealt	DBNOs	headsl
0	2f262dd9795e60	78437bcd91d40e	d5db3a49eb2955	0	0	0.0	0	
1	a32847cf5bf34b	85b7ce5a12e10b	65223f05c7fdb4	0	0	163.2	1	
2	1b1900a9990396	edf80d6523380a	1cadec4534f30a	0	3	278.7	2	
3	f589dd03b60bf2	804ab5e5585558	c4a5676dc91604	0	0	191.9	1	
4	c23c4cc5b78b35	b3e2cd169ed920	cd595700a01bfa	0	0	100.0	1	

5 rows × 29 columns

In [8]:
```python
# shows the last 5 rows from dataset
data1.tail()
```

Out[8]:

	Id	groupId	matchId	assists	boosts	damageDealt	DBNOs	he
9995	ef4f474acd8e85	2eca2a8391f75d	492ecdfae90b46	0	3	204.5	1	
9996	cf0bf82fb4d80e	2eaf2765f93adb	14bffd71e96320	0	0	0.0	0	
9997	a0a31a0b1dcbe1	8d50c64ccc5071	147e4bbb62e3bb	0	0	0.0	0	
9998	f6874657399d69	d31843d7e62ccb	662567dcf280f5	0	0	0.0	0	
9999	90359b0b8f8b0d	61d5b1bb8da43f	258bfa48d88014	0	0	0.0	0	

5 rows × 29 columns

In [9]:
```python
# shows the first 5 rows from dataset
data2.head()
```

Out[9]:

	Age	Gender	Do you play PUBG game	How long have you been playing this game	How often do you play this Game	How much time you spent daily	How affect this game on students	Positive effects of playing PUBG	Negative effects of playing PUBG	What are reasons that you dont play PUBG	How affect this game on students
0	21	Female	Yes	Less than 1 year	Several in a week	Upto 1 hour	Positive	Leadership Qualities	Affects mental health	NaN	Na
1	24	Male	Yes	Less than 1 year	Several in a day	Upto 1 hour	Negative	Alertness, Co-ordination, Leadership Qualities	Addiction, Anti-social, Poor physical health, ...	NaN	Na
2	22	Male	Yes	1 - 2 years	Several in a week	1 - 2 hours	Negative	Alertness	Violent tendency, Addiction, Poor physical hea...	NaN	Na
3	23	Male	Yes	1 - 2 years	Several in a week	1 - 2 hours	Positive	Alertness, Co-ordination, Leadership Qualities	Addiction	NaN	Na
4	21	Female	Yes	Less than 1 year	Several in a day	Less than 30 minute	Negative	Alertness	Violent tendency, Addiction, Anti-social, Poor...	NaN	Na

In [10]:
```python
# shows the last 5 rows from dataset
data2.tail()
```

Out[10]:

	Age	Gender	Do you play PUBG game	How long have you been playing this game	How often do you play this Game	How much time you spent daily	How affect this game on students	Positive effects of playing PUBG	Negative effects of playing PUBG	What are reasons that you dont play PUBG	How affect this game on students.1
48	25	Male	No	NaN	NaN	NaN	NaN	NaN	NaN	Addictive, Poor physical health, Affects menta...	Negative

	Age	Gender	Do you play PUBG game	How long have you been playing this game	How often do you play this Game	How much time you spent daily	How affect this game on students	Positive effects of playing PUBG	Negative effects of playing PUBG	What are reasons that you dont play PUBG	How affect this game on students.1
49	24	Female	No	NaN	NaN	NaN	NaN	NaN	NaN	Poor physical health, Affects mental health, D...	Negative
50	24	Female	No	NaN	NaN	NaN	NaN	NaN	NaN	Addictive, Poor physical health, Disturb sleep...	Negative
51	22	Male	No	NaN	NaN	NaN	NaN	NaN	NaN	Poor physical health, Bad academic score	Negative
52	23	Female	No	NaN	NaN	NaN	NaN	NaN	NaN	Violent tendency, Addictive, Anti-social, Poor...	Negative

In [11]: `data1.describe()`

Out[11]:

	assists	boosts	damageDealt	DBNOs	headshotKills	heals	killl
count	10000.000000	10000.000000	10000.000000	10000.00000	10000.000000	10000.000000	10000.00
mean	0.234600	1.088500	129.211264	0.64400	0.221700	1.354000	47.66
std	0.575149	1.703279	167.193945	1.09562	0.577046	2.629102	27.42
min	0.000000	0.000000	0.000000	0.00000	0.000000	0.000000	1.00
25%	0.000000	0.000000	0.000000	0.00000	0.000000	0.000000	24.00
50%	0.000000	0.000000	83.805000	0.00000	0.000000	0.000000	48.00
75%	0.000000	2.000000	185.325000	1.00000	0.000000	2.000000	71.00
max	7.000000	18.000000	3469.000000	11.00000	14.000000	31.000000	100.00

8 rows × 25 columns

In [12]: `data2.describe()`

Out[12]:

	Age
count	53.000000
mean	22.509434
std	2.232820
min	18.000000
25%	21.000000
50%	23.000000
75%	24.000000
max	27.000000

In [13]:
```python
data1.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 10000 entries, 0 to 9999
Data columns (total 29 columns):
 #   Column           Non-Null Count  Dtype
---  ------           --------------  -----
 0   Id               10000 non-null  object
 1   groupId          10000 non-null  object
 2   matchId          10000 non-null  object
 3   assists          10000 non-null  int64
 4   boosts           10000 non-null  int64
 5   damageDealt      10000 non-null  float64
 6   DBNOs            10000 non-null  int64
 7   headshotKills    10000 non-null  int64
 8   heals            10000 non-null  int64
 9   killPlace        10000 non-null  int64
 10  killPoints       10000 non-null  int64
 11  kills            10000 non-null  int64
 12  killStreaks      10000 non-null  int64
 13  longestKill      10000 non-null  float64
 14  matchDuration    10000 non-null  int64
 15  matchType        10000 non-null  object
 16  maxPlace         10000 non-null  int64
 17  numGroups        10000 non-null  int64
 18  rankPoints       10000 non-null  int64
 19  revives          10000 non-null  int64
 20  rideDistance     10000 non-null  float64
 21  roadKills        10000 non-null  int64
 22  swimDistance     10000 non-null  float64
 23  teamKills        10000 non-null  int64
 24  vehicleDestroys  10000 non-null  int64
 25  walkDistance     10000 non-null  float64
 26  weaponsAcquired  10000 non-null  int64
 27  winPoints        10000 non-null  int64
 28  winPlacePerc     10000 non-null  float64
dtypes: float64(6), int64(19), object(4)
memory usage: 2.2+ MB
```

In [14]:
```python
data2.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 53 entries, 0 to 52
Data columns (total 12 columns):
 #   Column                                                     Non-Null Count  Dt
ype
---  ------                                                     --------------  --
---
```

```
 0   Age                                                53 non-null    in
t64
 1   Gender                                             53 non-null    ob
ject
 2   Do you play PUBG game                              53 non-null    ob
ject
 3   How long have you been playing this game           23 non-null    ob
ject
 4   How often do you play this Game                    23 non-null    ob
ject
 5   How much time you spent daily                      23 non-null    ob
ject
 6   How affect this game on students                   23 non-null    ob
ject
 7   Positive effects of playing PUBG                   23 non-null    ob
ject
 8   Negative effects of playing PUBG                   23 non-null    ob
ject
 9   What are reasons that you dont play PUBG           30 non-null    ob
ject
 10  How affect this game on students.1                 30 non-null    ob
ject
 11  According to you are there positive effects of playing PUBG  30 non-null    ob
ject
dtypes: int64(1), object(11)
memory usage: 5.1+ KB
```

In [15]:
```python
# it shows the type of dataset
print(type(data1))
print(type(data2))
```

```
<class 'pandas.core.frame.DataFrame'>
<class 'pandas.core.frame.DataFrame'>
```

In [16]:
```python
# shows the shape, dimension and size of dataset
print(data1.shape)
print(data1.ndim)
print(data1.size)
```

```
(10000, 29)
2
290000
```

In [17]:
```python
# shows the shape, dimension and size of dataset
print(data2.shape)
print(data2.ndim)
print(data2.size)
```

```
(53, 12)
2
636
```

In [18]:
```python
# create a list of columns from dataset
data1.columns.to_list()
```

Out[18]:
```
['Id',
 'groupId',
 'matchId',
 'assists',
 'boosts',
 'damageDealt',
 'DBNOs',
 'headshotKills',
 'heals',
```

```
      'killPlace',
      'killPoints',
      'kills',
      'killStreaks',
      'longestKill',
      'matchDuration',
      'matchType',
      'maxPlace',
      'numGroups',
      'rankPoints',
      'revives',
      'rideDistance',
      'roadKills',
      'swimDistance',
      'teamKills',
      'vehicleDestroys',
      'walkDistance',
      'weaponsAcquired',
      'winPoints',
      'winPlacePerc']
```

In [19]:
```python
# create a list of columns from dataset
data2.columns.to_list()
```

Out[19]:
```
['Age',
 'Gender',
 'Do you play PUBG game',
 'How long have you been playing this game',
 'How often do you play this Game',
 'How much time you spent daily',
 'How affect this game on students',
 'Positive effects of playing PUBG',
 'Negative effects of playing PUBG',
 'What are reasons that you dont play PUBG',
 'How affect this game on students.1',
 'According to you are there positive effects of playing PUBG']
```

In [20]:
```python
data1.mean
```

Out[20]:
```
<bound method NDFrame._add_numeric_operations.<locals>.mean of                Id
groupId        matchId  assists  boosts  \
0      2f262dd9795e60  78437bcd91d40e  d5db3a49eb2955         0       0
1      a32847cf5bf34b  85b7ce5a12e10b  65223f05c7fdb4         0       0
2      1b1900a9990396  edf80d6523380a  1cadec4534f30a         0       3
3      f589dd03b60bf2  804ab5e5585558  c4a5676dc91604         0       0
4      c23c4cc5b78b35  b3e2cd169ed920  cd595700a01bfa         0       0
...               ...             ...             ...       ...     ...
9995   ef4f474acd8e85  2eca2a8391f75d  492ecdfae90b46         0       3
9996   cf0bf82fb4d80e  2eaf2765f93adb  14bffd71e96320         0       0
9997   a0a31a0b1dcbe1  8d50c64ccc5071  147e4bbb62e3bb         0       0
9998   f6874657399d69  d31843d7e62ccb  662567dcf280f5         0       0
9999   90359b0b8f8b0d  61d5b1bb8da43f  258bfa48d88014         0       0

       damageDealt  DBNOs  headshotKills  heals  killPlace  ...  revives  \
0              0.0      0              0      0         92  ...        0
1            163.2      1              1      0         42  ...        0
2            278.7      2              1      8         16  ...        3
3            191.9      1              0      0         31  ...        0
4            100.0      1              0      0         87  ...        0
...            ...    ...            ...    ...        ...  ...      ...
9995         204.5      1              0      0         17  ...        3
9996           0.0      0              0      0         49  ...        0
9997           0.0      0              0      0         83  ...        0
9998           0.0      0              0      0         82  ...        0
9999           0.0      0              0      0         78  ...        0

       rideDistance  roadKills  swimDistance  teamKills vehicleDestroys  \
```

```
0             0.0        0         0.0        0         0
1             0.0        0         0.0        0         0
2             0.0        0         0.0        0         0
3             0.0        0         0.0        0         0
4             0.0        0         0.0        0         0
...           ...      ...         ...      ...       ...
9995          0.0        0         0.0        0         0
9996          0.0        0         0.0        0         0
9997          0.0        0         0.0        0         0
9998          0.0        0         0.0        0         0
9999          0.0        0         0.0        0         0

      walkDistance  weaponsAcquired  winPoints  winPlacePerc
0             0.00                0       1470        0.0000
1           132.70                2       1531        0.2222
2          3591.00               10          0        0.8571
3           332.70                3          0        0.3462
4           252.70                3       1557        0.0690
...            ...              ...        ...           ...
9995       1648.00                4       1471        0.8333
9996        897.10                6       1500        0.7174
9997        188.20                2       1434        0.2083
9998        108.10                5       1534        0.2449
9999         53.36                1          0        0.1875

[10000 rows x 29 columns]>
```

In [21]:
```
data2.mean
```

Out[21]:
```
<bound method NDFrame._add_numeric_operations.<locals>.mean of      Age  Gender Do yo
u play PUBG game  \
0     21  Female              Yes
1     24    Male              Yes
2     22    Male              Yes
3     23    Male              Yes
4     21  Female              Yes
5     24    Male              Yes
6     22    Male              Yes
7     22  Female              Yes
8     24    Male              Yes
9     26    Male              Yes
10    18  Female              Yes
11    18    Male              Yes
12    20  Female              Yes
13    19    Male              Yes
14    21    Male              Yes
15    22    Male              Yes
16    23    Male              Yes
17    25    Male              Yes
18    23  Female              Yes
19    25    Male              Yes
20    27    Male              Yes
21    27  Female              Yes
22    26  Female              Yes
23    23    Male               No
24    24    Male               No
25    23    Male               No
26    23  Female               No
27    23    Male               No
28    27  Female               No
29    23    Male               No
30    23  Female               No
31    22  Female               No
32    23  Female               No
33    22  Female               No
34    22  Female               No
35    24    Male               No
36    22    Male               No
```

```
37    23    Female                    No
38    23    Female                    No
39    23      Male                    No
40    19      Male                    No
41    19      Male                    No
42    20      Male                    No
43    18      Male                    No
44    19    Female                    No
45    22    Female                    No
46    21    Female                    No
47    21      Male                    No
48    25      Male                    No
49    24    Female                    No
50    24    Female                    No
51    22      Male                    No
52    23    Female                    No
```

```
     How long have you been playing this game How often do you play this Game  \
0                          Less than 1 year              Several in a week
1                          Less than 1 year               Several in a day
2                              1 - 2 years               Several in a week
3                              1 - 2 years               Several in a week
4                          Less than 1 year               Several in a day
5                          Less than 1 year              Several in a week
6                         More than 2 years             Several in a month
7                          Less than 1 year             Several in a month
8                          Less than 1 year              Several in a week
9                          Less than 1 year               Several in a day
10                         Less than 1 year               Several in a day
11                             1 - 2 years               Several in a week
12                        More than 2 years               Several in a day
13                         Less than 1 year              Several in a week
14                        More than 2 years              Several in a week
15                             1 - 2 years               Several in a week
16                        More than 2 years              Several in a week
17                             1 - 2 years               Several in a day
18                             1 - 2 years              Several in a week
19                        More than 2 years             Several in a month
20                             1 - 2 years               Several in a day
21                             1 - 2 years              Several in a week
22                             1 - 2 years             Several in a month
23                                     NaN                            NaN
24                                     NaN                            NaN
25                                     NaN                            NaN
26                                     NaN                            NaN
27                                     NaN                            NaN
28                                     NaN                            NaN
29                                     NaN                            NaN
30                                     NaN                            NaN
31                                     NaN                            NaN
32                                     NaN                            NaN
33                                     NaN                            NaN
34                                     NaN                            NaN
35                                     NaN                            NaN
36                                     NaN                            NaN
37                                     NaN                            NaN
38                                     NaN                            NaN
39                                     NaN                            NaN
40                                     NaN                            NaN
41                                     NaN                            NaN
42                                     NaN                            NaN
43                                     NaN                            NaN
44                                     NaN                            NaN
45                                     NaN                            NaN
46                                     NaN                            NaN
47                                     NaN                            NaN
48                                     NaN                            NaN
49                                     NaN                            NaN
50                                     NaN                            NaN
```

```
51                              NaN                              NaN
52                              NaN                              NaN

    How much time you spent daily How affect this game on students  \
0                    Upto 1 hour                         Positive
1                    Upto 1 hour                         Negative
2                    1 - 2 hours                         Negative
3                    1 - 2 hours                         Positive
4            Less than 30 minute                         Negative
5            Less than 30 minute                         Positive
6            Less than 30 minute                         Negative
7            Less than 30 minute                         Negative
8                    Upto 1 hour                         Negative
9                    Upto 1 hour                         Negative
10            More than 2 hours                         Negative
11                   Upto 1 hour                         Positive
12                   Upto 1 hour                         Positive
13                   Upto 1 hour                         Positive
14                   1 - 2 hours                         Positive
15           Less than 30 minute                         Positive
16                   1 - 2 hours                         Positive
17           Less than 30 minute                         Negative
18                   1 - 2 hours                         Positive
19                   Upto 1 hour                         Positive
20                   1 - 2 hours                         Positive
21                   1 - 2 hours                         Positive
22                   1 - 2 hours                         Negative
23                           NaN                              NaN
24                           NaN                              NaN
25                           NaN                              NaN
26                           NaN                              NaN
27                           NaN                              NaN
28                           NaN                              NaN
29                           NaN                              NaN
30                           NaN                              NaN
31                           NaN                              NaN
32                           NaN                              NaN
33                           NaN                              NaN
34                           NaN                              NaN
35                           NaN                              NaN
36                           NaN                              NaN
37                           NaN                              NaN
38                           NaN                              NaN
39                           NaN                              NaN
40                           NaN                              NaN
41                           NaN                              NaN
42                           NaN                              NaN
43                           NaN                              NaN
44                           NaN                              NaN
45                           NaN                              NaN
46                           NaN                              NaN
47                           NaN                              NaN
48                           NaN                              NaN
49                           NaN                              NaN
50                           NaN                              NaN
51                           NaN                              NaN
52                           NaN                              NaN

                    Positive effects of playing PUBG  \
0                          Leadership Qualities
1     Alertness, Co-ordination, Leadership Qualities
2                                       Alertness
3     Alertness, Co-ordination, Leadership Qualities
4                                       Alertness
5    Alertness, Co-ordination, Cognition, Leadershi...
6    Alertness, Co-ordination, Cognition, Leadershi...
7                                       Alertness
8                                   Concentration
9    Alertness, Co-ordination, Leadership Qualities...
```

```
10                          Alertness, Leadership Qualities
11                              Co-ordination, Cognition
12                          Cognition, Leadership Qualities
13                          Cognition, Leadership Qualities
14                              Co-ordination, Cognition
15                          Alertness, Leadership Qualities
16          Alertness, Co-ordination, Leadership Qualities
17                              Co-ordination, Cognition
18                   Alertness, Co-ordination, Cognition
19               Alertness, Cognition, Leadership Qualities
20                                   Alertness, Cognition
21          Co-ordination, Cognition, Leadership Qualities
22                    Co-ordination, Leadership Qualities
23                                                     NaN
24                                                     NaN
25                                                     NaN
26                                                     NaN
27                                                     NaN
28                                                     NaN
29                                                     NaN
30                                                     NaN
31                                                     NaN
32                                                     NaN
33                                                     NaN
34                                                     NaN
35                                                     NaN
36                                                     NaN
37                                                     NaN
38                                                     NaN
39                                                     NaN
40                                                     NaN
41                                                     NaN
42                                                     NaN
43                                                     NaN
44                                                     NaN
45                                                     NaN
46                                                     NaN
47                                                     NaN
48                                                     NaN
49                                                     NaN
50                                                     NaN
51                                                     NaN
52                                                     NaN

                              Negative effects of playing PUBG  \
0                                      Affects mental health
1     Addiction, Anti-social, Poor physical health, ...
2     Violent tendency, Addiction, Poor physical hea...
3                                              Addiction
4     Violent tendency, Addiction, Anti-social, Poor...
5                         Addiction, Disturb sleep pattern
6     Violent tendency, Addiction, Anti-social, Poor...
7                        Addiction, Affects mental health
8     Poor physical health, Affects mental health, B...
9     Violent tendency, Addiction, Anti-social, Poor...
10    Addiction, Poor physical health, Disturb sleep...
11        Addiction, Anti-social, Poor physical health
12    Addiction, Affects mental health, Bad academic...
13    Addiction, Disturb sleep pattern, Bad academic...
14    Addiction, Anti-social, Poor physical health, ...
15    Violent tendency, Addiction, Affects mental he...
16    Violent tendency, Poor physical health, Distur...
17    Addiction, Anti-social, Affects mental health,...
18    Addiction, Poor physical health, Bad academic ...
19    Violent tendency, Addiction, Anti-social, Poor...
20    Violent tendency, Anti-social, Poor physical h...
21    Violent tendency, Anti-social, Poor physical h...
22    Addiction, Anti-social, Affects mental health,...
23                                                   NaN
```

```
24                                                         NaN
25                                                         NaN
26                                                         NaN
27                                                         NaN
28                                                         NaN
29                                                         NaN
30                                                         NaN
31                                                         NaN
32                                                         NaN
33                                                         NaN
34                                                         NaN
35                                                         NaN
36                                                         NaN
37                                                         NaN
38                                                         NaN
39                                                         NaN
40                                                         NaN
41                                                         NaN
42                                                         NaN
43                                                         NaN
44                                                         NaN
45                                                         NaN
46                                                         NaN
47                                                         NaN
48                                                         NaN
49                                                         NaN
50                                                         NaN
51                                                         NaN
52                                                         NaN

                  What are reasons that you dont play PUBG  \
0                                                        NaN
1                                                        NaN
2                                                        NaN
3                                                        NaN
4                                                        NaN
5                                                        NaN
6                                                        NaN
7                                                        NaN
8                                                        NaN
9                                                        NaN
10                                                       NaN
11                                                       NaN
12                                                       NaN
13                                                       NaN
14                                                       NaN
15                                                       NaN
16                                                       NaN
17                                                       NaN
18                                                       NaN
19                                                       NaN
20                                                       NaN
21                                                       NaN
22                                                       NaN
23  Violent tendency, Addictive, Affects mental he...
24  Addictive, Anti-social, Poor physical health, ...
25  Violent tendency, Addictive, Anti-social, Poor...
26    Violent tendency, Addictive, Bad academic score
27                                   Don't like to play
28                                 Affects mental health
29  Violent tendency, Addictive, Anti-social, Poor...
30  Violent tendency, Addictive, Affects mental he...
31  Violent tendency, Addictive, Disturb sleep pat...
32                                   Don't like to play
33                                   Don't like to play
34                                   Don't like to play
35  Addictive, Disturb sleep pattern, Bad academic...
36                                   Don't like to play
37  Addictive, Anti-social, Affects mental health,...
```

```
38         Affects mental health, Disturb sleep pattern
39             Poor physical health, Don't like to play
40  Violent tendency, Addictive, Poor physical hea...
41  Violent tendency, Poor physical health, Distur...
42  Addictive, Anti-social, Affects mental health,...
43                   Addictive, Poor physical health
44  Poor physical health, Disturb sleep pattern, B...
45  Anti-social, Poor physical health, Affects men...
46  Violent tendency, Poor physical health, Don't ...
47  Addictive, Anti-social, Poor physical health, ...
48  Addictive, Poor physical health, Affects menta...
49  Poor physical health, Affects mental health, D...
50  Addictive, Poor physical health, Disturb sleep...
51             Poor physical health, Bad academic score
52  Violent tendency, Addictive, Anti-social, Poor...

    How affect this game on students.1  \
0                                  NaN
1                                  NaN
2                                  NaN
3                                  NaN
4                                  NaN
5                                  NaN
6                                  NaN
7                                  NaN
8                                  NaN
9                                  NaN
10                                 NaN
11                                 NaN
12                                 NaN
13                                 NaN
14                                 NaN
15                                 NaN
16                                 NaN
17                                 NaN
18                                 NaN
19                                 NaN
20                                 NaN
21                                 NaN
22                                 NaN
23                            Negative
24                            Negative
25                            Negative
26                            Negative
27                            Negative
28                            Negative
29                            Negative
30                            Negative
31                            Negative
32                            Negative
33                            Negative
34                            Negative
35                            Negative
36                            Negative
37                            Negative
38                            Negative
39                            Negative
40                            Negative
41                            Negative
42                            Negative
43                            Negative
44                            Negative
45                            Negative
46                            Negative
47                            Negative
48                            Negative
49                            Negative
50                            Negative
51                            Negative
```

```
52                                Negative
```

```
    According to you are there positive effects of playing PUBG
0                                           NaN
1                                           NaN
2                                           NaN
3                                           NaN
4                                           NaN
5                                           NaN
6                                           NaN
7                                           NaN
8                                           NaN
9                                           NaN
10                                          NaN
11                                          NaN
12                                          NaN
13                                          NaN
14                                          NaN
15                                          NaN
16                                          NaN
17                                          NaN
18                                          NaN
19                                          NaN
20                                          NaN
21                                          NaN
22                                          NaN
23                                          No
24                                          No
25                                          No
26                                          No
27                                          No
28                                          No
29                                          No
30                                          No
31                                          No
32                                          No
33                                          Yes
34                                          No
35                                          Yes
36                                          No
37                                          No
38                                          No
39                                          No
40                                          Yes
41                                          No
42                                          No
43                                          No
44                                          No
45                                          No
46                                          No
47                                          No
48                                          Yes
49                                          Yes
50                                          No
51                                          Yes
52                                          No                    >
```

In [22]:
```python
data1.median
```

Out[22]:
```
<bound method NDFrame._add_numeric_operations.<locals>.median of                    I
d          groupId          matchId    assists   boosts  \
0     2f262dd9795e60   78437bcd91d40e   d5db3a49eb2955        0        0
1     a32847cf5bf34b   85b7ce5a12e10b   65223f05c7fdb4        0        0
2     1b1900a9990396   edf80d6523380a   1cadec4534f30a        0        3
3     f589dd03b60bf2   804ab5e5585558   c4a5676dc91604        0        0
4     c23c4cc5b78b35   b3e2cd169ed920   cd595700a01bfa        0        0
...              ...              ...              ...      ...      ...
9995  ef4f474acd8e85   2eca2a8391f75d   492ecdfae90b46        0        3
```

```
9996  cf0bf82fb4d80e  2eaf2765f93adb  14bffd71e96320          0        0
9997  a0a31a0b1dcbe1  8d50c64ccc5071  147e4bbb62e3bb          0        0
9998  f6874657399d69  d31843d7e62ccb  662567dcf280f5          0        0
9999  90359b0b8f8b0d  61d5b1bb8da43f  258bfa48d88014          0        0

      damageDealt  DBNOs  headshotKills  heals  killPlace  ...  revives  \
0            0.0      0              0      0         92  ...        0
1          163.2      1              1      0         42  ...        0
2          278.7      2              1      8         16  ...        3
3          191.9      1              0      0         31  ...        0
4          100.0      1              0      0         87  ...        0
...          ...    ...            ...    ...        ...  ...      ...
9995       204.5      1              0      0         17  ...        3
9996         0.0      0              0      0         49  ...        0
9997         0.0      0              0      0         83  ...        0
9998         0.0      0              0      0         82  ...        0
9999         0.0      0              0      0         78  ...        0

      rideDistance  roadKills  swimDistance  teamKills  vehicleDestroys  \
0              0.0          0           0.0          0                0
1              0.0          0           0.0          0                0
2              0.0          0           0.0          0                0
3              0.0          0           0.0          0                0
4              0.0          0           0.0          0                0
...            ...        ...           ...        ...              ...
9995           0.0          0           0.0          0                0
9996           0.0          0           0.0          0                0
9997           0.0          0           0.0          0                0
9998           0.0          0           0.0          0                0
9999           0.0          0           0.0          0                0

      walkDistance  weaponsAcquired  winPoints  winPlacePerc
0             0.00                0       1470        0.0000
1           132.70                2       1531        0.2222
2          3591.00               10          0        0.8571
3           332.70                3          0        0.3462
4           252.70                3       1557        0.0690
...            ...              ...        ...           ...
9995       1648.00                4       1471        0.8333
9996        897.10                6       1500        0.7174
9997        188.20                2       1434        0.2083
9998        108.10                5       1534        0.2449
9999         53.36                1          0        0.1875

[10000 rows x 29 columns]>
```

In [23]:
```
data1.dtypes
```

Out[23]:
```
Id               object
groupId          object
matchId          object
assists           int64
boosts            int64
damageDealt     float64
DBNOs             int64
headshotKills     int64
heals             int64
killPlace         int64
killPoints        int64
kills             int64
killStreaks       int64
longestKill     float64
matchDuration     int64
matchType        object
maxPlace          int64
numGroups         int64
rankPoints        int64
revives           int64
```

```
        rideDistance        float64
        roadKills            int64
        swimDistance        float64
        teamKills            int64
        vehicleDestroys      int64
        walkDistance        float64
        weaponsAcquired      int64
        winPoints            int64
        winPlacePerc        float64
        dtype: object
```

In [24]:
```
data2.dtypes
```

Out[24]:
```
Age                                                            int64
Gender                                                        object
Do you play PUBG game                                         object
How long have you been playing this game                     object
How often do you play this Game                              object
How much time you spent daily                                object
How affect this game on students                             object
Positive effects of playing PUBG                             object
Negative effects of playing PUBG                             object
What are reasons that you dont play PUBG                     object
How affect this game on students.1                           object
According to you are there positive effects of playing PUBG  object
dtype: object
```

In [25]:
```
data1['matchDuration'].unique()        # Show the unique function for the column
```

Out[25]:
```
array([1376, 1370, 1381, 1708, 1807, 1362, 1369, 1349, 1387, 1377, 1358,
       1829, 1385, 1778, 1863, 1336, 1898, 1793, 1351, 1421, 1771, 1279,
       1393, 1904, 1384, 1311, 1883, 1382, 2175, 1964, 1367, 2011, 1313,
       1885, 1813, 1348, 1397, 1914, 1443, 1360, 1368, 1434, 1380, 1332,
       1918, 1970, 1481, 2064, 1825, 1402, 1986, 1451, 1374, 1403, 1366,
       1378, 1996, 1375, 1806, 1338, 1968, 1359, 1860, 1879, 1317, 1399,
       1452, 1278, 1281, 1859, 1760, 1314, 1268, 1899, 1310, 1774, 1933,
       1234, 1455, 1389, 1299, 1344, 1750, 1263, 1848, 1354, 1417, 1824,
       1460, 1874, 1827, 1831, 1430, 1244, 1782, 1406, 1205, 1853, 1194,
       1383, 1941, 1315, 1929, 1835, 1308, 1431, 1373, 1833, 1773, 1301,
       1264, 1379, 1787, 1796, 1439, 1803, 1395, 1872, 1405, 1804, 1447,
       1917, 1894, 1396, 1352, 1390, 1781, 1818, 1400, 1997, 1990, 1826,
       1794, 1783, 1959, 1418, 1972, 1364, 1976, 1392, 1984, 1420, 1438,
       1294, 1930, 1435, 1307, 1321, 1882, 1517, 1371, 1892, 1372, 1722,
       1919, 2082, 1846, 1928, 1940, 1446, 1939, 1323, 1404, 1184, 1280,
       1487, 1958, 1893, 1857, 1777, 1889,  835, 1920, 1356, 1895, 1449,
       1887, 1320, 1913, 1923, 1868, 1297, 1797, 1878, 1361, 1471, 1865,
       1347, 1875, 1331, 1955, 1838, 1353, 1350, 1419, 1830, 1265, 1816,
       1873, 1266, 1324, 1319, 1413, 1871, 1440, 1288, 1363, 1291, 1329,
       1712, 1409, 1334, 1330, 1766, 1880, 1877, 1788, 1870, 1208, 1764,
       1876, 1840, 1510, 1295, 1253, 1758, 1423, 1298, 1808, 1752, 1459,
       1414, 1462, 1250, 1456, 1450, 1900, 1269, 1946, 1884,  868, 1345,
       1973, 2081, 1721, 1326, 1259, 1682, 1932, 1685, 1850, 1858, 1911,
       1410, 1823, 1255, 1441, 1814, 1401, 1842, 1357, 1241, 1537, 1276,
       1971, 1888, 1772, 1962, 1839, 1845, 1342, 1453, 1907, 1365, 1327,
       1391, 1903, 1905, 1388, 1293, 1785, 1909, 1355, 1897, 1491, 1795,
       1791, 1767, 1736, 1333, 1282, 1236, 2036, 1290, 1436, 1969, 1792,
       1260, 1458, 1864, 1530, 1821, 1901, 1951, 2188, 1245, 1271, 1408,
       1318, 1723, 1424, 1790, 1235, 1305, 1325, 1834, 1943, 1832, 1820,
       1687, 1908, 1828, 1477, 1215, 1445, 1730, 1881, 1982, 1759, 1465,
       1715, 1220, 1912, 1328, 1483, 1304, 1770, 1769, 1339, 1765, 1745,
       1309, 1762, 1886, 1689, 1411, 1726, 1660, 1466, 1910, 1343, 1944,
       1416, 1936, 1994, 1448, 1805, 1925, 1768, 1412, 1407, 1470, 2004,
       1425, 1508, 1337, 1533, 1341, 1927, 1335, 1852, 1847, 1956, 1698,
       1289, 1300, 1953, 1213, 2084, 1286, 1789, 1744, 1978, 1469, 1737,
       1866, 1799, 2019, 1444, 1988, 1837, 1454, 1779, 1292, 1753, 1849,
       1386, 1322, 1429, 1197, 1740, 1277, 1433, 2180, 1980, 1457, 1532,
       1467, 1960, 1671, 1798, 1983, 1952, 1822, 1844, 2015, 2121, 1340,
```

```
       2023, 1861, 1285, 1302, 1921, 1896, 2177, 1780, 1705, 2024, 1716,
       1815, 1989, 1520, 1836, 1802, 1916, 1428, 1693, 1924, 1937, 1515,
       1854, 1394, 1948, 1193, 1811, 1545, 1287, 1669, 1463, 1981, 1283,
       1461, 1934, 1415, 1566, 1867, 1464, 2035, 1432, 1851, 1902, 1754,
       1306, 1961, 1473, 2128, 1262, 1800, 1214, 1810, 1248, 1931, 1249,
       1472, 1665, 1957, 1543, 2189, 1979, 1757, 1303, 1856, 2201, 1999,
       1191, 1426, 1734, 1801, 2136, 1468, 1775, 1809, 1922,  869, 1296,
       1748, 1346, 1140, 1442, 1706, 1869, 2093, 1776, 1950, 1502, 1482,
       1059, 1841, 1755, 2192, 1729, 1422, 1427, 1761, 1254, 2078, 1926,
       1518, 1637, 1272, 1437, 1742, 2042, 1247, 1906, 1474, 1965, 1240,
       1251, 1114, 2186, 1974, 1212, 1963, 2034, 1817, 1273, 2141, 1398,
       1966, 2150, 2187, 2018, 1501, 1284, 1488, 1524, 2193, 1165, 1261,
       1316, 1977, 1206, 1312,  883, 1523, 1567, 1786, 1891, 2000, 1890,
       1732, 2094, 2007, 1967, 2184, 1485, 2049, 1746, 1495, 1843, 2037,
       1047, 1511, 2130,  892, 2013, 1506, 2191, 1819, 1985, 1995, 1812,
       1663, 1987, 1935, 1938, 2190, 1954, 2111, 1512, 1521, 1703, 2006,
       1494, 1711,  661, 1218, 1275, 1522, 1697, 2182, 1270, 1195, 2202,
        897, 1258, 1784, 2197, 1657, 1855, 1513, 1267, 1246, 2009, 1497,
       2129, 1238, 1749, 2010, 1862, 2171, 2181, 1751, 2115,  915, 2021,
       1242, 1274, 1217, 1942, 1718, 1116, 1176, 2088, 1159, 1763, 1915,
       2027, 2043, 1055, 1947, 1700,  902, 2040, 1233, 1717, 1733, 1975,
       1704,  526, 1695,  583, 2196, 1256, 1993, 1500, 2026, 1498, 1480,
       1229, 1991, 1207, 1243, 1756, 1541, 1725, 1949, 1489, 1514, 1739,
       2072, 1146, 1200, 1526, 1503, 1177, 1536, 1507, 1731, 1713, 1493,
       2153,  893, 1239, 1544, 1540, 2135, 2092, 1651, 1221, 1743, 2012,
       1201, 1546, 1667, 1699, 1224, 2179, 1551, 2163, 1096, 2138,  919,
       1121, 2017, 1161, 1478, 1257, 1945, 2045, 1476, 1222,  630, 1097,
       1504,  977, 1188, 2194, 1490,  464, 1203, 1168, 1702, 1690, 1741,
       1492, 1475, 1499, 1505, 1231, 2050, 1547, 1724, 1641, 1074, 1738,
       1181, 1141, 1568, 1479, 2185, 1658, 1219, 2107, 1747,  848, 2014,
       1204, 1525, 1694, 1542, 2056, 1210, 1167, 1484, 2059,  954, 2183,
       2041, 1688, 1701, 1095, 2039,  569, 1529, 1538, 1186, 1227, 2155,
       1226, 2170, 1656, 1692, 2060, 1992, 2003, 1252,  871, 2005, 1486,
       2080, 1166, 1534, 1232, 1179, 1560, 2195, 1131,  863, 1135,  829,
       2085, 1173, 1132, 1509, 1583, 1192, 1562,  861, 2099, 2001, 2066,
       1710, 1148, 1190, 2073, 2176,  599, 2122, 1553], dtype=int64)
```

In [26]:
```python
data1['matchDuration'].nunique()          # Show the count of unique function for the
```

Out[26]: 811

In [27]:
```python
data1.nunique()                           # Show the count of unique function for the all
```

Out[27]:
```
Id               10000
groupId           9973
matchId           8995
assists              8
boosts              15
damageDealt       4150
DBNOs               11
headshotKills        7
heals               28
killPlace          100
killPoints         762
kills               17
killStreaks          5
longestKill       3648
matchDuration      811
matchType           14
maxPlace            77
numGroups           82
rankPoints         547
revives              6
rideDistance      2248
roadKills            4
swimDistance       614
```

```
teamKills              4
vehicleDestroys        3
walkDistance        6699
weaponsAcquired       26
winPoints            342
winPlacePerc         988
dtype: int64
```

In [28]:
```python
# show the min value of column kills using min()
data1['kills'].min()
```

Out[28]: 0

In [29]:
```python
# show the max value of column kills using max()
data1['kills'].max()
```

Out[29]: 35

In [30]:
```python
# show the min value of column teamKills using min()
data1['teamKills'].min()
```

Out[30]: 0

In [31]:
```python
# show the max value of column teamKills using max()
data1['teamKills'].max()
```

Out[31]: 3

In [32]:
```python
# show the mid value of column damageDealth using median()
data1['damageDealt'].median()
```

Out[32]: 83.805

In [33]:
```python
# show the mid value of column kills using median()
data1['kills'].median()
```

Out[33]: 0.0

In [34]:
```python
# show the max value of column killsPoints and kills using max()
data1[['killPoints','kills']].max()
```

Out[34]:
```
killPoints    1926
kills           35
dtype: int64
```

In [35]:
```python
data1['killPoints'].argmax()
```

Out[35]: 5780

In [36]:
```python
data2['Age'].max()
```

Out[36]: 27

In [37]:
```python
data2['Age'].min()
```

Out[37]: 18

In [38]:
```python
data2['Age'].median()
```

Out[38]: 23.0

In [39]:
```python
data2['Gender'].nunique()
```

Out[39]: 2

In [40]:
```python
data2['How affect this game on students'].nunique()
```

Out[40]: 2

In [41]:
```python
data2['Positive effects of playing PUBG'].sort_values()
```

Out[41]:
```
2                                            Alertness
4                                            Alertness
7                                            Alertness
18                Alertness, Co-ordination, Cognition
6     Alertness, Co-ordination, Cognition, Leadershi...
5     Alertness, Co-ordination, Cognition, Leadershi...
1         Alertness, Co-ordination, Leadership Qualities
3         Alertness, Co-ordination, Leadership Qualities
16        Alertness, Co-ordination, Leadership Qualities
9      Alertness, Co-ordination, Leadership Qualities...
20                                 Alertness, Cognition
19         Alertness, Cognition, Leadership Qualities
10                    Alertness, Leadership Qualities
15                    Alertness, Leadership Qualities
11                             Co-ordination, Cognition
14                             Co-ordination, Cognition
17                             Co-ordination, Cognition
21     Co-ordination, Cognition, Leadership Qualities
22                Co-ordination, Leadership Qualities
12                   Cognition, Leadership Qualities
13                   Cognition, Leadership Qualities
8                                        Concentration
0                                 Leadership Qualities
23                                                 NaN
24                                                 NaN
25                                                 NaN
26                                                 NaN
27                                                 NaN
28                                                 NaN
29                                                 NaN
30                                                 NaN
31                                                 NaN
32                                                 NaN
33                                                 NaN
34                                                 NaN
35                                                 NaN
36                                                 NaN
37                                                 NaN
38                                                 NaN
39                                                 NaN
40                                                 NaN
41                                                 NaN
42                                                 NaN
```

```
43                                                  NaN
44                                                  NaN
45                                                  NaN
46                                                  NaN
47                                                  NaN
48                                                  NaN
49                                                  NaN
50                                                  NaN
51                                                  NaN
52                                                  NaN
Name: Positive effects of playing PUBG, dtype: object
```

In [ ]:

Using loc & iloc function

In [42]:
```python
#Pandas provide a unique method to retrieve rows from a Data frame
data1.iloc[[data1['killPoints'].argmax()]]
```

Out[42]:

	Id	groupId	matchId	assists	boosts	damageDealt	DBNOs	heads
5780	9c5b3a4d8dc175	37e59ecfe2a14f	52310adaef5f4c	0	0	200.0	0	

1 rows × 29 columns
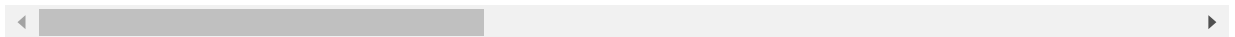
In [43]:
```python
#Pandas provide a unique method to retrieve rows from a Data frame
#We retrieve the record of 5780 position row
data1.iloc[5780]
```

Out[43]:
```
Id                 9c5b3a4d8dc175
groupId            37e59ecfe2a14f
matchId            52310adaef5f4c
assists                         0
boosts                          0
damageDealt                 200.0
DBNOs                           0
headshotKills                   0
heals                           0
killPlace                      22
killPoints                   1926
kills                           2
killStreaks                     2
longestKill                 8.619
matchDuration                1409
matchType                solo-fpp
maxPlace                       99
numGroups                      97
rankPoints                     -1
revives                         0
rideDistance                  0.0
roadKills                       0
swimDistance                  0.0
teamKills                       0
vehicleDestroys                 0
walkDistance                79.76
weaponsAcquired                 3
winPoints                    1684
winPlacePerc               0.2755
Name: 5780, dtype: object
```
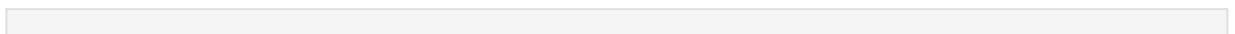
In [44]:

```python
data1.loc[5780]
```

Out[44]:

```
Id                  9c5b3a4d8dc175
groupId             37e59ecfe2a14f
matchId             52310adaef5f4c
assists                          0
boosts                           0
damageDealt                  200.0
DBNOs                            0
headshotKills                    0
heals                            0
killPlace                       22
killPoints                    1926
kills                            2
killStreaks                      2
longestKill                  8.619
matchDuration                 1409
matchType                 solo-fpp
maxPlace                        99
numGroups                       97
rankPoints                      -1
revives                          0
rideDistance                   0.0
roadKills                        0
swimDistance                   0.0
teamKills                        0
vehicleDestroys                  0
walkDistance                 79.76
weaponsAcquired                  3
winPoints                     1684
winPlacePerc                0.2755
Name: 5780, dtype: object
```

In [45]:

```python
#Pandas provide a unique method to retrieve rows from a Data frame
data2.iloc[[data2['Age'].argmax()]]
```

Out[45]:

	Age	Gender	Do you play PUBG game	How long have you been playing this game	How often do you play this Game	How much time you spent daily	How affect this game on students	Positive effects of playing PUBG	Negative effects of playing PUBG	What are reasons that you dont play PUBG	How affect thi game o students.
20	27	Male	Yes	1 - 2 years	Several in a day	1 - 2 hours	Positive	Alertness, Cognition	Violent tendency, Anti-social, Poor physical h…	NaN	NaN

In [46]:

```python
data2.loc[15]
```

Out[46]:

```
Age
22
Gender
Male
Do you play PUBG game
Yes
How long have you been playing this game
1 - 2 years
```

```
How often do you play this Game
Several in a week
How much time you spent daily
Less than 30 minute
How affect this game on students
Positive
Positive effects of playing PUBG                                                    Ale
rtness, Leadership Qualities
Negative effects of playing PUBG                              Violent tendency, Add
iction, Affects mental he...
What are reasons that you dont play PUBG
NaN
How affect this game on students.1
NaN
According to you are there positive effects of playing PUBG
NaN
Name: 15, dtype: object
```

In [47]:
```python
data2.iloc[15]
```

Out[47]:
```
Age
22
Gender
Male
Do you play PUBG game
Yes
How long have you been playing this game
1 - 2 years
How often do you play this Game
Several in a week
How much time you spent daily
Less than 30 minute
How affect this game on students
Positive
Positive effects of playing PUBG                                                    Ale
rtness, Leadership Qualities
Negative effects of playing PUBG                              Violent tendency, Add
iction, Affects mental he...
What are reasons that you dont play PUBG
NaN
How affect this game on students.1
NaN
According to you are there positive effects of playing PUBG
NaN
Name: 15, dtype: object
```

In [48]:
```python
data1['killPlace'].value_counts()
```

Out[48]:
```
29     134
71     128
16     128
55     126
39     125
      ...
96      57
98      23
97      23
99      12
100      5
Name: killPlace, Length: 100, dtype: int64
```

In [49]:
```python
data2['According to you are there positive effects of playing PUBG'].value_counts()
```

Out[49]:
```
No     24
Yes     6
```

Name: According to you are there positive effects of playing PUBG, dtype: int64

In [50]:
```python
data2.loc[:10]
```

Out[50]:

	Age	Gender	Do you play PUBG game	How long have you been playing this game	How often do you play this Game	How much time you spent daily	How affect this game on students	Positive effects of playing PUBG	Negative effects of playing PUBG	What are reasons that you dont play PUBG	affe ga stud
0	21	Female	Yes	Less than 1 year	Several in a week	Upto 1 hour	Positive	Leadership Qualities	Affects mental health	NaN	
1	24	Male	Yes	Less than 1 year	Several in a day	Upto 1 hour	Negative	Alertness, Co-ordination, Leadership Qualities	Addiction, Anti-social, Poor physical health, ...	NaN	
2	22	Male	Yes	1 - 2 years	Several in a week	1 - 2 hours	Negative	Alertness	Violent tendency, Addiction, Poor physical hea...	NaN	
3	23	Male	Yes	1 - 2 years	Several in a week	1 - 2 hours	Positive	Alertness, Co-ordination, Leadership Qualities	Addiction	NaN	
4	21	Female	Yes	Less than 1 year	Several in a day	Less than 30 minute	Negative	Alertness	Violent tendency, Addiction, Anti-social, Poor...	NaN	
5	24	Male	Yes	Less than 1 year	Several in a week	Less than 30 minute	Positive	Alertness, Co-ordination, Cognition, Leadershi...	Addiction, Disturb sleep pattern	NaN	
6	22	Male	Yes	More than 2 years	Several in a month	Less than 30 minute	Negative	Alertness, Co-ordination, Cognition, Leadershi...	Violent tendency, Addiction, Anti-social, Poor...	NaN	
7	22	Female	Yes	Less than 1 year	Several in a month	Less than 30 minute	Negative	Alertness	Addiction, Affects mental health	NaN	
8	24	Male	Yes	Less than 1 year	Several in a week	Upto 1 hour	Negative	Concentration	Poor physical health, Affects mental health, B...	NaN	

	Age	Gender	Do you play PUBG game	How long have you been playing this game	How often do you play this Game	How much time you spent daily	How affect this game on students	Positive effects of playing PUBG	Negative effects of playing PUBG	What are reasons that you dont play PUBG	affe ga stud
9	26	Male	Yes	Less than 1 year	Several in a day	Upto 1 hour	Negative	Alertness, Co-ordination, Leadership Qualities…	Violent tendency, Addiction, Anti-social, Poor…	NaN	
10	18	Female	Yes	Less than 1 year	Several in a day	More than 2 hours	Negative	Alertness, Leadership Qualities	Addiction, Poor physical health, Disturb sleep…	NaN	

In [51]:
```python
data2.describe().columns
```

Out[51]: `Index(['Age'], dtype='object')`

In [52]:
```python
data2.iloc[[data2['Age'].argmax()]]
```

Out[52]:

	Age	Gender	Do you play PUBG game	How long have you been playing this game	How often do you play this Game	How much time you spent daily	How affect this game on students	Positive effects of playing PUBG	Negative effects of playing PUBG	What are reasons that you dont play PUBG	How affect thi game o students.
20	27	Male	Yes	1 - 2 years	Several in a day	1 - 2 hours	Positive	Alertness, Cognition	Violent tendency, Anti-social, Poor physical h…	NaN	NaN

Sorting

In [53]:
```python
a=data1.sort_values('killPlace').tail()
a
```

Out[53]:

	Id	groupId	matchId	assists	boosts	damageDealt	DBNOs	hea
7401	27ccc8b772d7ba	d48289883ae9a8	5e4bed4f494ed4	0	0	18.0	0	
8899	6f1a3413874be1	64db01849f26ea	8611c2a3adb089	0	0	0.0	0	

	Id	groupId	matchId	assists	boosts	damageDealt	DBNOs	hea
5379	f683b6de67f24a	2e93bcb3e1759a	b3b9d086504a8a	0	0	0.0	0	
4382	828f21370748ca	0a83c6cf73306f	34fdebbb69d851	0	0	0.0	0	
1366	b1b028ff452c2d	cad95db9bd4c48	bea9c1afd1b8d5	0	0	0.0	0	

5 rows × 29 columns
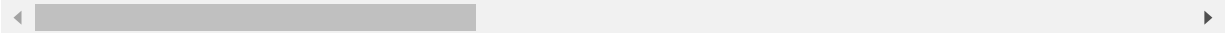
In [54]:
```python
b=data2.sort_values('Age').tail()
b
```

Out[54]:

	Age	Gender	Do you play PUBG game	How long have you been playing this game	How often do you play this Game	How much time you spent daily	How affect this game on students	Positive effects of playing PUBG	Negative effects of playing PUBG	What are reasons that you dont play PUBG	Ho affect th game students
22	26	Female	Yes	1 - 2 years	Several in a month	1 - 2 hours	Negative	Co-ordination, Leadership Qualities	Addiction, Anti-social, Affects mental health,...	NaN	Na
9	26	Male	Yes	Less than 1 year	Several in a day	Upto 1 hour	Negative	Alertness, Co-ordination, Leadership Qualities...	Violent tendency, Addiction, Anti-social, Poor...	NaN	Na
20	27	Male	Yes	1 - 2 years	Several in a day	1 - 2 hours	Positive	Alertness, Cognition	Violent tendency, Anti-social, Poor physical h...	NaN	Na
21	27	Female	Yes	1 - 2 years	Several in a week	1 - 2 hours	Positive	Co-ordination, Cognition, Leadership Qualities	Violent tendency, Anti-social, Poor physical h...	NaN	Na
28	27	Female	No	NaN	NaN	NaN	NaN	NaN	NaN	Affects mental health	Negati

Group_by

In [55]:
```python
a=data1.groupby('headshotKills')
```

```
a.get_group(14)
```

Out[55]:

	Id	groupId	matchId	assists	boosts	damageDealt	DBNOs	heads
3021	ffaa23dce3d18f	1c3d9a6dc204ec	fe7043ee6221c8	7	0	3469.0	0	

1 rows × 29 columns

In [56]:
```
b=data2.groupby('How much time you spent daily')
b.get_group('Upto 1 hour')
```

Out[56]:

	Age	Gender	Do you play PUBG game	How long have you been playing this game	How often do you play this Game	How much time you spent daily	How affect this game on students	Positive effects of playing PUBG	Negative effects of playing PUBG	What are reasons that you dont play PUBG	affe gai stud
0	21	Female	Yes	Less than 1 year	Several in a week	Upto 1 hour	Positive	Leadership Qualities	Affects mental health	NaN	
1	24	Male	Yes	Less than 1 year	Several in a day	Upto 1 hour	Negative	Alertness, Co-ordination, Leadership Qualities	Addiction, Anti-social, Poor physical health, ...	NaN	
8	24	Male	Yes	Less than 1 year	Several in a week	Upto 1 hour	Negative	Concentration	Poor physical health, Affects mental health, B...	NaN	
9	26	Male	Yes	Less than 1 year	Several in a day	Upto 1 hour	Negative	Alertness, Co-ordination, Leadership Qualities...	Violent tendency, Addiction, Anti-social, Poor...	NaN	
11	18	Male	Yes	1 - 2 years	Several in a week	Upto 1 hour	Positive	Co-ordination, Cognition	Addiction, Anti-social, Poor physical health	NaN	
12	20	Female	Yes	More than 2 years	Several in a day	Upto 1 hour	Positive	Cognition, Leadership Qualities	Addiction, Affects mental health, Bad academic...	NaN	

	Age	Gender	Do you play PUBG game	How long have you been playing this game	How often do you play this Game	How much time you spent daily	How affect this game on students	Positive effects of playing PUBG	Negative effects of playing PUBG	What are reasons that you dont play PUBG	affe ga stud
13	19	Male	Yes	Less than 1 year	Several in a week	Upto 1 hour	Positive	Cognition, Leadership Qualities	Addiction, Disturb sleep pattern, Bad academic...	NaN	
19	25	Male	Yes	More than 2 years	Several in a month	Upto 1 hour	Positive	Alertness, Cognition, Leadership Qualities	Violent tendency, Addiction, Anti-social, Poor...	NaN	

In [ ]:

In [57]:
```
# filtering row conditionally
data2[data2['Age']>25]
```

Out[57]:

	Age	Gender	Do you play PUBG game	How long have you been playing this game	How often do you play this Game	How much time you spent daily	How affect this game on students	Positive effects of playing PUBG	Negative effects of playing PUBG	What are reasons that you dont play PUBG	Ho affect th game students
9	26	Male	Yes	Less than 1 year	Several in a day	Upto 1 hour	Negative	Alertness, Co-ordination, Leadership Qualities...	Violent tendency, Addiction, Anti-social, Poor...	NaN	Na
20	27	Male	Yes	1 - 2 years	Several in a day	1 - 2 hours	Positive	Alertness, Cognition	Violent tendency, Anti-social, Poor physical h...	NaN	Na
21	27	Female	Yes	1 - 2 years	Several in a week	1 - 2 hours	Positive	Co-ordination, Cognition, Leadership Qualities	Violent tendency, Anti-social, Poor physical h...	NaN	Na

	Age	Gender	Do you play PUBG game	How long have you been playing this game	How often do you play this Game	How much time you spent daily	How affect this game on students	Positive effects of playing PUBG	Negative effects of playing PUBG	What are reasons that you dont play PUBG	How affect th game students
22	26	Female	Yes	1 - 2 years	Several in a month	1 - 2 hours	Negative	Co-ordination, Leadership Qualities	Addiction, Anti-social, Affects mental health,...	NaN	Na
28	27	Female	No	NaN	NaN	NaN	NaN	NaN	NaN	Affects mental health	Negati

In [58]:
```
data1[data1['kills']>15]
```

Out[58]:

	Id	groupId	matchId	assists	boosts	damageDealt	DBNOs	he
3021	ffaa23dce3d18f	1c3d9a6dc204ec	fe7043ee6221c8	7	0	3469.0	0	
3548	d649cd7ad7dd64	09e26b92166dd2	d8b2d5ada8d5a2	1	8	1988.0	11	

2 rows × 29 columns

In [59]:
```
data1[data1['rankPoints']>2000]
```

Out[59]:

	Id	groupId	matchId	assists	boosts	damageDealt	DBNOs	he
15	c5473a410326a8	8a25860cd71a23	88cffe1ae97aff	1	1	594.00	2	
91	dc096f1bfc19e1	d96d854e3a6e83	141292a39f9e83	2	3	655.10	6	
270	0a1c83c01366df	6a863044fe1c0e	82eb0de129cedd	0	0	57.33	0	
513	d63ab04adc3fd1	826ff26c2c7867	831d979936fb21	0	0	0.00	0	
1577	14661f448bb275	a487bd82df96e1	06c6fbdb62c73e	3	7	1036.00	6	
1843	ab1afced689401	d1479427076a34	67397e5c90e9d0	0	0	69.66	0	
2319	b40aade792d1fb	9f0ca505f443f7	e4b85e3eff53c1	0	2	351.20	1	
2921	2212e334a8bbbf	193060169f350b	e377dcb932cb03	0	0	288.80	0	
5603	1c51258d8c0cea	e530b35789a839	f43b3ff598d007	0	3	540.40	4	
6376	b48874dabe851c	896534034ba76c	e5dccbddc88c18	0	1	81.02	0	
6405	9485a48ebd27d4	f7858ecfb9fba3	f65530a592ed86	0	0	0.00	0	
6832	eb431c5ecad7d1	2348895c92364b	b0e64a66584b59	1	3	866.50	0	
7306	1400869b0955aa	601f6efe857a36	c9feeeef48054c	0	3	135.10	0	
7498	62925734e6f78d	97c237fbb9fad6	1ff10e296365a9	3	2	399.70	3	

	Id	groupId	matchId	assists	boosts	damageDealt	DBNOs	he
9406	e670fa5408eef8	492f610edeff94	8fce0450d9ab98	1	0	160.20	0	
9551	8b45ccbb7d9db4	e7e18c351c6d4a	5a3c6c83b98b6a	0	1	100.00	0	

16 rows × 29 columns
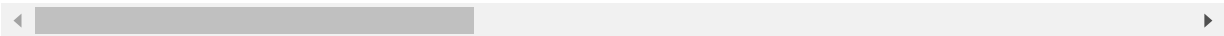
In [60]:
```python
# condiational statement using and Operatior
data1[(data1['matchDuration']>1800)&(data1['rankPoints']>2000)]
```

Out[60]:

	Id	groupId	matchId	assists	boosts	damageDealt	DBNOs	he
91	dc096f1bfc19e1	d96d854e3a6e83	141292a39f9e83	2	3	655.1	6	
9551	8b45ccbb7d9db4	e7e18c351c6d4a	5a3c6c83b98b6a	0	1	100.0	0	

2 rows × 29 columns
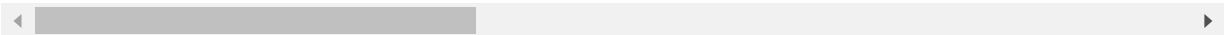
In [61]:
```python
data2[(data2['Age']>18)&(data2['Age']<22)]
```

Out[61]:

	Age	Gender	Do you play PUBG game	How long have you been playing this game	How often do you play this Game	How much time you spent daily	How affect this game on students	Positive effects of playing PUBG	Negative effects of playing PUBG	What are reasons that you dont play PUBG	affec gan stud
0	21	Female	Yes	Less than 1 year	Several in a week	Upto 1 hour	Positive	Leadership Qualities	Affects mental health	NaN	
4	21	Female	Yes	Less than 1 year	Several in a day	Less than 30 minute	Negative	Alertness	Violent tendency, Addiction, Anti-social, Poor...	NaN	
12	20	Female	Yes	More than 2 years	Several in a day	Upto 1 hour	Positive	Cognition, Leadership Qualities	Addiction, Affects mental health, Bad academic...	NaN	
13	19	Male	Yes	Less than 1 year	Several in a week	Upto 1 hour	Positive	Cognition, Leadership Qualities	Addiction, Disturb sleep pattern, Bad academic...	NaN	

	Age	Gender	Do you play PUBG game	How long have you been playing this game	How often do you play this Game	How much time you spent daily	How affect this game on students	Positive effects of playing PUBG	Negative effects of playing PUBG	What are reasons that you dont play PUBG	affe gar stud
14	21	Male	Yes	More than 2 years	Several in a week	1 - 2 hours	Positive	Co-ordination, Cognition	Addiction, Anti-social, Poor physical health, …	NaN	
40	19	Male	No	NaN	NaN	NaN	NaN	NaN	NaN	Violent tendency, Addictive, Poor physical hea…	Ne
41	19	Male	No	NaN	NaN	NaN	NaN	NaN	NaN	Violent tendency, Poor physical health, Distur…	Ne
42	20	Male	No	NaN	NaN	NaN	NaN	NaN	NaN	Addictive, Anti-social, Affects mental health,…	Ne
44	19	Female	No	NaN	NaN	NaN	NaN	NaN	NaN	Poor physical health, Disturb sleep pattern, B…	Ne
46	21	Female	No	NaN	NaN	NaN	NaN	NaN	NaN	Violent tendency, Poor physical health, Don't …	Ne
47	21	Male	No	NaN	NaN	NaN	NaN	NaN	NaN	Addictive, Anti-social, Poor physical health, …	Ne

In [62]:
```python
data2[(data2['Positive effects of playing PUBG']>'Alertness')]
```

Out[62]:

	Age	Gender	Do you play PUBG game	How long have you been playing this game	How often do you play this Game	How much time you spent daily	How affect this game on students	Positive effects of playing PUBG	Negative effects of playing PUBG	What are reasons that you dont play PUBG	aff... g... stu...
0	21	Female	Yes	Less than 1 year	Several in a week	Upto 1 hour	Positive	Leadership Qualities	Affects mental health	NaN	
1	24	Male	Yes	Less than 1 year	Several in a day	Upto 1 hour	Negative	Alertness, Co-ordination, Leadership Qualities	Addiction, Anti-social, Poor physical health, ...	NaN	
3	23	Male	Yes	1 - 2 years	Several in a week	1 - 2 hours	Positive	Alertness, Co-ordination, Leadership Qualities	Addiction	NaN	
5	24	Male	Yes	Less than 1 year	Several in a week	Less than 30 minute	Positive	Alertness, Co-ordination, Cognition, Leadershi...	Addiction, Disturb sleep pattern	NaN	
6	22	Male	Yes	More than 2 years	Several in a month	Less than 30 minute	Negative	Alertness, Co-ordination, Cognition, Leadershi...	Violent tendency, Addiction, Anti-social, Poor...	NaN	
8	24	Male	Yes	Less than 1 year	Several in a week	Upto 1 hour	Negative	Concentration	Poor physical health, Affects mental health, B...	NaN	
9	26	Male	Yes	Less than 1 year	Several in a day	Upto 1 hour	Negative	Alertness, Co-ordination, Leadership Qualities...	Violent tendency, Addiction, Anti-social, Poor...	NaN	
10	18	Female	Yes	Less than 1 year	Several in a day	More than 2 hours	Negative	Alertness, Leadership Qualities	Addiction, Poor physical health, Disturb sleep...	NaN	
11	18	Male	Yes	1 - 2 years	Several in a week	Upto 1 hour	Positive	Co-ordination, Cognition	Addiction, Anti-social, Poor physical health	NaN	

	Age	Gender	Do you play PUBG game	How long have you been playing this game	How often do you play this Game	How much time you spent daily	How affect this game on students	Positive effects of playing PUBG	Negative effects of playing PUBG	What are reasons that you dont play PUBG	aff ga stuc
12	20	Female	Yes	More than 2 years	Several in a day	Upto 1 hour	Positive	Cognition, Leadership Qualities	Addiction, Affects mental health, Bad academic...	NaN	
13	19	Male	Yes	Less than 1 year	Several in a week	Upto 1 hour	Positive	Cognition, Leadership Qualities	Addiction, Disturb sleep pattern, Bad academic...	NaN	
14	21	Male	Yes	More than 2 years	Several in a week	1 - 2 hours	Positive	Co-ordination, Cognition	Addiction, Anti-social, Poor physical health, ...	NaN	
15	22	Male	Yes	1 - 2 years	Several in a week	Less than 30 minute	Positive	Alertness, Leadership Qualities	Violent tendency, Addiction, Affects mental he...	NaN	
16	23	Male	Yes	More than 2 years	Several in a week	1 - 2 hours	Positive	Alertness, Co-ordination, Leadership Qualities	Violent tendency, Poor physical health, Distur...	NaN	
17	25	Male	Yes	1 - 2 years	Several in a day	Less than 30 minute	Negative	Co-ordination, Cognition	Addiction, Anti-social, Affects mental health,...	NaN	
18	23	Female	Yes	1 - 2 years	Several in a week	1 - 2 hours	Positive	Alertness, Co-ordination, Cognition	Addiction, Poor physical health, Bad academic ...	NaN	
19	25	Male	Yes	More than 2 years	Several in a month	Upto 1 hour	Positive	Alertness, Cognition, Leadership Qualities	Violent tendency, Addiction, Anti-social, Poor...	NaN	

	Age	Gender	Do you play PUBG game	How long have you been playing this game	How often do you play this Game	How much time you spent daily	How affect this game on students	Positive effects of playing PUBG	Negative effects of playing PUBG	What are reasons that you dont play PUBG	affe ga stud
20	27	Male	Yes	1 - 2 years	Several in a day	1 - 2 hours	Positive	Alertness, Cognition	Violent tendency, Anti-social, Poor physical h...	NaN	
21	27	Female	Yes	1 - 2 years	Several in a week	1 - 2 hours	Positive	Co-ordination, Cognition, Leadership Qualities	Violent tendency, Anti-social, Poor physical h...	NaN	
22	26	Female	Yes	1 - 2 years	Several in a month	1 - 2 hours	Negative	Co-ordination, Leadership Qualities	Addiction, Anti-social, Affects mental health,...	NaN	

In [63]:
```python
data1[data1['revives']>2]
```

Out[63]:

	Id	groupId	matchId	assists	boosts	damageDealt	DBNOs	he
2	1b1900a9990396	edf80d6523380a	1cadec4534f30a	0	3	278.7	2	
323	1bfbf4ffa9ffad	c44a5db0a49f3c	ff650dfcc90711	4	4	259.4	2	
902	92eee0c4558634	f3086861516e42	8a060e00c2e393	2	3	534.2	3	
918	a61f97123629d4	129dd87b49c6bd	f907542feaba96	2	3	657.1	4	
1040	b066dd3ce512df	59c71f3abcd82a	60ceae81538be8	0	0	0.0	4	
1260	650d9115b95f02	dcf7fb224fe9d5	23fd9acca2b310	0	6	559.1	4	
1421	313ccbd18c2ef0	8cbb17c5be24bd	99da06d01ab702	0	0	478.0	3	
1450	d58c1d8396c80d	fbb1d694368956	7ea51bc114e8a1	1	0	179.2	1	
1501	20999131a1fe9d	58d7f347f5dad5	8736333a1321e2	2	3	960.4	6	
1503	38fd592a701143	3590557400b764	d7be290e0cbc62	0	2	0.0	0	
1533	886ba654a5e28e	2.55952E+13	e905a4ec831d31	0	1	131.1	1	
1764	c7e19081bd8cca	88a2ae5746650c	4eb19eb2cb6048	3	1	238.5	2	
1783	6ee478719cc884	34e7ba4131def5	10e930e3c99e7d	0	0	363.3	1	
1883	ab192edebb5891	2b10395237b60a	6b7f2b8fdf902a	0	1	0.0	0	
1927	89a8643c017637	4acd27fb9e9a7a	270e759e643b2a	0	6	199.5	1	

	Id	groupId	matchId	assists	boosts	damageDealt	DBNOs	h
2146	53c730dfa7d7a9	4d27cac8236388	4346a2f5186b38	0	2	300.0	2	
2213	a57cccbb7a2093	1ab35b542312a3	c6118122e4b513	0	3	513.0	3	
2302	5adb8153147b7e	4d4b677dc8c21a	1f542ed4df2fad	1	4	145.9	0	
2477	2f669202e0ea35	d854bf0bb7283f	87321fa8687ffd	0	0	223.0	5	
2999	7976c94434d602	bea2e3afd4f655	d1ee0d945a1157	1	3	391.5	3	
3304	ad007bce7142af	fb8afee7bdd7da	a7789ba61a3885	0	4	564.5	5	
3862	64ffb84e157875	ffe3ba03098343	9a8f3857f40f52	2	1	269.7	6	
4116	6b67bd4a1e6089	4b5c866236ab2c	e5b44d706808c2	0	2	689.3	3	
4173	89e95fd73c3e21	3d3e6100c07ff0	d04dbb98249f76	1	5	34.3	0	
4266	64645545e518b9	c1c3262596682c	4a4af6a7900a49	3	3	695.5	5	
4855	812a1c3bcb779c	9083c3207389e3	264526fde2ec13	1	0	198.6	1	
6158	97e1c2dd49b4be	b9c9c66b6fe956	015e046cf159a9	1	7	387.4	2	
6230	5978f20db77143	cbf9c62fa5b8c8	819667e11c7c7f	0	6	175.0	3	
6431	1b1115047c1afa	b28d58823db34d	0c24ab45d43b3d	0	5	389.1	2	
6606	2a126226af0391	efa3c06cbe81cc	0cbe261833bb37	0	3	593.7	3	
7133	107f7ab18a2dac	5d7c2fc4f0961e	bccac4b2e48b74	3	3	546.5	3	
8026	6bfbbe5090c5e8	7a4ba2b8a74c0a	4d174763d567b2	1	3	421.3	2	
8140	68b232576ee27e	185078c0796180	dae004221c0032	0	4	184.9	3	
8567	2477c41f776777	9286ed6abcdcd0	5e53f78561d8ab	0	10	217.5	1	
8767	2819090f3c3f9d	2f86fd34d7d763	ffed6b75ebe4ce	0	4	408.4	1	
8960	d2c7a0cc219f3f	0a59ce6b8b117c	f058fa2aeca04b	1	6	515.6	3	
8986	6b7825a5f0c274	85145ad63f1ebf	311850a825fa54	1	3	376.2	2	
9035	a10dad96217fb8	d57509536da4a7	71ada14637abf5	0	2	0.0	0	
9235	9b31e4be29b753	5b4b4a84de4877	4c0fced7c796d5	0	5	456.1	2	
9423	9b476fd611db25	e0bfdc1931d4a0	a002510e50e185	0	1	23.4	0	
9430	4e62b9ac59fea0	bb5efa28935382	619cd5995add7d	0	5	233.7	0	
9995	ef4f474acd8e85	2eca2a8391f75d	492ecdfae90b46	0	3	204.5	1	

42 rows × 29 columns

In [64]:
```python
# displaying the data frame in numpy array
data1.values
```

Out[64]: array([['2f262dd9795e60', '78437bcd91d40e', 'd5db3a49eb2955', ..., 0,
        1470, 0.0],
       ['a32847cf5bf34b', '85b7ce5a12e10b', '65223f05c7fdb4', ..., 2,
        1531, 0.2222],
       ['1b1900a9990396', 'edf80d6523380a', '1cadec4534f30a', ..., 10, 0,
        0.8571],
       ...,

```
                  ['a0a31a0b1dcbe1', '8d50c64ccc5071', '147e4bbb62e3bb', ..., 2,
                   1434, 0.2083],
                  ['f6874657399d69', 'd31843d7e62ccb', '662567dcf280f5', ..., 5,
                   1534, 0.2449],
                  ['90359b0b8f8b0d', '61d5b1bb8da43f', '258bfa48d88014', ..., 1, 0,
                   0.1875]], dtype=object)
```

In [65]:
```python
# displaying the data frame in numpy array
data2.values
```

Out[65]:
```
array([[21, 'Female', 'Yes', 'Less than 1 year', 'Several in a week',
        'Upto 1 hour', 'Positive', 'Leadership Qualities',
        'Affects mental health', nan, nan, nan],
       [24, 'Male', 'Yes', 'Less than 1 year', 'Several in a day',
        'Upto 1 hour', 'Negative',
        'Alertness, Co-ordination, Leadership Qualities',
        'Addiction, Anti-social, Poor physical health, Affects mental health, Bad ac
ademic score',
        nan, nan, nan],
       [22, 'Male', 'Yes', '1 - 2 years', 'Several in a week',
        '1 - 2 hours', 'Negative', 'Alertness',
        'Violent tendency, Addiction, Poor physical health, Affects mental health, D
isturb sleep pattern, Bad academic score',
        nan, nan, nan],
       [23, 'Male', 'Yes', '1 - 2 years', 'Several in a week',
        '1 - 2 hours', 'Positive',
        'Alertness, Co-ordination, Leadership Qualities', 'Addiction',
        nan, nan, nan],
       [21, 'Female', 'Yes', 'Less than 1 year', 'Several in a day',
        'Less than 30 minute', 'Negative', 'Alertness',
        'Violent tendency, Addiction, Anti-social, Poor physical health, Affects men
tal health, Disturb sleep pattern, Bad academic score',
        nan, nan, nan],
       [24, 'Male', 'Yes', 'Less than 1 year', 'Several in a week',
        'Less than 30 minute', 'Positive',
        'Alertness, Co-ordination, Cognition, Leadership Qualities, Concentration',
        'Addiction, Disturb sleep pattern', nan, nan, nan],
       [22, 'Male', 'Yes', 'More than 2 years', 'Several in a month',
        'Less than 30 minute', 'Negative',
        'Alertness, Co-ordination, Cognition, Leadership Qualities',
        'Violent tendency, Addiction, Anti-social, Poor physical health, Affects men
tal health, Disturb sleep pattern, Bad academic score',
        nan, nan, nan],
       [22, 'Female', 'Yes', 'Less than 1 year', 'Several in a month',
        'Less than 30 minute', 'Negative', 'Alertness',
        'Addiction, Affects mental health', nan, nan, nan],
       [24, 'Male', 'Yes', 'Less than 1 year', 'Several in a week',
        'Upto 1 hour', 'Negative', 'Concentration',
        'Poor physical health, Affects mental health, Bad academic score',
        nan, nan, nan],
       [26, 'Male', 'Yes', 'Less than 1 year', 'Several in a day',
        'Upto 1 hour', 'Negative',
        'Alertness, Co-ordination, Leadership Qualities, Presence of mind',
        'Violent tendency, Addiction, Anti-social, Poor physical health, Affects men
tal health, Bad academic score',
        nan, nan, nan],
       [18, 'Female', 'Yes', 'Less than 1 year', 'Several in a day',
        'More than 2 hours', 'Negative',
        'Alertness, Leadership Qualities',
        'Addiction, Poor physical health, Disturb sleep pattern, Bad academic scor
e',
        nan, nan, nan],
       [18, 'Male', 'Yes', '1 - 2 years', 'Several in a week',
        'Upto 1 hour', 'Positive', 'Co-ordination, Cognition',
        'Addiction, Anti-social, Poor physical health', nan, nan, nan],
       [20, 'Female', 'Yes', 'More than 2 years', 'Several in a day',
        'Upto 1 hour', 'Positive', 'Cognition, Leadership Qualities',
        'Addiction, Affects mental health, Bad academic score', nan, nan,
```

```
         nan],
        [19, 'Male', 'Yes', 'Less than 1 year', 'Several in a week',
         'Upto 1 hour', 'Positive', 'Cognition, Leadership Qualities',
         'Addiction, Disturb sleep pattern, Bad academic score', nan, nan,
         nan],
        [21, 'Male', 'Yes', 'More than 2 years', 'Several in a week',
         '1 - 2 hours', 'Positive', 'Co-ordination, Cognition',
         'Addiction, Anti-social, Poor physical health, Disturb sleep pattern',
         nan, nan, nan],
        [22, 'Male', 'Yes', '1 - 2 years', 'Several in a week',
         'Less than 30 minute', 'Positive',
         'Alertness, Leadership Qualities',
         'Violent tendency, Addiction, Affects mental health, Disturb sleep pattern',
         nan, nan, nan],
        [23, 'Male', 'Yes', 'More than 2 years', 'Several in a week',
         '1 - 2 hours', 'Positive',
         'Alertness, Co-ordination, Leadership Qualities',
         'Violent tendency, Poor physical health, Disturb sleep pattern',
         nan, nan, nan],
        [25, 'Male', 'Yes', '1 - 2 years', 'Several in a day',
         'Less than 30 minute', 'Negative', 'Co-ordination, Cognition',
         'Addiction, Anti-social, Affects mental health, Disturb sleep pattern',
         nan, nan, nan],
        [23, 'Female', 'Yes', '1 - 2 years', 'Several in a week',
         '1 - 2 hours', 'Positive', 'Alertness, Co-ordination, Cognition',
         'Addiction, Poor physical health, Bad academic score', nan, nan,
         nan],
        [25, 'Male', 'Yes', 'More than 2 years', 'Several in a month',
         'Upto 1 hour', 'Positive',
         'Alertness, Cognition, Leadership Qualities',
         'Violent tendency, Addiction, Anti-social, Poor physical health',
         nan, nan, nan],
        [27, 'Male', 'Yes', '1 - 2 years', 'Several in a day',
         '1 - 2 hours', 'Positive', 'Alertness, Cognition',
         'Violent tendency, Anti-social, Poor physical health, Disturb sleep patter
n',
         nan, nan, nan],
        [27, 'Female', 'Yes', '1 - 2 years', 'Several in a week',
         '1 - 2 hours', 'Positive',
         'Co-ordination, Cognition, Leadership Qualities',
         'Violent tendency, Anti-social, Poor physical health, Disturb sleep patter
n',
         nan, nan, nan],
        [26, 'Female', 'Yes', '1 - 2 years', 'Several in a month',
         '1 - 2 hours', 'Negative', 'Co-ordination, Leadership Qualities',
         'Addiction, Anti-social, Affects mental health, Bad academic score',
         nan, nan, nan],
        [23, 'Male', 'No', nan, nan, nan, nan, nan, nan,
         "Violent tendency, Addictive, Affects mental health, Disturb sleep pattern,
Bad academic score, Don't like to play",
         'Negative', 'No'],
        [24, 'Male', 'No', nan, nan, nan, nan, nan, nan,
         "Addictive, Anti-social, Poor physical health, Affects mental health, Distur
b sleep pattern, Bad academic score, Don't like to play",
         'Negative', 'No'],
        [23, 'Male', 'No', nan, nan, nan, nan, nan, nan,
         "Violent tendency, Addictive, Anti-social, Poor physical health, Affects men
tal health, Disturb sleep pattern, Bad academic score, Don't like to play",
         'Negative', 'No'],
        [23, 'Female', 'No', nan, nan, nan, nan, nan, nan,
         'Violent tendency, Addictive, Bad academic score', 'Negative',
         'No'],
        [23, 'Male', 'No', nan, nan, nan, nan, nan, nan,
         "Don't like to play", 'Negative', 'No'],
        [27, 'Female', 'No', nan, nan, nan, nan, nan, nan,
         'Affects mental health', 'Negative', 'No'],
        [23, 'Male', 'No', nan, nan, nan, nan, nan, nan,
         "Violent tendency, Addictive, Anti-social, Poor physical health, Affects men
tal health, Disturb sleep pattern, Bad academic score, Don't like to play",
```

```
         'Negative', 'No'],
        [23, 'Female', 'No', nan, nan, nan, nan, nan, nan,
         "Violent tendency, Addictive, Affects mental health, Disturb sleep pattern,
    Bad academic score, Don't like to play",
         'Negative', 'No'],
        [22, 'Female', 'No', nan, nan, nan, nan, nan, nan,
         'Violent tendency, Addictive, Disturb sleep pattern', 'Negative',
         'No'],
        [23, 'Female', 'No', nan, nan, nan, nan, nan, nan,
         "Don't like to play", 'Negative', 'No'],
        [22, 'Female', 'No', nan, nan, nan, nan, nan, nan,
         "Don't like to play", 'Negative', 'Yes'],
        [22, 'Female', 'No', nan, nan, nan, nan, nan, nan,
         "Don't like to play", 'Negative', 'No'],
        [24, 'Male', 'No', nan, nan, nan, nan, nan, nan,
         'Addictive, Disturb sleep pattern, Bad academic score',
         'Negative', 'Yes'],
        [22, 'Male', 'No', nan, nan, nan, nan, nan, nan,
         "Don't like to play", 'Negative', 'No'],
        [23, 'Female', 'No', nan, nan, nan, nan, nan, nan,
         "Addictive, Anti-social, Affects mental health, Bad academic score, Don't li
    ke to play",
         'Negative', 'No'],
        [23, 'Female', 'No', nan, nan, nan, nan, nan, nan,
         'Affects mental health, Disturb sleep pattern', 'Negative', 'No'],
        [23, 'Male', 'No', nan, nan, nan, nan, nan, nan,
         "Poor physical health, Don't like to play", 'Negative', 'No'],
        [19, 'Male', 'No', nan, nan, nan, nan, nan, nan,
         'Violent tendency, Addictive, Poor physical health, Affects mental health, D
    isturb sleep pattern',
         'Negative', 'Yes'],
        [19, 'Male', 'No', nan, nan, nan, nan, nan, nan,
         "Violent tendency, Poor physical health, Disturb sleep pattern, Bad academic
    score, Don't like to play",
         'Negative', 'No'],
        [20, 'Male', 'No', nan, nan, nan, nan, nan, nan,
         "Addictive, Anti-social, Affects mental health, Don't like to play",
         'Negative', 'No'],
        [18, 'Male', 'No', nan, nan, nan, nan, nan, nan,
         'Addictive, Poor physical health', 'Negative', 'No'],
        [19, 'Female', 'No', nan, nan, nan, nan, nan, nan,
         'Poor physical health, Disturb sleep pattern, Bad academic score',
         'Negative', 'No'],
        [22, 'Female', 'No', nan, nan, nan, nan, nan, nan,
         'Anti-social, Poor physical health, Affects mental health',
         'Negative', 'No'],
        [21, 'Female', 'No', nan, nan, nan, nan, nan, nan,
         "Violent tendency, Poor physical health, Don't like to play",
         'Negative', 'No'],
        [21, 'Male', 'No', nan, nan, nan, nan, nan, nan,
         'Addictive, Anti-social, Poor physical health, Affects mental health',
         'Negative', 'No'],
        [25, 'Male', 'No', nan, nan, nan, nan, nan, nan,
         'Addictive, Poor physical health, Affects mental health',
         'Negative', 'Yes'],
        [24, 'Female', 'No', nan, nan, nan, nan, nan, nan,
         'Poor physical health, Affects mental health, Disturb sleep pattern, Bad aca
    demic score',
         'Negative', 'Yes'],
        [24, 'Female', 'No', nan, nan, nan, nan, nan, nan,
         'Addictive, Poor physical health, Disturb sleep pattern',
         'Negative', 'No'],
        [22, 'Male', 'No', nan, nan, nan, nan, nan, nan,
         'Poor physical health, Bad academic score', 'Negative', 'Yes'],
        [23, 'Female', 'No', nan, nan, nan, nan, nan, nan,
         "Violent tendency, Addictive, Anti-social, Poor physical health, Affects men
    tal health, Don't like to play",
         'Negative', 'No']], dtype=object)
```

In [66]:
```python
#stepping
data2.values[::1]
```

Out[66]:
```
array([[21, 'Female', 'Yes', 'Less than 1 year', 'Several in a week',
        'Upto 1 hour', 'Positive', 'Leadership Qualities',
        'Affects mental health', nan, nan, nan],
       [24, 'Male', 'Yes', 'Less than 1 year', 'Several in a day',
        'Upto 1 hour', 'Negative',
        'Alertness, Co-ordination, Leadership Qualities',
        'Addiction, Anti-social, Poor physical health, Affects mental health, Bad ac
ademic score',
        nan, nan, nan],
       [22, 'Male', 'Yes', '1 - 2 years', 'Several in a week',
        '1 - 2 hours', 'Negative', 'Alertness',
        'Violent tendency, Addiction, Poor physical health, Affects mental health, D
isturb sleep pattern, Bad academic score',
        nan, nan, nan],
       [23, 'Male', 'Yes', '1 - 2 years', 'Several in a week',
        '1 - 2 hours', 'Positive',
        'Alertness, Co-ordination, Leadership Qualities', 'Addiction',
        nan, nan, nan],
       [21, 'Female', 'Yes', 'Less than 1 year', 'Several in a day',
        'Less than 30 minute', 'Negative', 'Alertness',
        'Violent tendency, Addiction, Anti-social, Poor physical health, Affects men
tal health, Disturb sleep pattern, Bad academic score',
        nan, nan, nan],
       [24, 'Male', 'Yes', 'Less than 1 year', 'Several in a week',
        'Less than 30 minute', 'Positive',
        'Alertness, Co-ordination, Cognition, Leadership Qualities, Concentration',
        'Addiction, Disturb sleep pattern', nan, nan, nan],
       [22, 'Male', 'Yes', 'More than 2 years', 'Several in a month',
        'Less than 30 minute', 'Negative',
        'Alertness, Co-ordination, Cognition, Leadership Qualities',
        'Violent tendency, Addiction, Anti-social, Poor physical health, Affects men
tal health, Disturb sleep pattern, Bad academic score',
        nan, nan, nan],
       [22, 'Female', 'Yes', 'Less than 1 year', 'Several in a month',
        'Less than 30 minute', 'Negative', 'Alertness',
        'Addiction, Affects mental health', nan, nan, nan],
       [24, 'Male', 'Yes', 'Less than 1 year', 'Several in a week',
        'Upto 1 hour', 'Negative', 'Concentration',
        'Poor physical health, Affects mental health, Bad academic score',
        nan, nan, nan],
       [26, 'Male', 'Yes', 'Less than 1 year', 'Several in a day',
        'Upto 1 hour', 'Negative',
        'Alertness, Co-ordination, Leadership Qualities, Presence of mind',
        'Violent tendency, Addiction, Anti-social, Poor physical health, Affects men
tal health, Bad academic score',
        nan, nan, nan],
       [18, 'Female', 'Yes', 'Less than 1 year', 'Several in a day',
        'More than 2 hours', 'Negative',
        'Alertness, Leadership Qualities',
        'Addiction, Poor physical health, Disturb sleep pattern, Bad academic scor
e',
        nan, nan, nan],
       [18, 'Male', 'Yes', '1 - 2 years', 'Several in a week',
        'Upto 1 hour', 'Positive', 'Co-ordination, Cognition',
        'Addiction, Anti-social, Poor physical health', nan, nan, nan],
       [20, 'Female', 'Yes', 'More than 2 years', 'Several in a day',
        'Upto 1 hour', 'Positive', 'Cognition, Leadership Qualities',
        'Addiction, Affects mental health, Bad academic score', nan, nan,
        nan],
       [19, 'Male', 'Yes', 'Less than 1 year', 'Several in a week',
        'Upto 1 hour', 'Positive', 'Cognition, Leadership Qualities',
        'Addiction, Disturb sleep pattern, Bad academic score', nan, nan,
        nan],
       [21, 'Male', 'Yes', 'More than 2 years', 'Several in a week',
        '1 - 2 hours', 'Positive', 'Co-ordination, Cognition',
```

```
       'Addiction, Anti-social, Poor physical health, Disturb sleep pattern',
        nan, nan, nan],
       [22, 'Male', 'Yes', '1 - 2 years', 'Several in a week',
        'Less than 30 minute', 'Positive',
        'Alertness, Leadership Qualities',
        'Violent tendency, Addiction, Affects mental health, Disturb sleep pattern',
        nan, nan, nan],
       [23, 'Male', 'Yes', 'More than 2 years', 'Several in a week',
        '1 - 2 hours', 'Positive',
        'Alertness, Co-ordination, Leadership Qualities',
        'Violent tendency, Poor physical health, Disturb sleep pattern',
        nan, nan, nan],
       [25, 'Male', 'Yes', '1 - 2 years', 'Several in a day',
        'Less than 30 minute', 'Negative', 'Co-ordination, Cognition',
        'Addiction, Anti-social, Affects mental health, Disturb sleep pattern',
        nan, nan, nan],
       [23, 'Female', 'Yes', '1 - 2 years', 'Several in a week',
        '1 - 2 hours', 'Positive', 'Alertness, Co-ordination, Cognition',
        'Addiction, Poor physical health, Bad academic score', nan, nan,
        nan],
       [25, 'Male', 'Yes', 'More than 2 years', 'Several in a month',
        'Upto 1 hour', 'Positive',
        'Alertness, Cognition, Leadership Qualities',
        'Violent tendency, Addiction, Anti-social, Poor physical health',
        nan, nan, nan],
       [27, 'Male', 'Yes', '1 - 2 years', 'Several in a day',
        '1 - 2 hours', 'Positive', 'Alertness, Cognition',
        'Violent tendency, Anti-social, Poor physical health, Disturb sleep patter
n',
        nan, nan, nan],
       [27, 'Female', 'Yes', '1 - 2 years', 'Several in a week',
        '1 - 2 hours', 'Positive',
        'Co-ordination, Cognition, Leadership Qualities',
        'Violent tendency, Anti-social, Poor physical health, Disturb sleep patter
n',
        nan, nan, nan],
       [26, 'Female', 'Yes', '1 - 2 years', 'Several in a month',
        '1 - 2 hours', 'Negative', 'Co-ordination, Leadership Qualities',
        'Addiction, Anti-social, Affects mental health, Bad academic score',
        nan, nan, nan],
       [23, 'Male', 'No', nan, nan, nan, nan, nan, nan,
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Bad academic score, Don't like to play",
        'Negative', 'No'],
       [24, 'Male', 'No', nan, nan, nan, nan, nan, nan,
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b sleep pattern, Bad academic score, Don't like to play",
        'Negative', 'No'],
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tal health, Disturb sleep pattern, Bad academic score, Don't like to play",
        'Negative', 'No'],
       [23, 'Female', 'No', nan, nan, nan, nan, nan, nan,
        'Violent tendency, Addictive, Bad academic score', 'Negative',
        'No'],
       [23, 'Male', 'No', nan, nan, nan, nan, nan, nan,
        "Don't like to play", 'Negative', 'No'],
       [27, 'Female', 'No', nan, nan, nan, nan, nan, nan,
        'Affects mental health', 'Negative', 'No'],
       [23, 'Male', 'No', nan, nan, nan, nan, nan, nan,
        "Violent tendency, Addictive, Anti-social, Poor physical health, Affects men
tal health, Disturb sleep pattern, Bad academic score, Don't like to play",
        'Negative', 'No'],
       [23, 'Female', 'No', nan, nan, nan, nan, nan, nan,
        "Violent tendency, Addictive, Affects mental health, Disturb sleep pattern,
Bad academic score, Don't like to play",
        'Negative', 'No'],
       [22, 'Female', 'No', nan, nan, nan, nan, nan, nan,
        'Violent tendency, Addictive, Disturb sleep pattern', 'Negative',
```

```
                'No'],
               [23, 'Female', 'No', nan, nan, nan, nan, nan, nan,
                "Don't like to play", 'Negative', 'No'],
               [22, 'Female', 'No', nan, nan, nan, nan, nan, nan,
                "Don't like to play", 'Negative', 'Yes'],
               [22, 'Female', 'No', nan, nan, nan, nan, nan, nan,
                "Don't like to play", 'Negative', 'No'],
               [24, 'Male', 'No', nan, nan, nan, nan, nan, nan,
                'Addictive, Disturb sleep pattern, Bad academic score',
                'Negative', 'Yes'],
               [22, 'Male', 'No', nan, nan, nan, nan, nan, nan,
                "Don't like to play", 'Negative', 'No'],
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                "Addictive, Anti-social, Affects mental health, Bad academic score, Don't li
        ke to play",
                'Negative', 'No'],
               [23, 'Female', 'No', nan, nan, nan, nan, nan, nan,
                'Affects mental health, Disturb sleep pattern', 'Negative', 'No'],
               [23, 'Male', 'No', nan, nan, nan, nan, nan, nan,
                "Poor physical health, Don't like to play", 'Negative', 'No'],
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                'Violent tendency, Addictive, Poor physical health, Affects mental health, D
        isturb sleep pattern',
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               [19, 'Male', 'No', nan, nan, nan, nan, nan, nan,
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        score, Don't like to play",
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                "Addictive, Anti-social, Affects mental health, Don't like to play",
                'Negative', 'No'],
               [18, 'Male', 'No', nan, nan, nan, nan, nan, nan,
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                'Poor physical health, Disturb sleep pattern, Bad academic score',
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               [22, 'Female', 'No', nan, nan, nan, nan, nan, nan,
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                'Negative', 'No'],
               [21, 'Female', 'No', nan, nan, nan, nan, nan, nan,
                "Violent tendency, Poor physical health, Don't like to play",
                'Negative', 'No'],
               [21, 'Male', 'No', nan, nan, nan, nan, nan, nan,
                'Addictive, Anti-social, Poor physical health, Affects mental health',
                'Negative', 'No'],
               [25, 'Male', 'No', nan, nan, nan, nan, nan, nan,
                'Addictive, Poor physical health, Affects mental health',
                'Negative', 'Yes'],
               [24, 'Female', 'No', nan, nan, nan, nan, nan, nan,
                'Poor physical health, Affects mental health, Disturb sleep pattern, Bad aca
        demic score',
                'Negative', 'Yes'],
               [24, 'Female', 'No', nan, nan, nan, nan, nan, nan,
                'Addictive, Poor physical health, Disturb sleep pattern',
                'Negative', 'No'],
               [22, 'Male', 'No', nan, nan, nan, nan, nan, nan,
                'Poor physical health, Bad academic score', 'Negative', 'Yes'],
               [23, 'Female', 'No', nan, nan, nan, nan, nan, nan,
                "Violent tendency, Addictive, Anti-social, Poor physical health, Affects men
        tal health, Don't like to play",
                'Negative', 'No']], dtype=object)
```

In [67]:
```python
# Extracting rows and columns
data2[['Age','Gender','Do you play PUBG game']]
```

Out[67]:

Age	**Gender**	**Do you play PUBG game**

	Age	Gender	Do you play PUBG game
0	21	Female	Yes
1	24	Male	Yes
2	22	Male	Yes
3	23	Male	Yes
4	21	Female	Yes
5	24	Male	Yes
6	22	Male	Yes
7	22	Female	Yes
8	24	Male	Yes
9	26	Male	Yes
10	18	Female	Yes
11	18	Male	Yes
12	20	Female	Yes
13	19	Male	Yes
14	21	Male	Yes
15	22	Male	Yes
16	23	Male	Yes
17	25	Male	Yes
18	23	Female	Yes
19	25	Male	Yes
20	27	Male	Yes
21	27	Female	Yes
22	26	Female	Yes
23	23	Male	No
24	24	Male	No
25	23	Male	No
26	23	Female	No
27	23	Male	No
28	27	Female	No
29	23	Male	No
30	23	Female	No
31	22	Female	No
32	23	Female	No
33	22	Female	No
34	22	Female	No
35	24	Male	No

	Age	Gender	Do you play PUBG game
36	22	Male	No
37	23	Female	No
38	23	Female	No
39	23	Male	No
40	19	Male	No
41	19	Male	No
42	20	Male	No
43	18	Male	No
44	19	Female	No
45	22	Female	No
46	21	Female	No
47	21	Male	No
48	25	Male	No
49	24	Female	No
50	24	Female	No
51	22	Male	No
52	23	Female	No

Data Cleaning

In [68]:
```python
data2.isnull().sum()
```

Out[68]:
```
Age                                                             0
Gender                                                          0
Do you play PUBG game                                           0
How long have you been playing this game                       30
How often do you play this Game                                30
How much time you spent daily                                  30
How affect this game on students                               30
Positive effects of playing PUBG                               30
Negative effects of playing PUBG                               30
What are reasons that you dont play PUBG                        23
How affect this game on students.1                             23
According to you are there positive effects of playing PUBG    23
dtype: int64
```

In [69]:
```python
data1.isnull().sum()
```

Out[69]:
```
Id               0
groupId          0
matchId          0
assists          0
boosts           0
damageDealt      0
DBNOs            0
headshotKills    0
heals            0
```

```
killPlace          0
killPoints         0
kills              0
killStreaks        0
longestKill        0
matchDuration      0
matchType          0
maxPlace           0
numGroups          0
rankPoints         0
revives            0
rideDistance       0
roadKills          0
swimDistance       0
teamKills          0
vehicleDestroys    0
walkDistance       0
weaponsAcquired    0
winPoints          0
winPlacePerc       0
dtype: int64
```

Data Visualiazation:- Plotting of Graph

In [70]:
```python
print(np.__version__)
```

```
1.20.1
```

Barplot

In [71]:
```python
sns.countplot(x = 'Age',  data = data2)
plt.show()
```
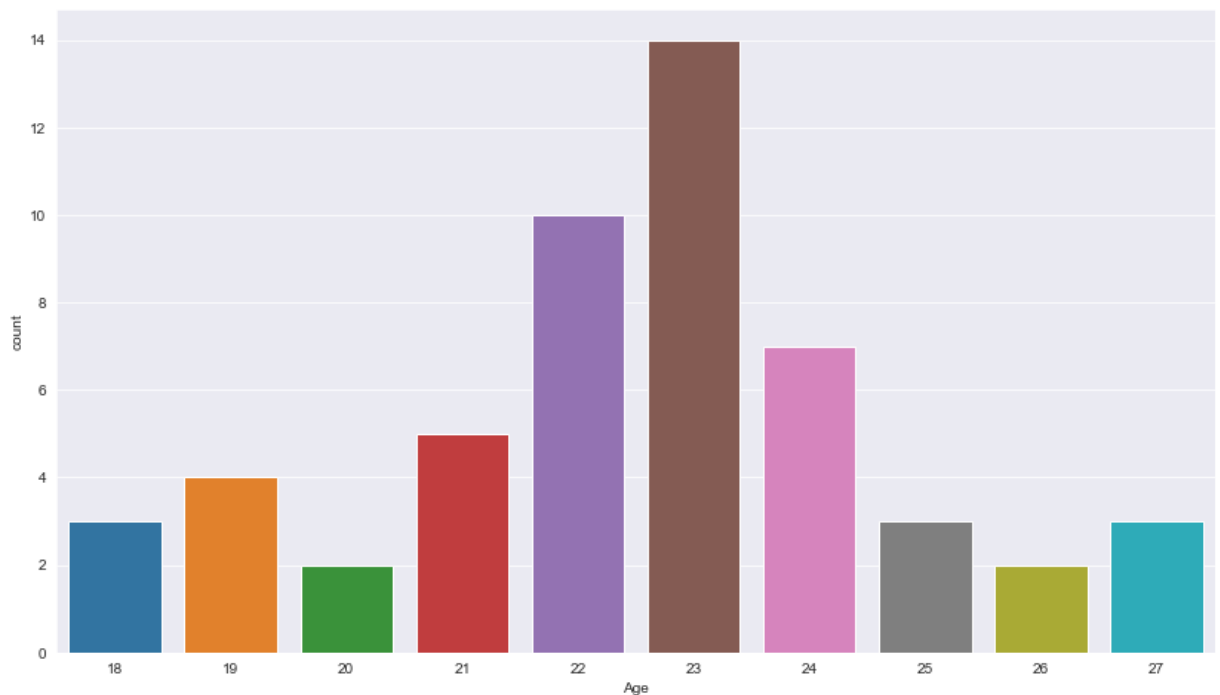

In [72]:
```python
sns.countplot(y = 'What are reasons that you dont play PUBG', data = data2)
plt.show()
```
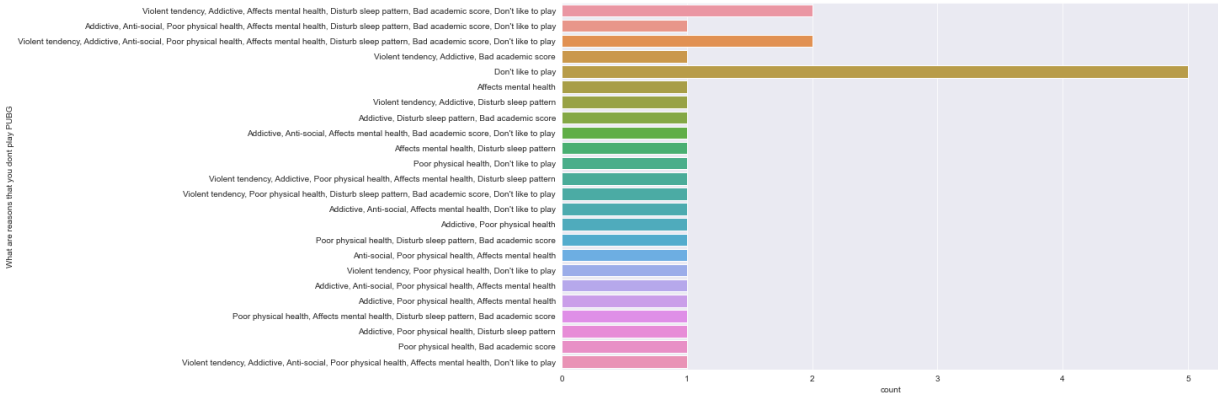
In [73]:
```python
sns.countplot(x = 'kills', data = data1)
plt.show()
```
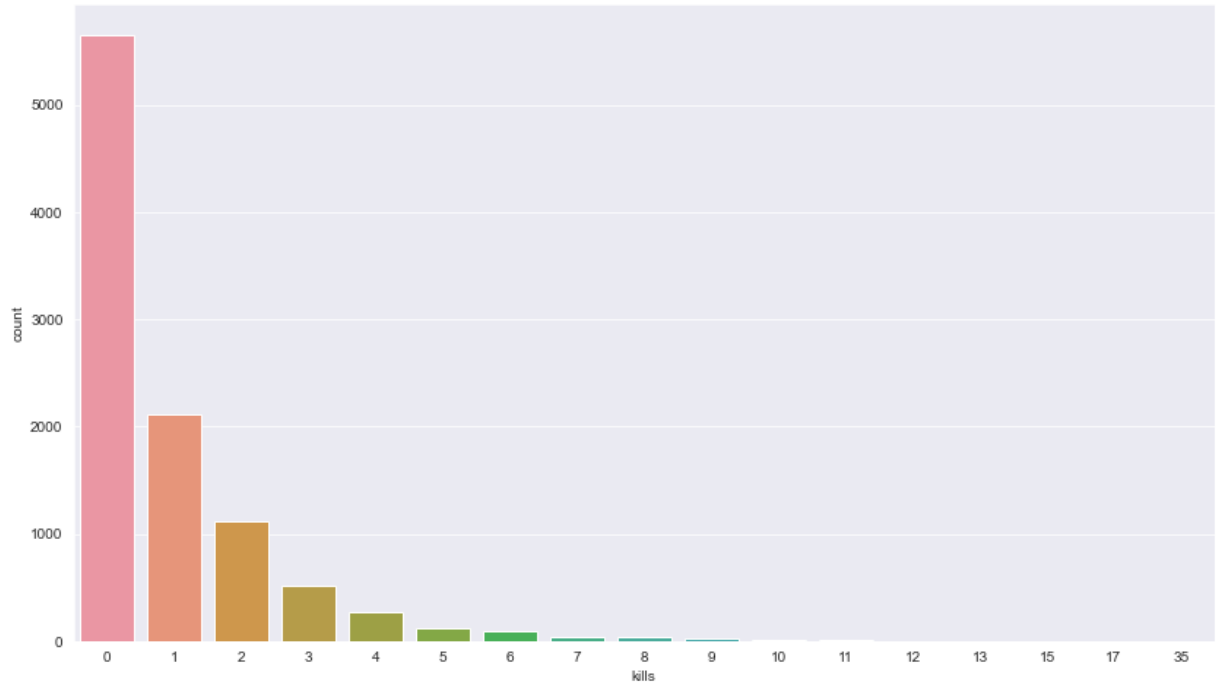

In [74]:
```python
sns.countplot(y = 'matchType', data = data1)
plt.show()
```
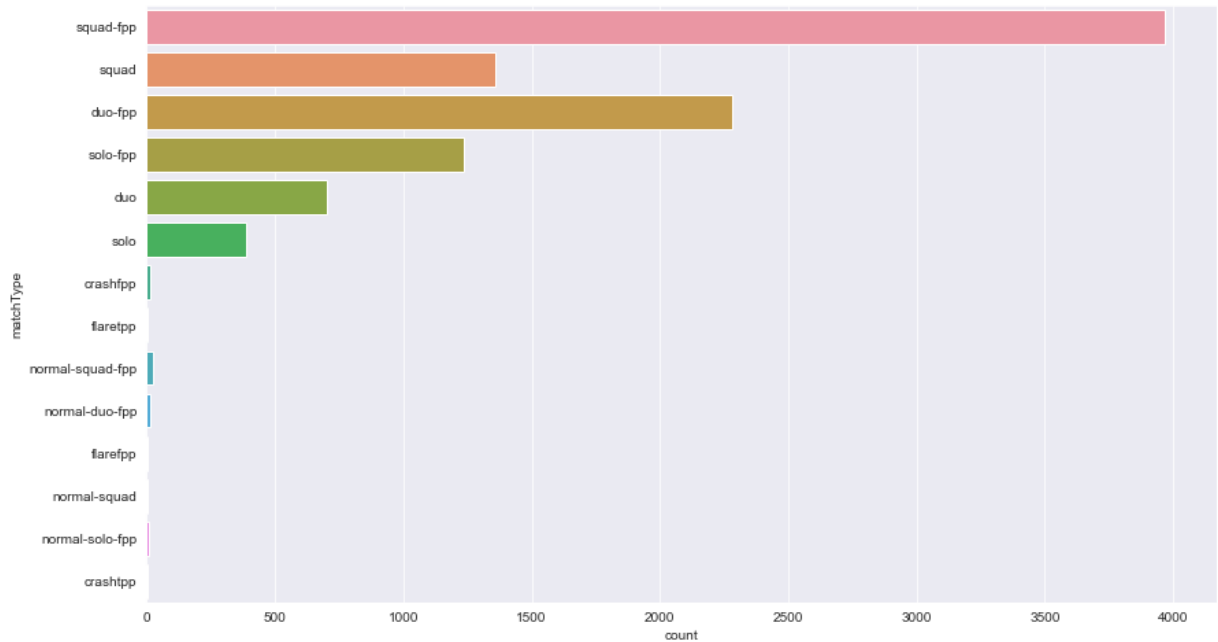
In [75]:
```python
# Bar plot of Match type
a=data1.matchType.value_counts().plot.bar()
a.set_xlabel('Match Type')
a.set_ylabel('Frequency')
a.set_title('Barplot of Match type')
plt.xticks(rotation = 60)
```

Out[75]:
```
(array([ 0,  1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13]),
 [Text(0, 0, 'squad-fpp'),
  Text(1, 0, 'duo-fpp'),
  Text(2, 0, 'squad'),
  Text(3, 0, 'solo-fpp'),
  Text(4, 0, 'duo'),
  Text(5, 0, 'solo'),
  Text(6, 0, 'normal-squad-fpp'),
  Text(7, 0, 'crashfpp'),
  Text(8, 0, 'normal-duo-fpp'),
  Text(9, 0, 'normal-solo-fpp'),
  Text(10, 0, 'normal-squad'),
  Text(11, 0, 'flaretpp'),
  Text(12, 0, 'crashtpp'),
  Text(13, 0, 'flarefpp')])
```
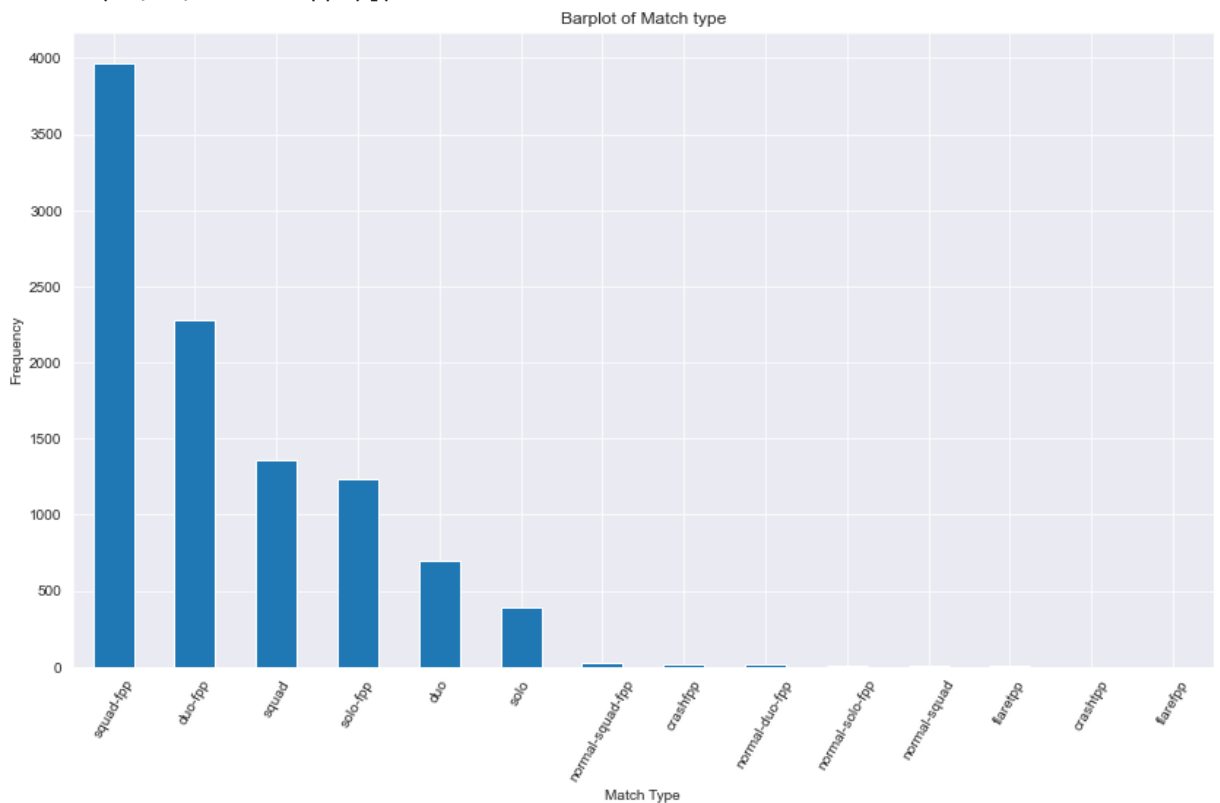

In [76]:
```python
a=data1.headshotKills.value_counts().plot.bar()
a.set_xlabel('Headshot Kills')
a.set_ylabel('Frequency')
a.set_title('Barplot of Headshot Kills')
```

Out[76]: Text(0.5, 1.0, 'Barplot of Headshot Kills')

Barplot of Headshot Kills
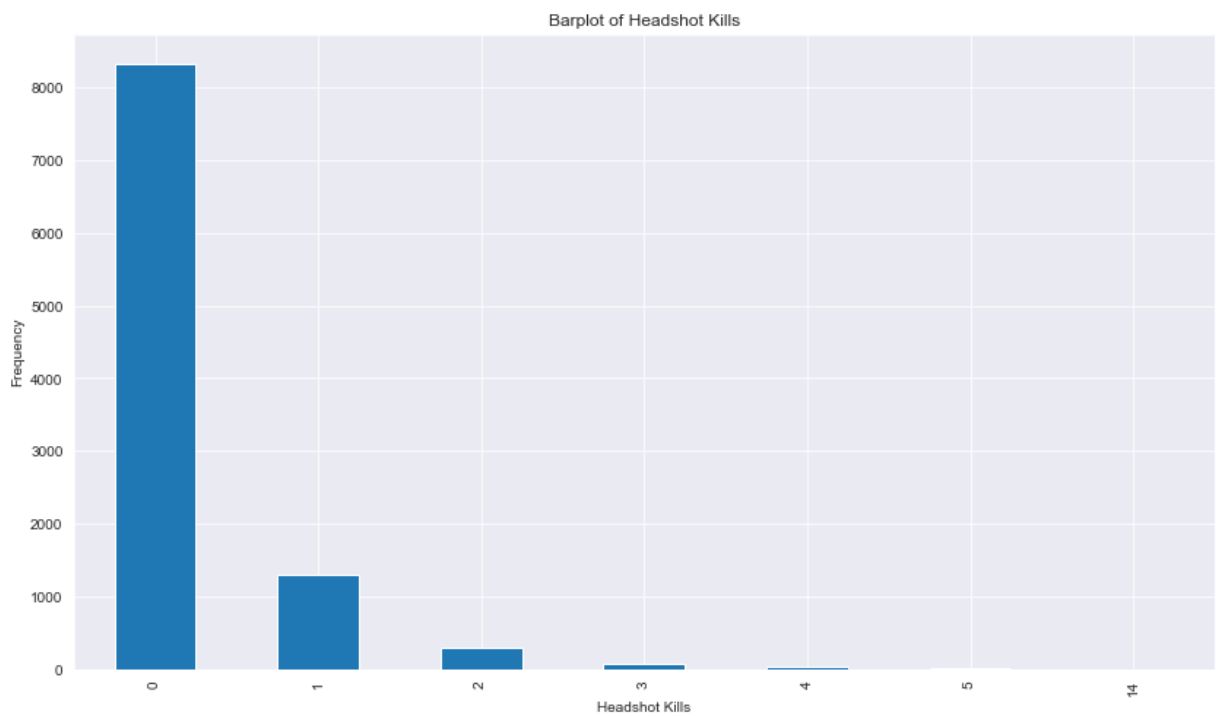

```
In [77]:    sns.barplot(x='matchType', y='killPoints', data=data1)
            plt.xticks(rotation=70)
```

```
Out[77]:   (array([ 0,  1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13]),
            [Text(0, 0, 'squad-fpp'),
             Text(1, 0, 'squad'),
             Text(2, 0, 'duo-fpp'),
             Text(3, 0, 'solo-fpp'),
             Text(4, 0, 'duo'),
             Text(5, 0, 'solo'),
             Text(6, 0, 'crashfpp'),
             Text(7, 0, 'flaretpp'),
             Text(8, 0, 'normal-squad-fpp'),
             Text(9, 0, 'normal-duo-fpp'),
             Text(10, 0, 'flarefpp'),
             Text(11, 0, 'normal-squad'),
             Text(12, 0, 'normal-solo-fpp'),
             Text(13, 0, 'crashtpp')])
```
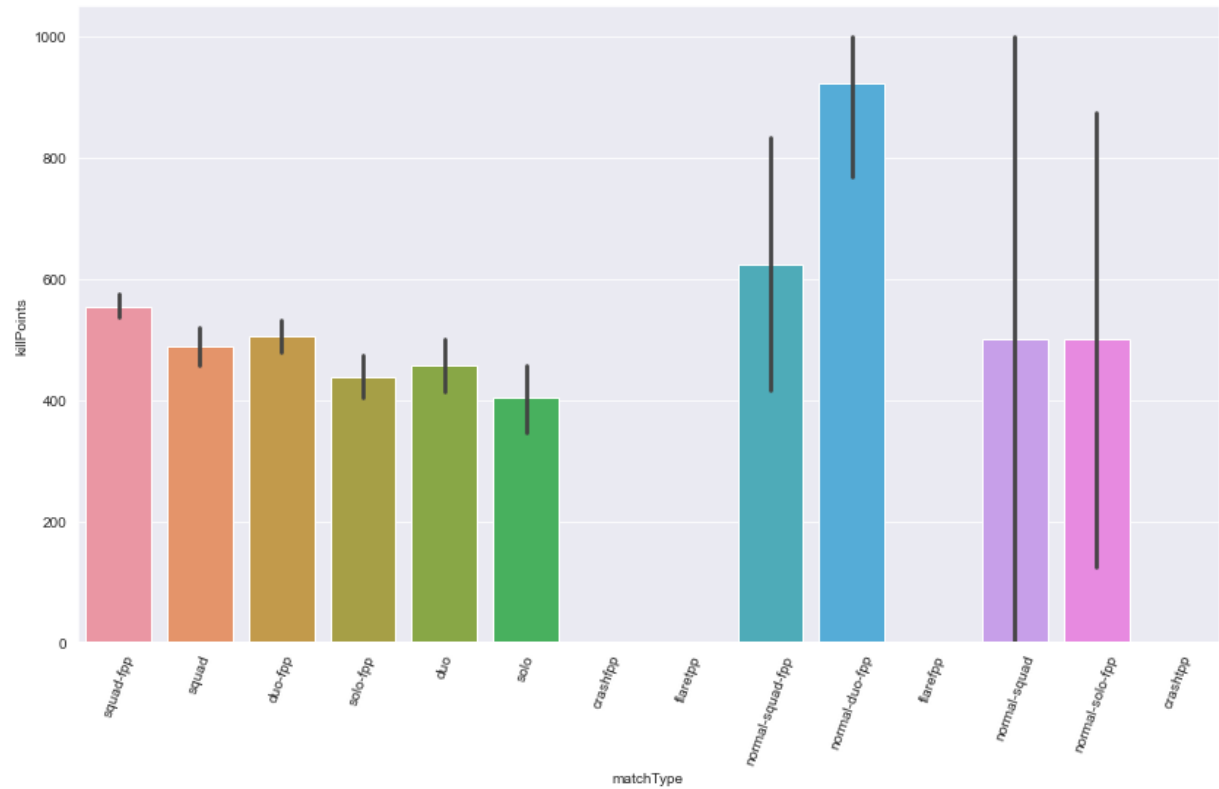
PieChart

```python
a=data1.matchType.value_counts().plot.pie()
a.set_title('Match Type')
```

Out[78]: Text(0.5, 1.0, 'Match Type')
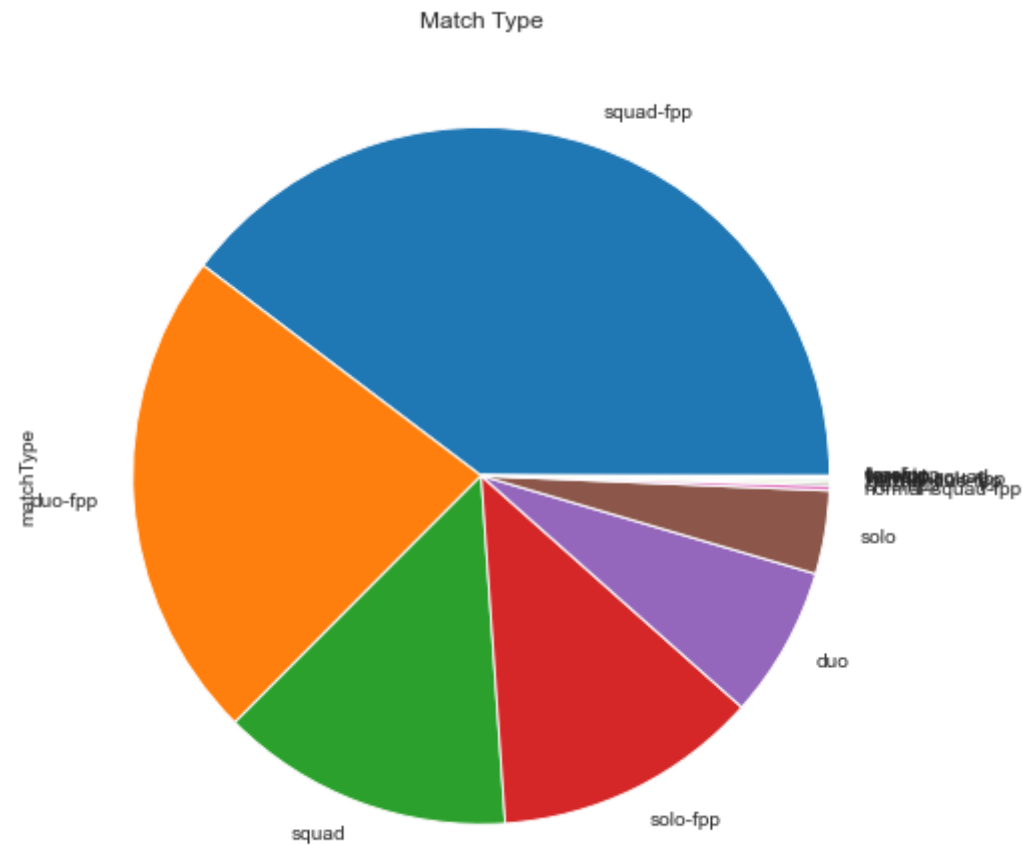
In [79]:
```python
a=data1.kills.value_counts().plot.pie()
a.set_title('Kills')
```

Out[79]: Text(0.5, 1.0, 'Kills')
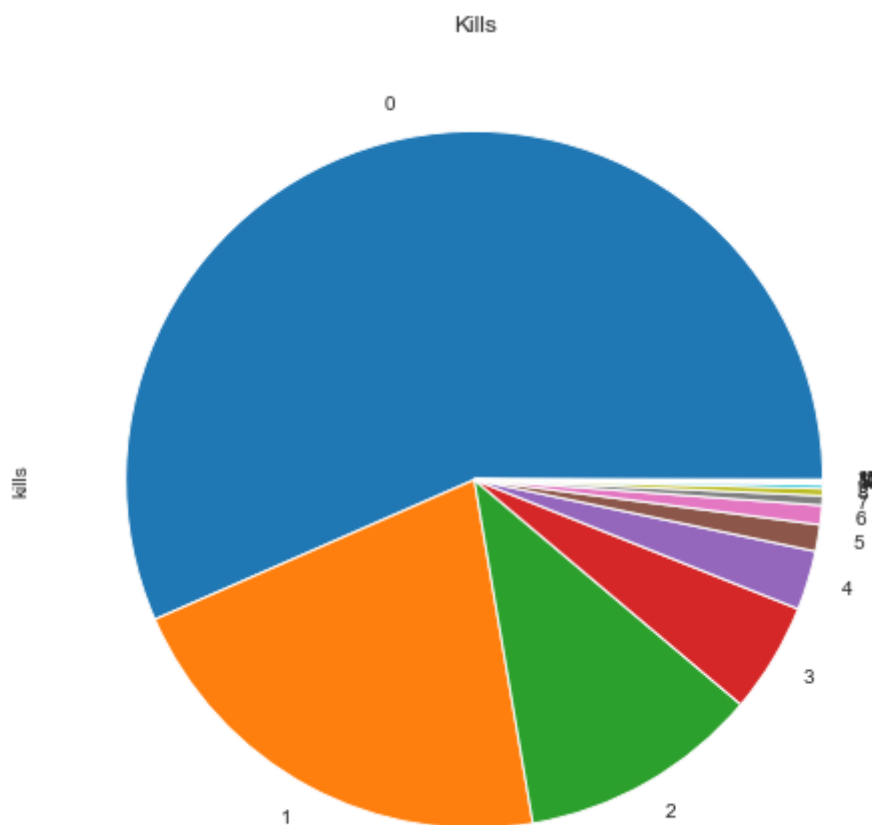
Kills

In [80]:
```python
a=data2.Age.value_counts().plot.pie()
a.set_title('Age')
```

Out[80]: Text(0.5, 1.0, 'Age')

Age
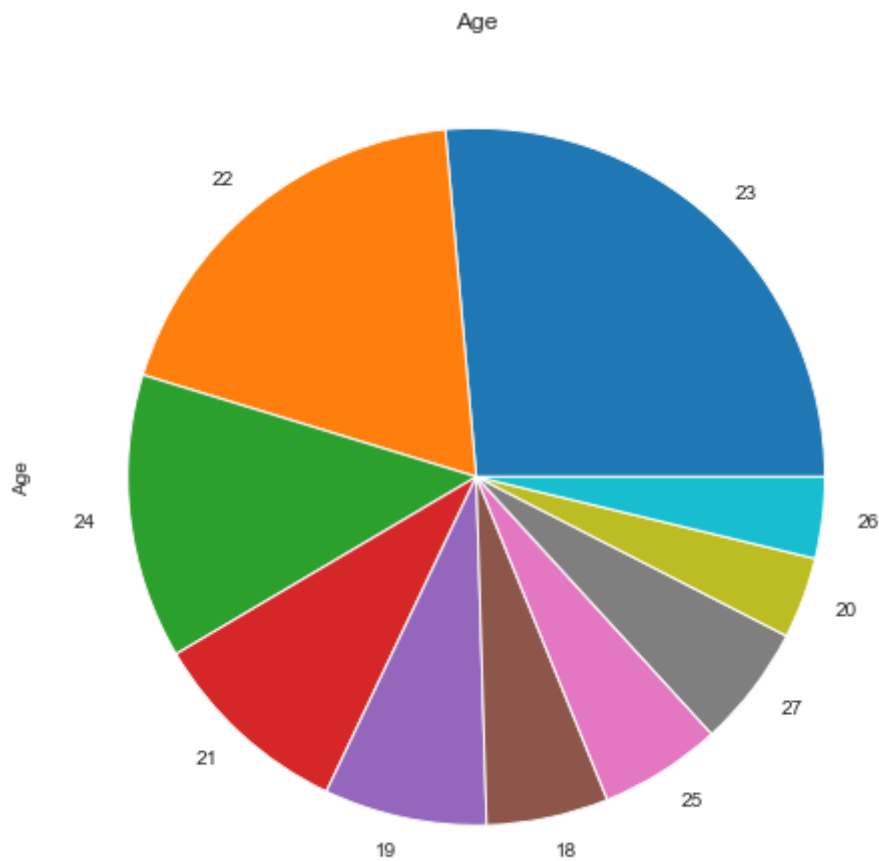
Scatter Plot

```python
data1.plot.scatter(x='headshotKills',y='killPoints')
```

`<AxesSubplot:xlabel='headshotKills', ylabel='killPoints'>`
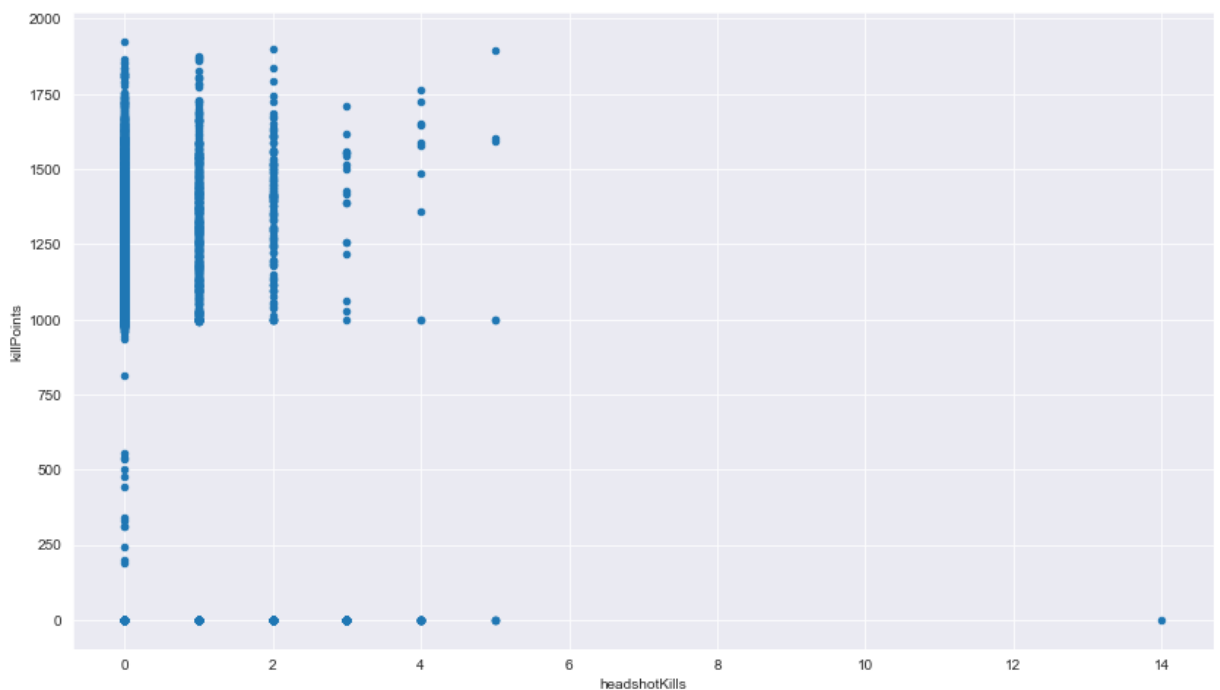
```python
data1.plot.scatter(x='headshotKills',y='weaponsAcquired')
```

`<AxesSubplot:xlabel='headshotKills', ylabel='weaponsAcquired'>`

Out[82]:
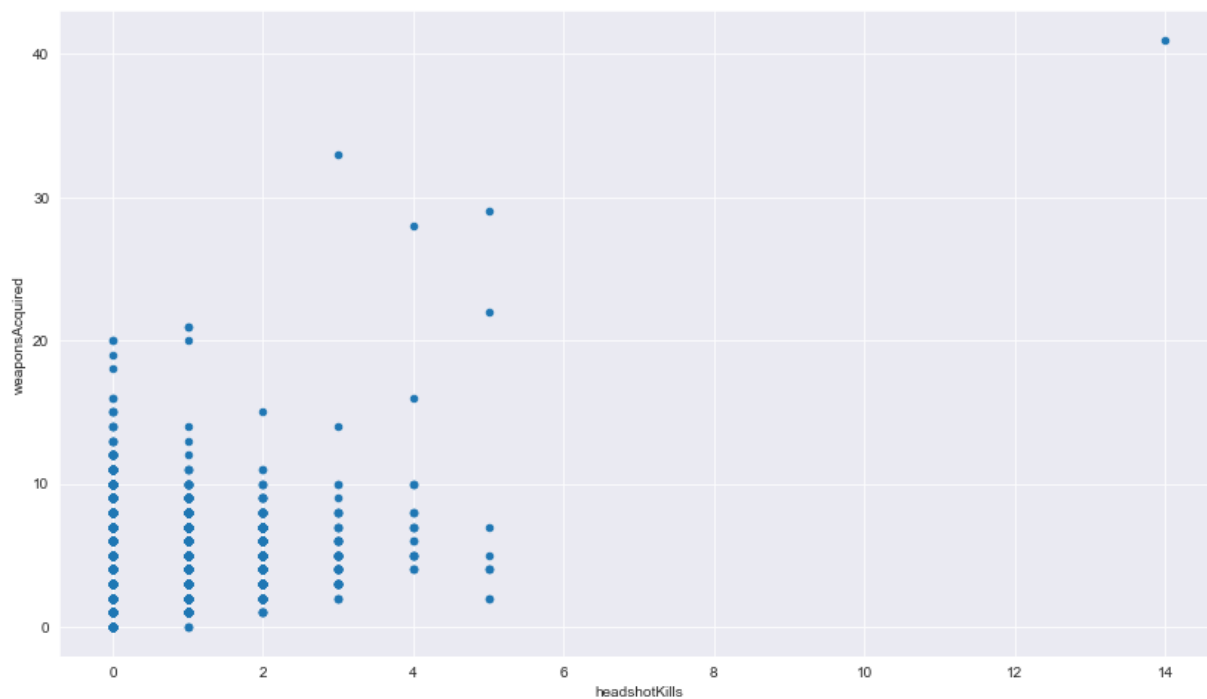
In [83]:
```python
data2.plot.scatter(y='Age',x='Gender')
```
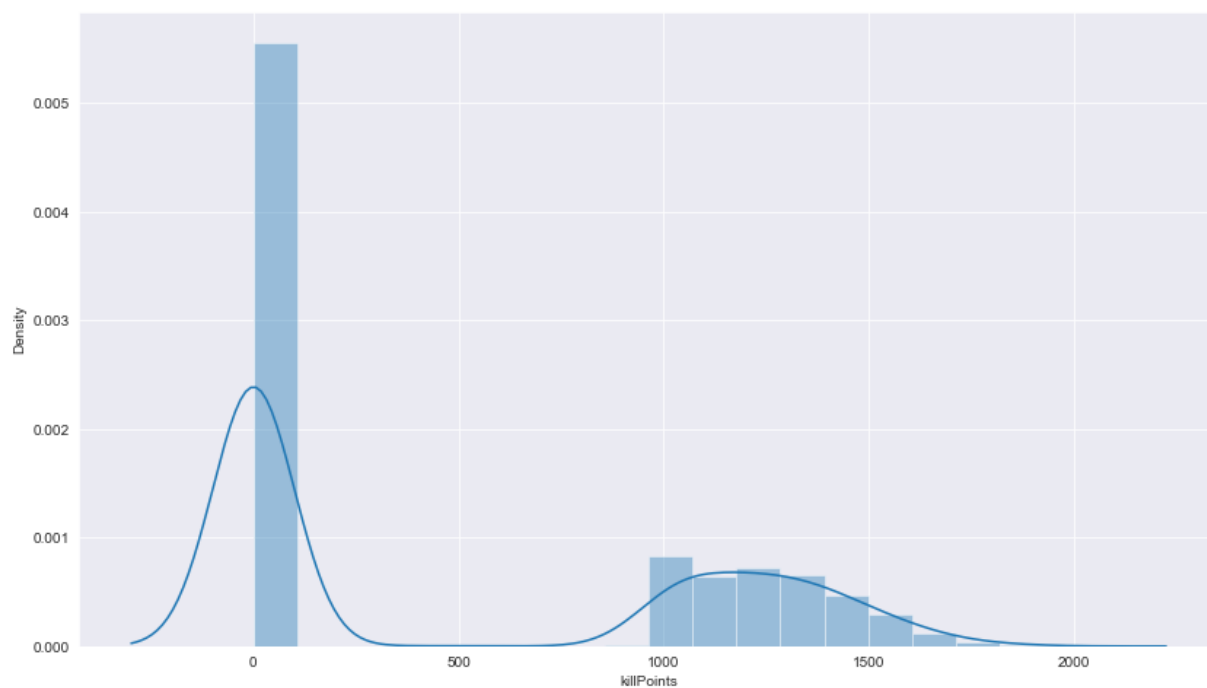
Out[83]: <AxesSubplot:xlabel='Gender', ylabel='Age'>

Distribution Plot

In [84]:
```python
sns.distplot(data1['matchDuration'])
```
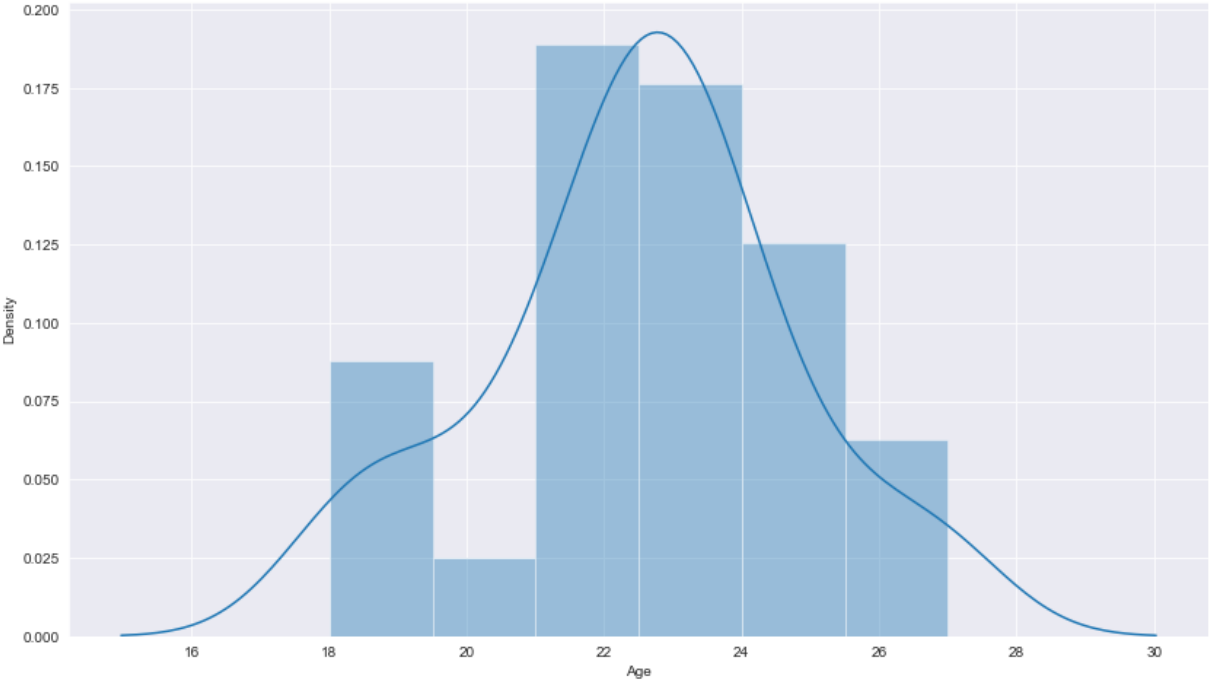
Out[84]: <AxesSubplot:xlabel='matchDuration', ylabel='Density'>
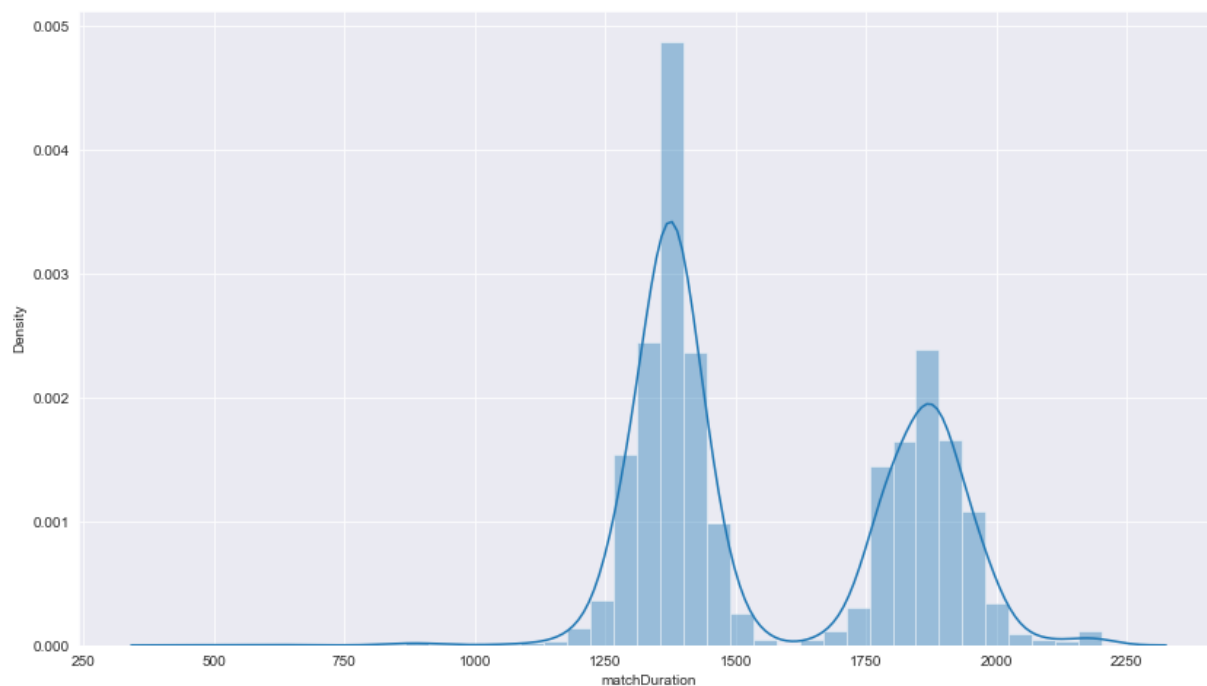
In [85]:
```python
sns.distplot(data1['killPoints'])
```

Out[85]: <AxesSubplot:xlabel='killPoints', ylabel='Density'>

In [86]:
```python
sns.distplot(data2['Age'])
```

Out[86]: <AxesSubplot:xlabel='Age', ylabel='Density'>

In [ ]:

In [ ]:

In [ ]: