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

In [2]:
```
ds = pd.read_csv("F:\Downloads\Symboisis Skills\Datasets\pubg.csv")      # impo
```

In [3]:
```
ds                    # Print what the data in dataset
```

Out[3]:

	Id	groupId	matchId	assists	boosts	damageDealt	DBNOs	hea
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 [4]:
```
ds.head()           # shows the 1st 5 rows from dataset
```

Out[4]:

	Id	groupId	matchId	assists	boosts	damageDealt	DBNOs	headsh
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 [5]:
```
ds.head(10)           # shows the 1st 10 rows from dataset
```

Out[5]:

	Id	groupId	matchId	assists	boosts	damageDealt	DBNOs	headsho
0	2f262dd9795e60	78437bcd91d40e	d5db3a49eb2955	0	0	0.00	0	
1	a32847cf5bf34b	85b7ce5a12e10b	65223f05c7fdb4	0	0	163.20	1	
2	1b1900a9990396	edf80d6523380a	1cadec4534f30a	0	3	278.70	2	
3	f589dd03b60bf2	804ab5e5585558	c4a5676dc91604	0	0	191.90	1	
4	c23c4cc5b78b35	b3e2cd169ed920	cd595700a01bfa	0	0	100.00	1	
5	fd034582dd4d2e	9b8930aeee086a	6f6e52b15ddf21	0	1	200.00	2	
6	c60b5633f4dcc8	7c0f817f6627c7	3232c1e0fec04b	0	3	638.20	4	
7	f0ba8246b6980f	7318b5204462cb	112e9711f86001	0	0	27.94	0	
8	79c5d5eda1c72e	a85b81198dfc06	ef5fc25e28ffb1	1	4	275.80	3	
9	94834a28e52abd	bc513cde35fa54	f36a754a9b88f7	1	1	530.40	4	

10 rows × 29 columns

In [6]:

```
ds.tail()           # shows the last 5 rows from dataset
```

Out[6]:

	Id	groupId	matchId	assists	boosts	damageDealt	DBNOs	hea
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 [7]:

```
ds.tail(10)                # shows the last 10 rows from dataset
```

Out[7]:

	Id	groupId	matchId	assists	boosts	damageDealt	DBNOs	hea
9990	f5787aa77c8e06	88096109cb472d	5df66fa38e24f8	0	1	366.2	3	
9991	165a09eed0c3c9	81a070d7fde035	1a48b828ac6bfa	0	3	572.0	0	
9992	0feb1da947933b	94c3f30cc7c3bc	5bbabd56cbd75c	0	2	0.0	0	
9993	25ca622e243276	518d0f7b16c302	cabda8b31e52d0	0	2	310.8	3	
9994	2cd3e844b34462	ea957f38343675	bb2a4179c006b0	0	0	0.0	0	
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	

	Id	groupId	matchId	assists	boosts	damageDealt	DBNOs	hea
9998	f6874657399d69	d31843d7e62ccb	662567dcf280f5	0	0	0.0	0	
9999	90359b0b8f8b0d	61d5b1bb8da43f	258bfa48d88014	0	0	0.0	0	

In [8]:
```
print(type(ds))          # it shows the type of dataset
```

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

In [9]:
```
print(ds.shape)          # shows the shape of dataset in row and column
```

```
(10000, 29)
```

In [10]:
```
print(ds.ndim)           # shows the dimension of dataset
```

```
2
```

In [11]:
```
print(ds.size)           # shows the size of dataset calculating the rows + co
```

```
290000
```

In [12]:
```
ds.columns.to_list()      # create a list of columns from dataset
```

Out[12]:
```
['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 [13]:
```
ds.describe()            # it Describe the data in min max format
```

Out[13]:

	assists	boosts	damageDealt	DBNOs	headshotKills	heals	killPl

	assists	boosts	damageDealt	DBNOs	headshotKills	heals	killPl
count	10000.000000	10000.000000	10000.000000	10000.00000	10000.000000	10000.000000	10000.000
mean	0.234600	1.088500	129.211264	0.64400	0.221700	1.354000	47.663
std	0.575149	1.703279	167.193945	1.09562	0.577046	2.629102	27.424
min	0.000000	0.000000	0.000000	0.00000	0.000000	0.000000	1.000
25%	0.000000	0.000000	0.000000	0.00000	0.000000	0.000000	24.000
50%	0.000000	0.000000	83.805000	0.00000	0.000000	0.000000	48.000
75%	0.000000	2.000000	185.325000	1.00000	0.000000	2.000000	71.000
max	7.000000	18.000000	3469.000000	11.00000	14.000000	31.000000	100.000

In [14]:
```
ds.mean()              # it shows the mean value from the dataset
```

Out[14]:
```
assists               0.234600
boosts                1.088500
damageDealt         129.211264
DBNOs                 0.644000
headshotKills         0.221700
heals                 1.354000
killPlace            47.663100
killPoints          506.970200
kills                 0.913400
killStreaks           0.543800
longestKill          23.272333
matchDuration      1575.398000
maxPlace             44.655500
numGroups            43.151300
rankPoints          889.699600
revives               0.160200
rideDistance        600.693584
roadKills             0.004200
swimDistance          4.385917
teamKills             0.024400
vehicleDestroys       0.007700
walkDistance       1130.008410
weaponsAcquired       3.635900
winPoints           609.344000
winPlacePerc          0.469926
dtype: float64
```

In [15]:
```
ds.median()          # shows that median values from dataset
```

Out[15]:
```
assists               0.0000
boosts                0.0000
damageDealt          83.8050
DBNOs                 0.0000
headshotKills         0.0000
heals                 0.0000
killPlace            48.0000
killPoints            0.0000
kills                 0.0000
killStreaks           0.0000
longestKill           0.0000
matchDuration      1431.5000
```

```
maxPlace             30.0000
numGroups            30.0000
rankPoints         1444.0000
revives               0.0000
rideDistance          0.0000
roadKills             0.0000
swimDistance          0.0000
teamKills             0.0000
vehicleDestroys       0.0000
walkDistance        650.3500
weaponsAcquired       3.0000
winPoints             0.0000
winPlacePerc          0.4583
dtype: float64
```

In [16]:
```
ds.max()              # shows the max values from dataset
```

Out[16]:
```
Id                 fff25e031e7c48
groupId            fff6b2c20ffd96
matchId            fffe92232706aa
assists                         7
boosts                         18
damageDealt                3469.0
DBNOs                          11
headshotKills                  14
heals                          31
killPlace                     100
killPoints                   1926
kills                          35
killStreaks                     4
longestKill                538.6
matchDuration               2202
matchType                squad-fpp
maxPlace                      100
numGroups                     100
rankPoints                   2835
revives                         5
rideDistance                28780.0
roadKills                       3
swimDistance                971.2
teamKills                       3
vehicleDestroys                 2
walkDistance                10490.0
weaponsAcquired                41
winPoints                    1863
winPlacePerc                  1.0
dtype: object
```

In [17]:
```
ds['matchDuration'].unique()          # Show the unique function for the col
```

Out[17]:
```
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 [18]:

```
ds['matchDuration'].nunique()        # Show the count of unique function for
```

Out[18]: 811

In [19]:
```
ds.nunique()                        # Show the count of unique function for the
```

Out[19]:
```
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 [20]:
```
ds['kills'].min()             # show the min value of column kills using min()
```

Out[20]: 0

In [21]:
```
ds['kills'].max()             # show the max value of column kills using max()
```

Out[21]: 35

In [22]:
```
ds['teamKills'].min()          # show the min value of column teamKills using
```

Out[22]: 0

In [23]:
```
ds['teamKills'].max()          # show the max value of column teamKills using
```

Out[23]: 3

In [24]:
```
ds['damageDealt'].median()       # show the mid value of column damageDealth u
```

Out[24]:
```
83.805
```

In [25]:
```
ds['kills'].median()              # show the mid value of column kills using me
```

Out[25]:
```
0.0
```

In [26]:
```
ds[['killPoints','kills']].max()          # show the max value of column kill
```

Out[26]:
```
killPoints    1926
kills           35
dtype: int64
```

In [27]:
```
ds['killPoints'].argmax()
```

Out[27]:
```
5780
```

In [28]:
```
ds.iloc[[ds['killPoints'].argmax()]]
```

Out[28]:

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

1 rows × 29 columns

In [29]:
```
ds.iloc[5780]
```

Out[29]:
```
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
```

In [30]:
```
ds.loc[5780]
```

Out[30]:
```
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 [31]:
```
ds['killPlace'].value_counts()
```

Out[31]:
```
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 [32]:
```
ds['matchType'].value_counts()
```

Out[32]:
```
squad-fpp           3969
duo-fpp             2282
squad               1359
solo-fpp            1234
duo                  702
solo                 386
normal-squad-fpp      24
crashfpp              13
normal-duo-fpp        13
```

```
normal-solo-fpp         8
normal-squad            4
flaretpp                3
crashtpp                2
flarefpp                1
Name: matchType, dtype: int64
```

In [33]:
```
ds.describe().columns
```

Out[33]:
```
Index(['assists', 'boosts', 'damageDealt', 'DBNOs', 'headshotKills', 'heals',
       'killPlace', 'killPoints', 'kills', 'killStreaks', 'longestKill',
       'matchDuration', 'maxPlace', 'numGroups', 'rankPoints', 'revives',
       'rideDistance', 'roadKills', 'swimDistance', 'teamKills',
       'vehicleDestroys', 'walkDistance', 'weaponsAcquired', 'winPoints',
       'winPlacePerc'],
      dtype='object')
```

In [34]:
```
ds.iloc[[ds['damageDealt'].argmax()]]
```

Out[34]:

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

1 rows × 29 columns

In [35]:
```
ds.iloc[[ds['longestKill'].argmax()]]
```

Out[35]:

	Id	groupId	matchId	assists	boosts	damageDealt	DBNOs	heads
8265	8a8a4b6184c48c	2bec51c9f4383e	6ad98dfb9d9963	1	3	265.8	1	

1 rows × 29 columns

In [36]:
```
a=ds.sort_values('killPoints').tail()
a
```

Out[36]:

	Id	groupId	matchId	assists	boosts	damageDealt	DBNOs	heac
594	3ea530150379fc	92ae8218955b89	ce08744064e880	0	6	644.2	5	
2232	38235eabea1c61	d816254d846986	fe2e525eaa1032	0	0	264.0	2	
9454	9229c6d001680f	b89789115d990b	b271cf55d04db2	3	7	1182.0	5	
9105	fad8eef42d382f	29c6d9a71c332e	574bdac0aead91	1	7	1021.0	3	
5780	9c5b3a4d8dc175	37e59ecfe2a14f	52310adaef5f4c	0	0	200.0	0	

5 rows × 29 columns

In [37]:
```
b=ds.sort_values('kills').tail()
b
```

Out[37]:

	Id	groupId	matchId	assists	boosts	damageDealt	DBNOs	hea
1442	e95c430fb5bc20	ea800ea1aa6efa	ed092b499ac27d	3	0	1207.0	0	
8004	ca101356b3371b	bfc2c8a37870fa	270e759e643b2a	2	5	1378.0	11	
2504	bed2be3828d78f	8d0adb65b76bc3	87581b7411aafe	4	8	1342.0	11	
3548	d649cd7ad7dd64	09e26b92166dd2	d8b2d5ada8d5a2	1	8	1988.0	11	
3021	ffaa23dce3d18f	1c3d9a6dc204ec	fe7043ee6221c8	7	0	3469.0	0	

5 rows × 29 columns

In [38]:

```
a=ds.groupby('headshotKills')
a.get_group(14)
```

Out[38]:

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

1 rows × 29 columns

In [39]:

```
ds[ds['killPoints']>1500]
```

Out[39]:

	Id	groupId	matchId	assists	boosts	damageDealt	DBNOs	hea
9	94834a28e52abd	bc513cde35fa54	f36a754a9b88f7	1	1	530.4	4	
32	e48908e2b6d2dd	94b95c14614592	99b60fc01250f0	0	0	100.0	1	
37	84a2e75d672f7f	146ec184fc92a3	1e010c6b7f0985	0	0	265.8	3	
68	b086ceb9c7f966	d2e62bfc356a82	e2229491c36ef0	3	7	995.8	2	
87	dcb385ab70d20a	f38050a2aceb56	e15e98f055efc4	0	2	465.7	1	
...	...	...	...	...	...	...	...	
9883	c8a00d5580db15	abe66efaed01b6	3333a0b0c8d118	2	1	355.8	1	
9930	c7fcdb9d663f85	eda2bc2b45d50c	a35ef932e5968b	1	0	153.0	1	
9957	812678877d050a	c324257c438bd3	50e88f443c9b9d	0	0	100.0	1	
9975	d0bbae1fd779f6	69d324baf3a8e0	d8ad908327f64a	2	3	243.2	4	
9985	56b51ec6e40466	3a11a5e48bf198	17e24dcfa74fde	0	0	124.5	1	

483 rows × 29 columns

In [40]:

```
ds[ds['kills']>15]
```

Out[40]:

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

	Id	groupId	matchId	assists	boosts	damageDealt	DBNOs	hea
3548	d649cd7ad7dd64	09e26b92166dd2	d8b2d5ada8d5a2	1	8	1988.0	11	

In [41]:
```
ds[ds['rankPoints']>2000]
```

Out[41]:

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

16 rows × 29 columns

In [42]:
```
ds[(ds['matchDuration']>1800)&(ds['rankPoints']>2000)]
```

Out[42]:

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

2 rows × 29 columns

In [43]:
```
ds[ds['roadKills']>2]
```

Out[43]:

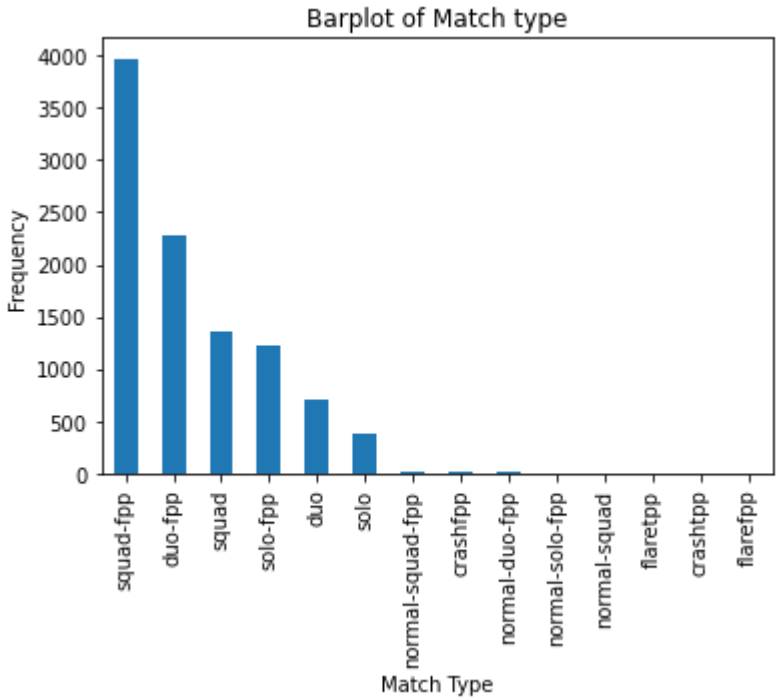
	Id	groupId	matchId	assists	boosts	damageDealt	DBNOs	heads

	Id	groupId	matchId	assists	boosts	damageDealt	DBNOs	heads
1302	13fd930f56638d	3a4d5a40dd17c6	9e6d4e4aad23aa	2	4	599.1	4	

Barplot

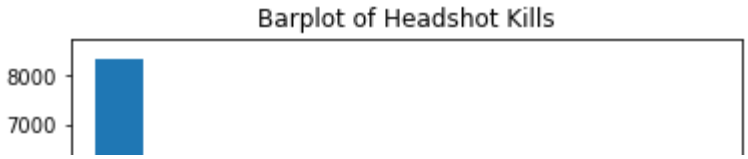
In [44]:
```
# Bar plot of Match type
a=ds.matchType.value_counts().plot.bar()
a.set_xlabel('Match Type')
a.set_ylabel('Frequency')
a.set_title('Barplot of Match type')
```

Out[44]: Text(0.5, 1.0, 'Barplot of Match type')



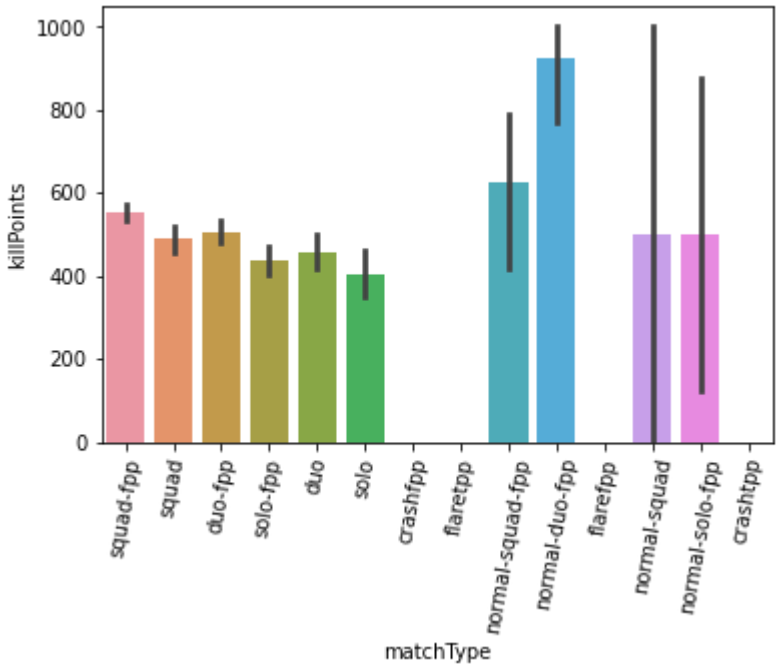
In [45]:
```
a=ds.headshotKills.value_counts().plot.bar()
a.set_xlabel('Headshot Kills')
a.set_ylabel('Frequency')
a.set_title('Barplot of Headshot Kills')
```

Out[45]: Text(0.5, 1.0, 'Barplot of Headshot Kills')



In [46]:
```
sns.barplot(x='matchType', y='killPoints', data=ds)
plt.xticks(rotation=80)
```

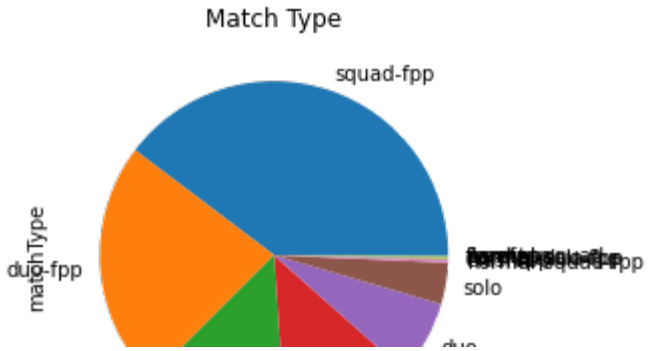
Out[46]:
```
(array([ 0,  1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13]),
 [Text(0, 0, 'squad-fpp'),
  Text(1, 0, 'squad'),
  Text(2, 0, 'duo-fpp'),
  Text(3, 0, 'solo-fpp'),
  Text(4, 0, 'duo'),
  Text(5, 0, 'solo'),
  Text(6, 0, 'crashfpp'),
  Text(7, 0, 'flaretpp'),
  Text(8, 0, 'normal-squad-fpp'),
  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

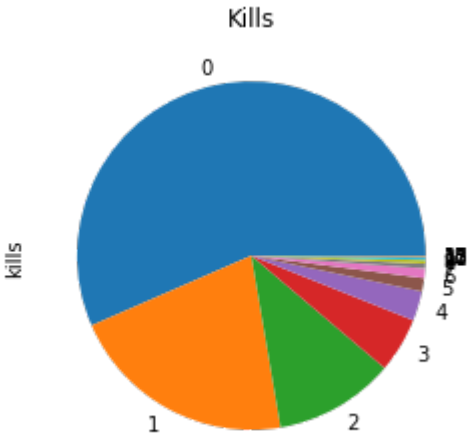
In [47]:
```
a=ds.matchType.value_counts().plot.pie()
a.set_title('Match Type')
```

Out[47]:
```
Text(0.5, 1.0, 'Match Type')
```



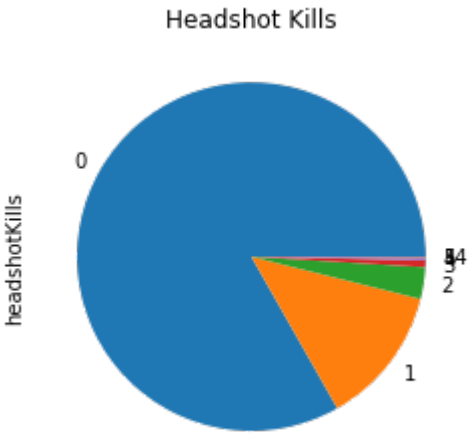
In [48]:
```
a=ds.kills.value_counts().plot.pie()
a.set_title('Kills')
```

Out[48]: Text(0.5, 1.0, 'Kills')



In [49]:
```
a=ds.headshotKills.value_counts().plot.pie()
a.set_title('Headshot Kills')
```

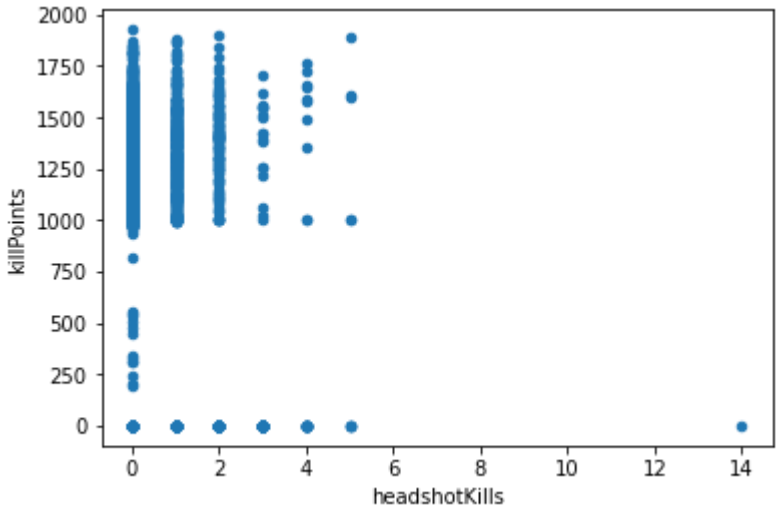
Out[49]: Text(0.5, 1.0, 'Headshot Kills')



Scatter Plot

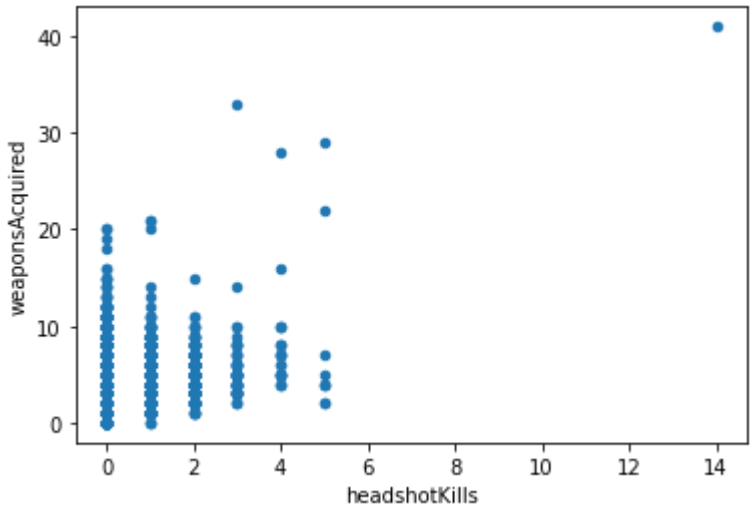
In [50]:
```
ds.plot.scatter(x='headshotKills',y='killPoints')
```

Out[50]: <AxesSubplot:xlabel='headshotKills', ylabel='killPoints'>



In [51]:
```
ds.plot.scatter(x='headshotKills',y='weaponsAcquired')
```

Out[51]: <AxesSubplot:xlabel='headshotKills', ylabel='weaponsAcquired'>



In [52]:
```
ds.plot.scatter(x='kills',y='winPoints')
```

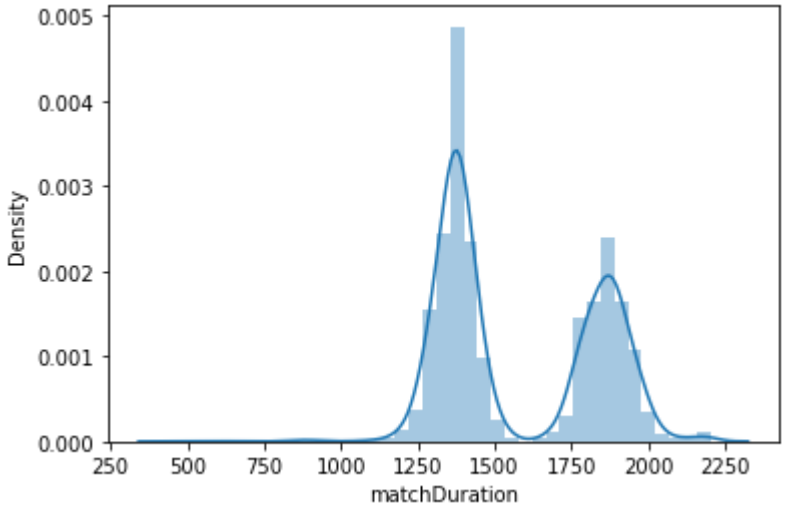
Out[52]: <AxesSubplot:xlabel='kills', ylabel='winPoints'>

Distribution Plot

In [53]:
```
sns.distplot(ds['matchDuration'])
```

```
C:\Users\Raj\anaconda3\lib\site-packages\seaborn\distributions.py:2557: FutureWarning: `distplot` is a deprecated function and will be removed in a future version. Please adapt your code to use either `displot` (a figure-level function with similar flexibility) or `histplot` (an axes-level function for histograms).
  warnings.warn(msg, FutureWarning)
```

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



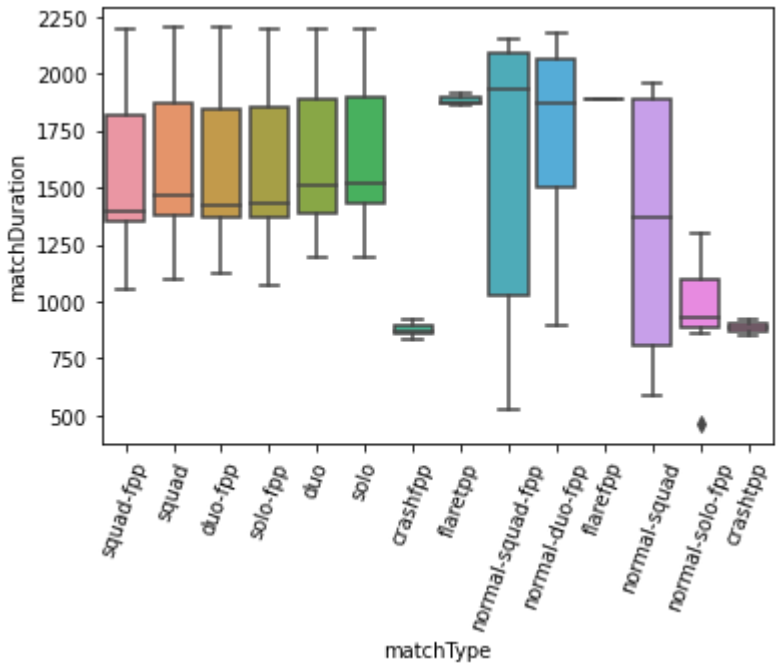
In [54]:
```
sns.distplot(ds['killPoints'])
```

```
C:\Users\Raj\anaconda3\lib\site-packages\seaborn\distributions.py:2557: FutureWarning: `distplot` is a deprecated function and will be removed in a future version. Please adapt your code to use either `displot` (a figure-level function with similar flexibility) or `histplot` (an axes-level function for histograms).
  warnings.warn(msg, FutureWarning)
```

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

Box Plot

In [55]:
```
sns.boxplot (x="matchType",y="matchDuration",data=ds)
plt.xticks(rotation=70);
```



In [ ]:
```
```

In [56]:
```
pip install -U notebook-as-pdf
```

```
Requirement already satisfied: notebook-as-pdf in c:\users\raj\anaconda3\lib\s
ite-packages (0.5.0)
Requirement already satisfied: PyPDF2 in c:\users\raj\anaconda3\lib\site-packa
ges (from notebook-as-pdf) (1.26.0)
Requirement already satisfied: nbconvert in c:\users\raj\anaconda3\lib\site-pa
ckages (from notebook-as-pdf) (6.0.7)
Requirement already satisfied: pyppeteer in c:\users\raj\anaconda3\lib\site-pa
ckages (from notebook-as-pdf) (0.2.6)
Requirement already satisfied: nbformat>=4.4 in c:\users\raj\anaconda3\lib\sit
e-packages (from nbconvert->notebook-as-pdf) (5.1.3)
Requirement already satisfied: bleach in c:\users\raj\anaconda3\lib\site-packa
ges (from nbconvert->notebook-as-pdf) (3.3.0)
Requirement already satisfied: jinja2>=2.4 in c:\users\raj\anaconda3\lib\site-
packages (from nbconvert->notebook-as-pdf) (2.11.3)
Requirement already satisfied: testpath in c:\users\raj\anaconda3\lib\site-pac
kages (from nbconvert->notebook-as-pdf) (0.4.4)
Requirement already satisfied: pygments>=2.4.1 in c:\users\raj\anaconda3\lib\s
ite-packages (from nbconvert->notebook-as-pdf) (2.8.1)
Requirement already satisfied: pandocfilters>=1.4.1 in c:\users\raj\anaconda3\
```

```
lib\site-packages (from nbconvert->notebook-as-pdf) (1.4.3)
Requirement already satisfied: nbclient<0.6.0,>=0.5.0 in c:\users\raj\anaconda
3\lib\site-packages (from nbconvert->notebook-as-pdf) (0.5.3)
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b\site-packages (from nbconvert->notebook-as-pdf) (0.8.4)
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ackages (from nbconvert->notebook-as-pdf) (0.7.1)
Requirement already satisfied: jupyter-core in c:\users\raj\anaconda3\lib\site
-packages (from nbconvert->notebook-as-pdf) (4.7.1)
Requirement already satisfied: jupyterlab-pygments in c:\users\raj\anaconda3\l
ib\site-packages (from nbconvert->notebook-as-pdf) (0.1.2)
Requirement already satisfied: entrypoints>=0.2.2 in c:\users\raj\anaconda3\li
b\site-packages (from nbconvert->notebook-as-pdf) (0.3)
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te-packages (from nbconvert->notebook-as-pdf) (5.0.5)
Requirement already satisfied: MarkupSafe>=0.23 in c:\users\raj\anaconda3\lib\
site-packages (from jinja2>=2.4->nbconvert->notebook-as-pdf) (1.1.1)
Requirement already satisfied: async-generator in c:\users\raj\anaconda3\lib\s
ite-packages (from nbclient<0.6.0,>=0.5.0->nbconvert->notebook-as-pdf) (1.10)
Requirement already satisfied: nest-asyncio in c:\users\raj\anaconda3\lib\site
-packages (from nbclient<0.6.0,>=0.5.0->nbconvert->notebook-as-pdf) (1.5.1)
Requirement already satisfied: jupyter-client>=6.1.5 in c:\users\raj\anaconda
3\lib\site-packages (from nbclient<0.6.0,>=0.5.0->nbconvert->notebook-as-pdf)
(6.1.12)
Requirement already satisfied: python-dateutil>=2.1 in c:\users\raj\anaconda3\
lib\site-packages (from jupyter-client>=6.1.5->nbclient<0.6.0,>=0.5.0->nbconve
rt->notebook-as-pdf) (2.8.1)
Requirement already satisfied: tornado>=4.1 in c:\users\raj\anaconda3\lib\site
-packages (from jupyter-client>=6.1.5->nbclient<0.6.0,>=0.5.0->nbconvert->note
book-as-pdf) (6.1)
Requirement already satisfied: pyzmq>=13 in c:\users\raj\anaconda3\lib\site-pa
ckages (from jupyter-client>=6.1.5->nbclient<0.6.0,>=0.5.0->nbconvert->noteboo
k-as-pdf) (20.0.0)
Requirement already satisfied: pywin32>=1.0 in c:\users\raj\anaconda3\lib\site
-packages (from jupyter-core->nbconvert->notebook-as-pdf) (227)
Requirement already satisfied: ipython-genutils in c:\users\raj\anaconda3\lib\
site-packages (from nbformat>=4.4->nbconvert->notebook-as-pdf) (0.2.0)
Requirement already satisfied: jsonschema!=2.5.0,>=2.4 in c:\users\raj\anacond
a3\lib\site-packages (from nbformat>=4.4->nbconvert->notebook-as-pdf) (3.2.0)
Requirement already satisfied: six>=1.11.0 in c:\users\raj\anaconda3\lib\site-
packages (from jsonschema!=2.5.0,>=2.4->nbformat>=4.4->nbconvert->notebook-as-
pdf) (1.15.0)
Requirement already satisfied: attrs>=17.4.0 in c:\users\raj\anaconda3\lib\sit
e-packages (from jsonschema!=2.5.0,>=2.4->nbformat>=4.4->nbconvert->notebook-a
s-pdf) (20.3.0)
Requirement already satisfied: pyrsistent>=0.14.0 in c:\users\raj\anaconda3\li
b\site-packages (from jsonschema!=2.5.0,>=2.4->nbformat>=4.4->nbconvert->noteb
ook-as-pdf) (0.17.3)
Requirement already satisfied: setuptools in c:\users\raj\anaconda3\lib\site-p
ackages (from jsonschema!=2.5.0,>=2.4->nbformat>=4.4->nbconvert->notebook-as-p
df) (52.0.0.post20210125)
Requirement already satisfied: webencodings in c:\users\raj\anaconda3\lib\site
-packages (from bleach->nbconvert->notebook-as-pdf) (0.5.1)
Requirement already satisfied: packaging in c:\users\raj\anaconda3\lib\site-pa
ckages (from bleach->nbconvert->notebook-as-pdf) (20.9)
Requirement already satisfied: pyparsing>=2.0.2 in c:\users\raj\anaconda3\lib\
site-packages (from packaging->bleach->nbconvert->notebook-as-pdf) (2.4.7)
Requirement already satisfied: urllib3<2.0.0,>=1.25.8 in c:\users\raj\anaconda
3\lib\site-packages (from pyppeteer->notebook-as-pdf) (1.26.4)
Requirement already satisfied: importlib-metadata>=1.4 in c:\users\raj\anacond
a3\lib\site-packages (from pyppeteer->notebook-as-pdf) (3.10.0)
Requirement already satisfied: websockets<10.0,>=9.1 in c:\users\raj\anaconda
3\lib\site-packages (from pyppeteer->notebook-as-pdf) (9.1)
Requirement already satisfied: tqdm<5.0.0,>=4.42.1 in c:\users\raj\anaconda3\l
ib\site-packages (from pyppeteer->notebook-as-pdf) (4.59.0)
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Requirement already satisfied: pyee<9.0.0,>=8.1.0 in c:\users\raj\anaconda3\li
b\site-packages (from pyppeteer->notebook-as-pdf) (8.2.2)
Requirement already satisfied: appdirs<2.0.0,>=1.4.3 in c:\users\raj\anaconda
3\lib\site-packages (from pyppeteer->notebook-as-pdf) (1.4.4)
Requirement already satisfied: zipp>=0.5 in c:\users\raj\anaconda3\lib\site-pa
ckages (from importlib-metadata>=1.4->pyppeteer->notebook-as-pdf) (3.4.1)
```