Task 1 :-

In [2]:

```
import numpy as np
Hr = np.arange(1,501)
Hr
fin = np.arange(501, 1001)
fin
IT = np.arange(1001,1501)
IT
Sales = np.arange(1501,2001)
Sales
```

Out[2]:

```
array([1501, 1502, 1503, 1504, 1505, 1506, 1507, 1508, 1509, 1510, 1511,
       1512, 1513, 1514, 1515, 1516, 1517, 1518, 1519, 1520, 1521, 1522,
       1523, 1524, 1525, 1526, 1527, 1528, 1529, 1530, 1531, 1532, 1533,
       1534, 1535, 1536, 1537, 1538, 1539, 1540, 1541, 1542, 1543, 1544,
       1545, 1546, 1547, 1548, 1549, 1550, 1551, 1552, 1553, 1554, 1555,
       1556, 1557, 1558, 1559, 1560, 1561, 1562, 1563, 1564, 1565, 1566,
       1567, 1568, 1569, 1570, 1571, 1572, 1573, 1574, 1575, 1576, 1577,
       1578, 1579, 1580, 1581, 1582, 1583, 1584, 1585, 1586, 1587, 1588,
       1589, 1590, 1591, 1592, 1593, 1594, 1595, 1596, 1597, 1598, 1599,
       1600, 1601, 1602, 1603, 1604, 1605, 1606, 1607, 1608, 1609, 1610,
       1611, 1612, 1613, 1614, 1615, 1616, 1617, 1618, 1619, 1620, 1621,
       1622, 1623, 1624, 1625, 1626, 1627, 1628, 1629, 1630, 1631, 1632,
       1633, 1634, 1635, 1636, 1637, 1638, 1639, 1640, 1641, 1642, 1643,
       1644, 1645, 1646, 1647, 1648, 1649, 1650, 1651, 1652, 1653, 1654,
       1655, 1656, 1657, 1658, 1659, 1660, 1661, 1662, 1663, 1664, 1665,
       1666, 1667, 1668, 1669, 1670, 1671, 1672, 1673, 1674, 1675, 1676,
       1677, 1678, 1679, 1680, 1681, 1682, 1683, 1684, 1685, 1686, 1687,
       1688, 1689, 1690, 1691, 1692, 1693, 1694, 1695, 1696, 1697, 1698,
       1699, 1700, 1701, 1702, 1703, 1704, 1705, 1706, 1707, 1708, 1709,
       1710, 1711, 1712, 1713, 1714, 1715, 1716, 1717, 1718, 1719, 1720,
       1721, 1722, 1723, 1724, 1725, 1726, 1727, 1728, 1729, 1730, 1731,
       1732, 1733, 1734, 1735, 1736, 1737, 1738, 1739, 1740, 1741, 1742,
       1743, 1744, 1745, 1746, 1747, 1748, 1749, 1750, 1751, 1752, 1753,
       1754, 1755, 1756, 1757, 1758, 1759, 1760, 1761, 1762, 1763, 1764,
       1765, 1766, 1767, 1768, 1769, 1770, 1771, 1772, 1773, 1774, 1775,
       1776, 1777, 1778, 1779, 1780, 1781, 1782, 1783, 1784, 1785, 1786,
       1787, 1788, 1789, 1790, 1791, 1792, 1793, 1794, 1795, 1796, 1797,
       1798, 1799, 1800, 1801, 1802, 1803, 1804, 1805, 1806, 1807, 1808,
       1809, 1810, 1811, 1812, 1813, 1814, 1815, 1816, 1817, 1818, 1819,
       1820, 1821, 1822, 1823, 1824, 1825, 1826, 1827, 1828, 1829, 1830,
       1831, 1832, 1833, 1834, 1835, 1836, 1837, 1838, 1839, 1840, 1841,
       1842, 1843, 1844, 1845, 1846, 1847, 1848, 1849, 1850, 1851, 1852,
       1853, 1854, 1855, 1856, 1857, 1858, 1859, 1860, 1861, 1862, 1863,
       1864, 1865, 1866, 1867, 1868, 1869, 1870, 1871, 1872, 1873, 1874,
       1875, 1876, 1877, 1878, 1879, 1880, 1881, 1882, 1883, 1884, 1885,
       1886, 1887, 1888, 1889, 1890, 1891, 1892, 1893, 1894, 1895, 1896,
       1897, 1898, 1899, 1900, 1901, 1902, 1903, 1904, 1905, 1906, 1907,
       1908, 1909, 1910, 1911, 1912, 1913, 1914, 1915, 1916, 1917, 1918,
       1919, 1920, 1921, 1922, 1923, 1924, 1925, 1926, 1927, 1928, 1929,
       1930, 1931, 1932, 1933, 1934, 1935, 1936, 1937, 1938, 1939, 1940,
       1941, 1942, 1943, 1944, 1945, 1946, 1947, 1948, 1949, 1950, 1951,
       1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962,
       1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973,
       1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984,
       1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995,
       1996, 1997, 1998, 1999, 2000])
```

Task 2 :-

In [15]:

```
salhr = np.random.randint(25000,50000,500)
salfin = np.array(1.25*salhr)
salIT = np.array(salfin/2)
salsales = np.array(salhr+5000)
salsales
salIT
```

Out[15]:

```
array([25093.75 , 19113.125, 27369.375, 19727.5  , 23750.   , 23500.   ,
       18781.875, 29995.   , 28695.625, 24642.5  , 30728.75 , 18345.625,
       19875.625, 17333.75 , 16846.875, 21903.75 , 25643.125, 30307.5  ,
       16219.375, 17035.   , 19069.375, 18911.25 , 30738.125, 30781.25 ,
       26245.   , 17088.75 , 19538.125, 23751.25 , 22428.75 , 29948.75 ,
       20823.125, 25166.875, 28666.875, 16765.   , 16035.   , 28193.125,
       15988.75 , 25000.625, 21092.5  , 25265.625, 25920.625, 15788.125,
       27813.75 , 27323.125, 23673.75 , 22846.25 , 26748.75 , 22370.625,
       22680.   , 19137.5  , 24870.   , 16057.5  , 21245.625, 21230.   ,
       28444.375, 17674.375, 29876.875, 17147.5  , 30839.375, 26157.5  ,
       19646.25 , 30108.125, 18450.625, 17685.   , 21404.375, 25211.25 ,
       29851.25 , 18081.25 , 22457.5  , 27586.25 , 17713.125, 18487.5  ,
       29195.625, 16952.5  , 21604.375, 16471.875, 19937.5  , 25370.   ,
       26206.25 , 21600.   , 26475.   , 28155.625, 24815.625, 28948.75 ,
       25186.875, 19920.   , 23483.75 , 16717.5  , 19936.25 , 29490.625,
       18284.375, 23471.25 , 20890.625, 18044.375, 19823.75 , 26518.125,
       26628.125, 19499.375, 16035.625, 24450.   , 20626.25 , 24980.625,
       29222.5  , 16105.   , 30150.   , 29435.625, 17100.625, 19650.   ,
       28583.125, 16321.25 , 27478.75 , 27693.75 , 26310.   , 30778.125,
       28502.5  , 20136.875, 24191.25 , 24973.75 , 28302.5  , 27051.875,
       19267.5  , 17116.25 , 17150.625, 26329.375, 22511.25 , 21540.   ,
       16463.125, 21408.125, 26821.25 , 29121.875, 24245.   , 20139.375,
       19099.375, 16675.   , 20338.75 , 29131.875, 21823.75 , 19376.875,
       18116.875, 28884.375, 26920.   , 22653.75 , 17786.25 , 27775.625,
       17842.5  , 25622.5  , 30852.5  , 26456.875, 16433.125, 24557.5  ,
       31138.75 , 17996.25 , 29080.625, 18173.75 , 26789.375, 27583.125,
       21953.125, 18781.25 , 21006.25 , 15928.75 , 17921.25 , 20173.75 ,
       26205.625, 28570.625, 28635.625, 17150.625, 30244.375, 21867.5  ,
       31196.875, 20226.25 , 20090.625, 29270.   , 28923.75 , 21562.5  ,
       30341.25 , 29083.125, 18258.125, 31091.25 , 19884.375, 16543.125,
       27128.125, 26629.375, 29907.5  , 24517.5  , 29150.   , 24399.375,
       20485.   , 22875.   , 27910.   , 20520.   , 27785.625, 25371.25 ,
       22763.75 , 29902.5  , 21427.5  , 26623.75 , 27473.75 , 16238.75 ,
       21761.875, 17212.5  , 19123.125, 21689.375, 17499.375, 16996.25 ,
       24411.25 , 27621.875, 26816.25 , 26157.5  , 19925.   , 21466.25 ,
       20838.125, 16950.625, 21590.625, 30503.75 , 18646.25 , 26835.625,
       18578.75 , 23743.75 , 19981.25 , 27267.5  , 29381.875, 24308.125,
       16205.625, 29437.5  , 22881.875, 30113.125, 27961.875, 29992.5  ,
       30285.625, 24908.75 , 20123.125, 19042.5  , 27848.125, 27247.5  ,
       17513.75 , 24173.125, 19901.875, 18350.625, 28633.75 , 25445.625,
       20627.5  , 30943.75 , 28521.25 , 27511.25 , 30804.375, 15655.625,
       16776.25 , 23423.75 , 17605.625, 24624.375, 19566.25 , 18700.   ,
       24379.375, 21330.   , 27940.625, 28238.75 , 22435.625, 26930.   ,
       30263.75 , 23321.875, 26583.75 , 16261.25 , 17950.   , 30005.   ,
       28112.5  , 16061.25 , 18584.375, 19939.375, 25222.5  , 22880.625,
       18801.875, 31063.75 , 21037.5  , 22910.   , 28535.   , 15962.5  ,
       30337.5  , 17133.125, 29681.875, 22457.5  , 23950.625, 30355.   ,
       29346.25 , 16523.75 , 29716.25 , 23331.875, 28178.75 , 18992.5  ,
       29128.75 , 23057.5  , 19713.125, 21942.5  , 17798.125, 21107.5  ,
       16960.   , 28073.125, 21270.625, 27716.875, 22638.75 , 29183.75 ,
       29909.375, 16610.   , 18412.5  , 21085.625, 17848.75 , 22694.375,
       28307.5  , 28045.625, 30653.125, 29673.75 , 23127.5  , 22626.25 ,
       25843.75 , 27123.125, 18936.875, 29244.375, 27213.125, 22001.875,
       29464.375, 22511.25 , 21055.   , 29417.5  , 24034.375, 25718.75 ,
       24915.   , 27933.125, 25203.125, 16864.375, 26143.125, 27804.375,
       25319.375, 28842.5  , 21808.75 , 28963.125, 30471.875, 25402.5  ,
       19265.625, 25720.   , 23982.5  , 19144.375, 15865.   , 16621.875,
       15995.625, 17274.375, 28416.875, 25890.625, 17096.875, 24366.875,
       16251.875, 26597.5  , 21831.875, 30824.375, 23128.75 , 26526.875,
       24955.   , 17020.625, 28333.75 , 23136.875, 21846.875, 18308.125,
       16420.625, 31200.625, 28100.625, 15972.5  , 26503.75 , 29401.25 ,
       24610.   , 25146.875, 19640.625, 22922.5  , 25221.875, 18491.875,
       26113.125, 19723.75 , 22717.5  , 21209.375, 19173.75 , 18937.5  ,
       19692.5  , 24786.25 , 29642.5  , 27880.   , 18375.625, 30934.375,
       27353.125, 18549.375, 27923.125, 29697.5  , 22746.25 , 21948.75 ,
       18291.875, 16566.25 , 16273.75 , 26356.25 , 17634.375, 22231.875,
       21971.875, 25750.   , 18658.125, 21975.   , 15710.   , 26363.75 ,
       18468.125, 17194.375, 21903.125, 22921.25 , 29606.875, 17810.   ,
       17043.75 , 26656.25 , 21118.75 , 25486.25 , 20094.375, 27895.625,
       26783.125, 25342.5  , 16905.   , 23321.875, 28965.625, 21512.5  ,
       26167.5  , 22550.   , 27211.875, 29955.   , 19165.625, 29281.25 ,
       21173.75 , 29985.625, 19973.75 , 19606.25 , 29805.   , 21030.625,
       25847.5  , 17739.375, 22160.   , 21618.75 , 20973.125, 25975.   ,
       20886.875, 17525.625, 27611.875, 18289.375, 22364.375, 22052.5  ,
       30980.625, 20405.625, 25245.625, 20670.625, 29204.375, 27382.5  ,
       21280.625, 16783.125, 30555.625, 15850.   , 18690.   , 26295.   ,
       27395.   , 20652.5  , 19175.   , 26720.625, 16790.625, 24553.125,
       30693.125, 21792.5  , 18206.875, 20665.625, 27548.125, 26700.   ,
       17229.375, 18925.   , 18968.125, 22365.   , 30349.375, 29892.5  ,
       26003.125, 27970.   , 27989.375, 16955.625, 26575.   , 29650.625,
       20368.125, 24672.5  , 21441.25 , 26926.25 , 30037.5  , 24074.375,
       23615.   , 20590.625, 24169.375, 18868.125, 24358.75 , 19203.125,
       16395.   , 17833.75 , 23325.625, 27376.25 , 30115.625, 19296.875,
       26375.   , 18675.   ])
```

Task 3 :-

In [4]:

```
total_salhr =np.sum(salhr)
print("sum of salary of hr",total_salhr)
total_salhr =np.sum(salfin)
print("sum of salary of finance",total_salhr)
total_salhr =np.sum(salIT)
print("sum of salary of IT",total_salhr)
total_salhr =np.sum(salsales)
print("sum of salary of sales",total_salhr)
```

```
sum of salary of hr 18728333
sum of salary of finance 23410416.25
sum of salary of IT 11705208.125
sum of salary of sales 21228333
```

Task 4 :-

In [5]:

```
salhr_sort = np.sort(salhr)[::-1]
salfin_sort = np.sort(salfin)[::-1]
print("The top 10 highest salaries of hr: ", salhr_sort[0:11])
print("The top 10 highest salaries of finance: ", salfin_sort[0:11])
```

```
The top 10 highest salaries of hr:  [49959 49911 49847 49823 49804 49775 49770 49759 49689 49684 49679]
The top 10 highest salaries of finance:  [62448.75 62388.75 62308.75 62278.75 62255.   62218.75 62212.5  62198.75
 62111.25 62105.   62098.75]
```

Task 5 :-

In [7]:

```
new_sal_hr = np.where(salhr>45000)
print(salhr[new_sal_hr])
I_hrsal = salhr[new_sal_hr]*1.1
I_hrsal
```

```
[49759 45244 45837 45431 46349 46462 45833 49674 45776 46116 49363 48209
 45383 49327 48008 49608 47703 46934 48763 48469 49959 47331 48493 46710
 47714 49679 49684 45500 49080 45218 45213 45334 45106 49254 48524 45509
 47259 46741 48827 46331 48263 49689 47156 46667 47988 46963 49587 48359
 46844 45917 47078 45672 49319 47011 49474 48704 45768 49362 49104 45434
 45799 47414 49105 47750 47172 46406 46648 46288 46182 46438 47983 47198
 49823 49775 48903 49182 47751 46616 46294 47226 46781 49847 49636 47516
 46998 49770 46339 46209 48532 45068 47869 46689 48857 45493 45788 47197
 47859 49327 49804 47109 49911]
```

Out[7]:

```
array([54734.9, 49768.4, 50420.7, 49974.1, 50983.9, 51108.2, 50416.3,
       54641.4, 50353.6, 50727.6, 54299.3, 53029.9, 49921.3, 54259.7,
       52808.8, 54568.8, 52473.3, 51627.4, 53639.3, 53315.9, 54954.9,
       52064.1, 53342.3, 51381. , 52485.4, 54646.9, 54652.4, 50050. ,
       53988. , 49739.8, 49734.3, 49867.4, 49616.6, 54179.4, 53376.4,
       50059.9, 51984.9, 51415.1, 53709.7, 50964.1, 53089.3, 54657.9,
       51871.6, 51333.7, 52786.8, 51659.3, 54545.7, 53194.9, 51528.4,
       50508.7, 51785.8, 50239.2, 54250.9, 51712.1, 54421.4, 53574.4,
       50344.8, 54298.2, 54014.4, 49977.4, 50378.9, 52155.4, 54015.5,
       52525. , 51889.2, 51046.6, 51312.8, 50916.8, 50800.2, 51081.8,
       52781.3, 51917.8, 54805.3, 54752.5, 53793.3, 54100.2, 52526.1,
       51277.6, 50923.4, 51948.6, 51459.1, 54831.7, 54599.6, 52267.6,
       51697.8, 54747. , 50972.9, 50829.9, 53385.2, 49574.8, 52655.9,
       51357.9, 53742.7, 50042.3, 50366.8, 51916.7, 52644.9, 54259.7,
       54784.4, 51819.9, 54902.1])
```

In [10]:

```
new_sal_fin = np.where(salfin>45000)
print(salfin[new_sal_fin])
I_salfin = salfin[new_sal_fin] *1.1
I_salfin
```

```
[46928.75 48240.   47656.25 62198.75 56236.25 53750.   49172.5  46508.75
 56555.   54895.   47298.75 54661.25 57296.25 56788.75 49540.   53060.
 49480.   51473.75 57936.25 58077.5  48396.25 48412.5  47185.   49918.75
 57291.25 56177.5  62092.5  54587.5  57220.   54091.25 51042.5  54797.5
 46843.75 49158.75 55363.75 55171.25 46497.5  45935.   52445.   51706.25
 48326.25 57645.   45366.25 51805.   61703.75 60261.25 53142.5  49838.75
 51431.25 53802.5  56728.75 51588.75 61658.75 49880.   46705.   60010.
 62010.   59628.75 49341.25 58667.5  49908.75 48312.5  51625.   46333.75
 54366.25 51358.75 46395.   48405.   54656.25 60953.75 48003.75 60586.25
 62448.75 59163.75 45968.75 52351.25 50677.5  49287.5  54031.25 60616.25
 58387.5  55981.25 59642.5  50632.5  62098.75 54026.25 49793.75 47166.25
 62105.   55921.25 56875.   61350.   48756.25 56522.5  47007.5  54075.
 56516.25 56667.5  56382.5  49720.   55398.75 52681.25 52606.25 51048.75
 61567.5  52357.5  54471.25 47157.5  45062.5  50283.75 60655.   56886.25
 50443.75 59073.75 50580.   58426.25 61033.75 51638.75 57913.75 60328.75
 46418.75 50386.25 46087.5  62111.25 55351.25 47973.75 52493.75 58945.
 58333.75 59985.   58703.75 50797.5  61983.75 54188.75 60448.75 58555.
 57396.25 49470.   46826.25 58847.5  51062.5  50973.75 57090.   61648.75
 58763.75 51628.75 61842.5  60880.   47780.   55065.   50318.75 45778.75
 57210.   51392.5  55312.5  46223.75 49296.25 48591.25 52186.25 61702.5
 55458.75 52650.   50858.75 55251.25 47031.25 53926.25 55560.   61380.
 49525.   54681.25 56792.5  57248.75 48907.5  59267.5  54031.25 48027.5
 49101.25 61381.25 59687.5  46220.   47672.5  50243.75 54920.   58965.
 58007.5  58310.   51507.5  57860.   52845.   48283.75 45722.5  57727.5
 53373.75 46208.75 58047.5  59978.75 52193.75 47628.75 47771.25 58997.5
 46476.25 52323.75 51362.5  50811.25 62278.75 62218.75 61128.75 61477.5
 47523.75 54703.75 55903.75 59688.75 58270.   53708.75 46831.25 55383.75
 57867.5  45152.5  50823.75 47102.5  47553.75 49176.25 59032.5  54536.25
 51650.   47802.5  58476.25 54916.25 45258.75 62308.75 62045.   54922.5
 53138.75 47566.25 49817.5  50906.25 49492.5  54612.5  52273.75 45575.
 52748.75 59395.   58747.5  45205.   54493.75 50101.25 62212.5  52345.
 57923.75 49415.   54003.75 57761.25 47961.25 60665.   53796.25 50992.5
 56335.   59836.25 58361.25 50607.5  61071.25 56866.25 54361.25 57235.
 55480.   45008.75 58996.25 49861.25 59823.75 61658.75 62255.   58886.25
 62388.75 50831.25]
```

Out[10]:

```
array([51621.625, 53064.   , 52421.875, 68418.625, 61859.875, 59125.   ,
       54089.75 , 51159.625, 62210.5  , 60384.5  , 52028.625, 60127.375,
       63025.875, 62467.625, 54494.   , 58366.   , 54428.   , 56621.125,
       63729.875, 63885.25 , 53235.875, 53253.75 , 51903.5  , 54910.625,
       63020.375, 61795.25 , 68301.75 , 60046.25 , 62942.   , 59500.375,
       56146.75 , 60277.25 , 51528.125, 54074.625, 60900.125, 60688.375,
       51147.25 , 50528.5  , 57689.5  , 56876.875, 53158.875, 63409.5  ,
       49902.875, 56985.5  , 67874.125, 66287.375, 58456.75 , 54822.625,
       56574.375, 59182.75 , 62401.625, 56747.625, 67824.625, 54868.   ,
       51375.5  , 66011.   , 68211.   , 65591.625, 54275.375, 64534.25 ,
       54899.625, 53143.75 , 56787.5  , 50967.125, 59802.875, 56494.625,
       51034.5  , 53245.5  , 60121.875, 67049.125, 52804.125, 66644.875,
       68693.625, 65080.125, 50565.625, 57586.375, 55745.25 , 54216.25 ,
       59434.375, 66677.875, 64226.25 , 61579.375, 65606.75 , 55695.75 ,
       68308.625, 59428.875, 54773.125, 51882.875, 68315.5  , 61513.375,
       62562.5  , 67485.   , 53631.875, 62174.75 , 51708.25 , 59482.5  ,
       62167.875, 62334.25 , 62020.75 , 54692.   , 60938.625, 57949.375,
       57866.875, 56153.625, 67724.25 , 57593.25 , 59918.375, 51873.25 ,
       49568.75 , 55312.125, 66720.5  , 62574.875, 55488.125, 64981.125,
       55638.   , 64268.875, 67137.125, 56802.625, 63705.125, 66361.625,
       51060.625, 55424.875, 50696.25 , 68322.375, 60886.375, 52771.125,
       57743.125, 64839.5  , 64167.125, 65983.5  , 64574.125, 55877.25 ,
       68182.125, 59607.625, 66493.625, 64410.5  , 63135.875, 54417.   ,
       51508.875, 64732.25 , 56168.75 , 56071.125, 62799.   , 67813.625,
       64640.125, 56791.625, 68026.75 , 66968.   , 52558.   , 60571.5  ,
       55350.625, 50356.625, 62931.   , 56531.75 , 60843.75 , 50846.125,
       54225.875, 53450.375, 57404.875, 67872.75 , 61004.625, 57915.   ,
       55944.625, 60776.375, 51734.375, 59318.875, 61116.   , 67518.   ,
       54477.5  , 60149.375, 62471.75 , 62973.625, 53798.25 , 65194.25 ,
       59434.375, 52830.25 , 54011.375, 67519.375, 65656.25 , 50842.   ,
       52439.75 , 55268.125, 60412.   , 64861.5  , 63808.25 , 64141.   ,
       56658.25 , 63646.   , 58129.5  , 53112.125, 50294.75 , 63500.25 ,
       58711.125, 50829.625, 63852.25 , 65976.625, 57413.125, 52391.625,
       52548.375, 64897.25 , 51123.875, 57556.125, 56498.75 , 55892.375,
       68506.625, 68440.625, 67241.625, 67625.25 , 52276.125, 60174.125,
       61494.125, 65657.625, 64097.   , 59079.625, 51514.375, 60922.125,
       63654.25 , 49667.75 , 55906.125, 51812.75 , 52309.125, 54093.875,
       64935.75 , 59989.875, 56815.   , 52582.75 , 64323.875, 60407.875,
       49784.625, 68539.625, 68249.5  , 60414.75 , 58452.625, 52322.875,
       54799.25 , 55996.875, 54441.75 , 60073.75 , 57501.125, 50132.5  ,
       58023.625, 65334.5  , 64622.25 , 49725.5  , 59943.125, 55111.375,
       68433.75 , 57579.5  , 63716.125, 54356.5  , 59404.125, 63537.375,
       52757.375, 66731.5  , 59175.875, 56091.75 , 61968.5  , 65819.875,
       64197.375, 55668.25 , 67178.375, 62552.875, 59797.375, 62958.5  ,
       61028.   , 49509.625, 64895.875, 54847.375, 65806.125, 67824.625,
       68480.5  , 64774.875, 68627.625, 55914.375])
```

In [12]:

```
new_sal_It = np.where(salIT>45000)
print(salfin[new_sal_It])
I_salfin= salfin[new_sal_It]*1.1
I_salfin
```

```
[]
```

Out[12]:

```
array([], dtype=float64)
```

In [14]:

```
new_sal_sales = np.where(salsales>45000)
print(salfin[new_sal_sales])
I_salsales = salfin[new_sal_sales]*1.1
I_salsales
```

```
[62198.75 56236.25 53750.   56555.   54895.   54661.25 57296.25 56788.75
 53060.   51473.75 57936.25 58077.5  57291.25 56177.5  62092.5  54587.5
 57220.   54091.25 51042.5  54797.5  55363.75 55171.25 52445.   51706.25
 57645.   51805.   61703.75 60261.25 53142.5  51431.25 53802.5  56728.75
 51588.75 61658.75 60010.   62010.   59628.75 58667.5  51625.   54366.25
 51358.75 54656.25 60953.75 60586.25 62448.75 59163.75 52351.25 50677.5
 54031.25 60616.25 58387.5  55981.25 59642.5  50632.5  62098.75 54026.25
 62105.   55921.25 56875.   61350.   56522.5  54075.   56516.25 56667.5
 56382.5  55398.75 52681.25 52606.25 51048.75 61567.5  52357.5  54471.25
 50283.75 60655.   56886.25 50443.75 59073.75 50580.   58426.25 61033.75
 51638.75 57913.75 60328.75 50386.25 62111.25 55351.25 52493.75 58945.
 58333.75 59985.   58703.75 50797.5  61983.75 54188.75 60448.75 58555.
 57396.25 58847.5  51062.5  50973.75 57090.   61648.75 58763.75 51628.75
 61842.5  60880.   55065.   50318.75 57210.   51392.5  55312.5  52186.25
 61702.5  55458.75 52650.   50858.75 55251.25 53926.25 55560.   61380.
 54681.25 56792.5  57248.75 59267.5  54031.25 61381.25 59687.5  50243.75
 54920.   58965.   58007.5  58310.   51507.5  57860.   52845.   57727.5
 53373.75 58047.5  59978.75 52193.75 58997.5  52323.75 51362.5  50811.25
 62278.75 62218.75 61128.75 61477.5  54703.75 55903.75 59688.75 58270.
 53708.75 55383.75 57867.5  50823.75 59032.5  54536.25 51650.   58476.25
 54916.25 62308.75 62045.   54922.5  53138.75 50906.25 54612.5  52273.75
 52748.75 59395.   58747.5  54493.75 50101.25 62212.5  52345.   57923.75
 54003.75 57761.25 60665.   53796.25 50992.5  56335.   59836.25 58361.25
 50607.5  61071.25 56866.25 54361.25 57235.   55480.   58996.25 59823.75
 61658.75 62255.   58886.25 62388.75 50831.25]
```

Out[14]:

```
array([68418.625, 61859.875, 59125.   , 62210.5  , 60384.5  , 60127.375,
       63025.875, 62467.625, 58366.   , 56621.125, 63729.875, 63885.25 ,
       63020.375, 61795.25 , 68301.75 , 60046.25 , 62942.   , 59500.375,
       56146.75 , 60277.25 , 60900.125, 60688.375, 57689.5  , 56876.875,
       63409.5  , 56985.5  , 67874.125, 66287.375, 58456.75 , 56574.375,
       59182.75 , 62401.625, 56747.625, 67824.625, 66011.   , 68211.   ,
       65591.625, 64534.25 , 56787.5  , 59802.875, 56494.625, 60121.875,
       67049.125, 66644.875, 68693.625, 65080.125, 57586.375, 55745.25 ,
       59434.375, 66677.875, 64226.25 , 61579.375, 65606.75 , 55695.75 ,
       68308.625, 59428.875, 68315.5  , 61513.375, 62562.5  , 67485.   ,
       62174.75 , 59482.5  , 62167.875, 62334.25 , 62020.75 , 60938.625,
       57949.375, 57866.875, 56153.625, 67724.25 , 57593.25 , 59918.375,
       55312.125, 66720.5  , 62574.875, 55488.125, 64981.125, 55638.   ,
       64268.875, 67137.125, 56802.625, 63705.125, 66361.625, 55424.875,
       68322.375, 60886.375, 57743.125, 64839.5  , 64167.125, 65983.5  ,
       64574.125, 55877.25 , 68182.125, 59607.625, 66493.625, 64410.5  ,
       63135.875, 64732.25 , 56168.75 , 56071.125, 62799.   , 67813.625,
       64640.125, 56791.625, 68026.75 , 66968.   , 60571.5  , 55350.625,
       62931.   , 56531.75 , 60843.75 , 57404.875, 67872.75 , 61004.625,
       57915.   , 55944.625, 60776.375, 59318.875, 61116.   , 67518.   ,
       60149.375, 62471.75 , 62973.625, 65194.25 , 59434.375, 67519.375,
       65656.25 , 55268.125, 60412.   , 64861.5  , 63808.25 , 64141.   ,
       56658.25 , 63646.   , 58129.5  , 63500.25 , 58711.125, 63852.25 ,
       65976.625, 57413.125, 64897.25 , 57556.125, 56498.75 , 55892.375,
       68506.625, 68440.625, 67241.625, 67625.25 , 60174.125, 61494.125,
       65657.625, 64097.   , 59079.625, 60922.125, 63654.25 , 55906.125,
       64935.75 , 59989.875, 56815.   , 64323.875, 60407.875, 68539.625,
       68249.5  , 60414.75 , 58452.625, 55996.875, 60073.75 , 57501.125,
       58023.625, 65334.5  , 64622.25 , 59943.125, 55111.375, 68433.75 ,
       57579.5  , 63716.125, 59404.125, 63537.375, 66731.5  , 59175.875,
       56091.75 , 61968.5  , 65819.875, 64197.375, 55668.25 , 67178.375,
       62552.875, 59797.375, 62958.5  , 61028.   , 64895.875, 65806.125,
       67824.625, 68480.5  , 64774.875, 68627.625, 55914.375])
```

Task 6 :- ¶

In [18]:

```
Sal_sales = np.where(salsales<45000)
print(salsales[Sal_sales])
Inc_sales = salsales[Sal_sales]*1.1
Inc_sales
```

```
[35581 36564 43000 42600 35051 44428 34353 36801 32734 31955 40046 30951
 32256 35511 35258 32342 36261 43002 40886 38317 31824 30656 30582 38748
 30261 42878 41554 40793 41288 35620 44792 30692 38993 38968 33279 32436
 36434 34521 33296 39247 33930 40932 33341 34580 32124 39567 31355 36900
 39560 44705 36872 42574 31748 36898 34255 42554 38425 33871 36718 36199
 30657 44120 38002 44969 30768 32361 36440 31114 37219 43706 44958 35828
 32386 32441 41018 39464 31341 39253 43792 37223 35559 31680 37542 39918
 36003 33987 41246 33458 33548 31293 44292 33794 34078 40125 35050 38610
 30486 33674 37278 32441 39988 37362 37145 39500 34213 36815 31469 44228
 44039 37776 41600 37832 41422 39284 30982 39819 32540 35597 39703 32999
 32194 44058 36880 39346 38341 32121 39545 34834 34726 42990 36970 43893
 30929 41611 44854 37197 35468 33022 43677 36843 34361 38004 30049 31842
 42478 33169 44399 36306 34920 44007 39128 40897 42315 31018 33720 30698
 34735 36903 41609 35083 38660 41656 30540 32413 40932 43321 31438 42331
 35388 41892 36541 40108 33477 38772 32136 39033 41222 31576 34460 38737
 33558 41311 42004 41202 35299 40203 41018 38688 43455 44864 31983 39894
 35825 43372 35631 30384 31595 30593 32639 32355 43987 31003 39931 42006
 44928 32233 42019 39955 34293 31273 30556 44376 36425 41676 34587 36558
 41348 38935 35678 35300 36508 44658 34401 34679 41394 40118 34267 31506
 31038 33215 40571 40155 34853 40160 30136 34549 32511 40045 41674 33496
 32270 38790 37151 32048 42315 39420 41080 35665 38878 36958 36370 38649
 33383 40456 39590 38557 38419 33041 34263 40783 40284 37649 38073 39049
 31853 30360 34904 38044 35680 31865 44285 39868 34131 38065 32567 35280
 35349 40784 32129 37589 44476 39306 43519 42784 37945 43671 35189 43974
 35725 31232 33534 42321 35875 34880]
```

Out[18]:

```
array([39139.1, 40220.4, 47300. , 46860. , 38556.1, 48870.8, 37788.3,
       40481.1, 36007.4, 35150.5, 44050.6, 34046.1, 35481.6, 39062.1,
       38783.8, 35576.2, 39887.1, 47302.2, 44974.6, 42148.7, 35006.4,
       33721.6, 33640.2, 42622.8, 33287.1, 47165.8, 45709.4, 44872.3,
       45416.8, 39182. , 49271.2, 33761.2, 42892.3, 42864.8, 36606.9,
       35679.6, 40077.4, 37973.1, 36625.6, 43171.7, 37323. , 45025.2,
       36675.1, 38038. , 35336.4, 43523.7, 34490.5, 40590. , 43516. ,
       49175.5, 40559.2, 46831.4, 34922.8, 40587.8, 37680.5, 46809.4,
       42267.5, 37258.1, 40389.8, 39818.9, 33722.7, 48532. , 41802.2,
       49465.9, 33844.8, 35597.1, 40084. , 34225.4, 40940.9, 48076.6,
       49453.8, 39410.8, 35624.6, 35685.1, 45119.8, 43410.4, 34475.1,
       43178.3, 48171.2, 40945.3, 39114.9, 34848. , 41296.2, 43909.8,
       39603.3, 37385.7, 45370.6, 36803.8, 36902.8, 34422.3, 48721.2,
       37173.4, 37485.8, 44137.5, 38555. , 42471. , 33534.6, 37041.4,
       41005.8, 35685.1, 43986.8, 41098.2, 40859.5, 43450. , 37634.3,
       40496.5, 34615.9, 48650.8, 48442.9, 41553.6, 45760. , 41615.2,
       45564.2, 43212.4, 34080.2, 43800.9, 35794. , 39156.7, 43673.3,
       36298.9, 35413.4, 48463.8, 40568. , 43280.6, 42175.1, 35333.1,
       43499.5, 38317.4, 38198.6, 47289. , 40667. , 48282.3, 34021.9,
       45772.1, 49339.4, 40916.7, 39014.8, 36324.2, 48044.7, 40527.3,
       37797.1, 41804.4, 33053.9, 35026.2, 46725.8, 36485.9, 48838.9,
       39936.6, 38412. , 48407.7, 43040.8, 44986.7, 46546.5, 34119.8,
       37092. , 33767.8, 38208.5, 40593.3, 45769.9, 38591.3, 42526. ,
       45821.6, 33594. , 35654.3, 45025.2, 47653.1, 34581.8, 46564.1,
       38926.8, 46081.2, 40195.1, 44118.8, 36824.7, 42649.2, 35349.6,
       42936.3, 45344.2, 34733.6, 37906. , 42610.7, 36913.8, 45442.1,
       46204.4, 45322.2, 38828.9, 44223.3, 45119.8, 42556.8, 47800.5,
       49350.4, 35181.3, 43883.4, 39407.5, 47709.2, 39194.1, 33422.4,
       34754.5, 33652.3, 35902.9, 35590.5, 48385.7, 34103.3, 43924.1,
       46206.6, 49420.8, 35456.3, 46220.9, 43950.5, 37722.3, 34400.3,
       33611.6, 48813.6, 40067.5, 45843.6, 38045.7, 40213.8, 45482.8,
       42828.5, 39245.8, 38830. , 40158.8, 49123.8, 37841.1, 38146.9,
       45533.4, 44129.8, 37693.7, 34656.6, 34141.8, 36536.5, 44628.1,
       44170.5, 38338.3, 44176. , 33149.6, 38003.9, 35762.1, 44049.5,
       45841.4, 36845.6, 35497. , 42669. , 40866.1, 35252.8, 46546.5,
       43362. , 45188. , 39231.5, 42765.8, 40653.8, 40007. , 42513.9,
       36721.3, 44501.6, 43549. , 42412.7, 42260.9, 36345.1, 37689.3,
       44861.3, 44312.4, 41413.9, 41880.3, 42953.9, 35038.3, 33396. ,
       38394.4, 41848.4, 39248. , 35051.5, 48713.5, 43854.8, 37544.1,
       41871.5, 35823.7, 38808. , 38883.9, 44862.4, 35341.9, 41347.9,
       48923.6, 43236.6, 47870.9, 47062.4, 41739.5, 48038.1, 38707.9,
       48371.4, 39297.5, 34355.2, 36887.4, 46553.1, 39462.5, 38368. ])
```

In [ ]:

```

```