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Female  39  \n",
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Female  43  \n",
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\\\n",
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Male    35  \n",
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Female   36  \n",
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Male    42  \n",
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Female   28  \n",
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"      Tenure      Balance  NumOfProducts  HasCrCard
IsActiveMember  \\\n",
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0  \n",
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```

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```

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[illegible]

[illegible]

[illegible]

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IsActiveMember  \\\n",

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2  \n",
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1  \n",
"2      3      15619304      502      0      0      42
8  \n",
"3      4      15701354      699      0      0      39
1  \n",
"4      5      15737888      850      2      0      43
2  \n",
"  \n",
"      Balance  NumOfProducts  HasCrCard  ...
Surname_Zinachukwudi  \\\n",
"0      0.00      1      1  ...
0  \n",
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0  \n",
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0  \n",
"3      0.00      2      0  ...
0  \n",
"4      125510.82      1      1  ...
0  \n",
"  \n",
"      Surname_Zito  Surname_Zotov  Surname_Zotova  Surname_Zox
Surname_Zubarev  \\\n",
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0  \n",
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0  \n",

```

```

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0  \n",
0         "3                0                0                0                0
0  \n",
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0  \n",
0         "\n",
0         "    Surname_Zubareva  Surname_Zuev  Surname_Zuyev
Surname_Zuyeva  \n",
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0     "data_d.head()"
0 ]
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"\n",
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"        vertical-align: top;\n",
"    }\n",
"\n",
"    .dataframe thead th {\n",
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"      <th>Geography</th>\n",
"      <th>Gender</th>\n",
"      <th>Age</th>\n",
"      <th>Tenure</th>\n",
"      <th>Balance</th>\n",
"      <th>NumOfProducts</th>\n",
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```

```

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"      <td>2</td>\n",
"      <td>0</td>\n",
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"      <td>Onio</td>\n",
"      <td>502</td>\n",
"      <td>0</td>\n",
"      <td>0</td>\n",
"      <td>42</td>\n",
"      <td>8</td>\n",
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"      <td>Boni</td>\n",
"      <td>699</td>\n",
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"      <td>93826.63</td>\n",
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"      <th>4</th>\n",

```



```

"      <td>5</td>\n",
"      <td>15737888</td>\n",
"      <td>Mitchell</td>\n",
"      <td>850</td>\n",
"      <td>2</td>\n",
"      <td>0</td>\n",
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"      <td>79084.10</td>\n",
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"  </tbody>\n",
"</table>\n",
"</div>"
],
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  "      RowNumber  CustomerId  Surname  CreditScore  Geography
Gender  Age  \\\n",
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      \n",
0  41  "1          2      15647311      Hill          608          2
      \n",
0  41  "2          3      15619304      Onio          502          0
      \n",
0  42  "3          4      15701354      Boni          699          0
      \n",
0  39  "4          5      15737888  Mitchell          850          2
      \n",
0  43  "\n",
      "      Tenure      Balance  NumOfProducts  HasCrCard  IsActiveMember
\\\n",
      "0          2          0.00          1          1          1
\n",
      "1          1      83807.86          1          0          1
\n",
      "2          8      159660.80          3          1          0
\n",
      "3          1          0.00          2          0          0
\n",
      "4          2      125510.82          1          1          1
\n",
      "\n",
      "      EstimatedSalary  Exited  \n",
      "0          101348.88          1  \n",
      "1          112542.58          0  \n",
      "2          113931.57          1  \n",
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      "4           79084.10          0  "

```

```

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          "        0.0000000e+00, 0.0000000e+00],\n",
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          "        0.0000000e+00, 0.0000000e+00],\n",
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0.0000000e+00,\n",
          "        0.0000000e+00, 0.0000000e+00],\n",
          "        ..., \n",
          "        [9.9980000e+03, 1.5584532e+07, 7.0900000e+02, ...,
0.0000000e+00,\n",
          "        0.0000000e+00, 0.0000000e+00],\n",
          "        [9.9990000e+03, 1.5682355e+07, 7.7200000e+02, ...,
0.0000000e+00,\n",
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          "        [1.0000000e+04, 1.5628319e+07, 7.9200000e+02, ...,
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        ]
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},

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    "y"
  ]
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    "# Scale - Similar to std "
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```

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,\n",
        "        -0.01414355, -0.01414355],\n",
        "        [-1.7315312 , -0.60653412, -0.44003595, ..., -0.0100005
,\n",
        "        -0.01414355, -0.01414355],\n",
        "        [-1.73118479, -0.99588476, -1.53679418, ..., -0.0100005
,\n",
        "        -0.01414355, -0.01414355],\n",
        "        ..., \n",
        "        [ 1.73118479, -1.47928179,  0.60498839, ..., -0.0100005
,\n",
        "        -0.01414355, -0.01414355],\n",
        "        [ 1.7315312 , -0.11935577,  1.25683526, ..., -0.0100005
,\n",
        "        -0.01414355, -0.01414355],\n",
        "        [ 1.73187761, -0.87055909,  1.46377078, ..., -0.0100005
,\n",
        "        -0.01414355, -0.01414355]]) "
    ]
    },
    "execution_count": 177,
    "metadata": {},
    "output_type": "execute_result"
}
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    "x"
]
},
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    "outputs": [],
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    ]
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{
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    "execution_count": 170,

```

```

    "id": "2081572b",
    "metadata": {},
    "outputs": [],
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        "x_train, x_test, y_train, y_test = train_test_split(x,y,
test_size = 0.2)"
    ]
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            "output_type": "stream",
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            ]
        }
    ],
    "source": [
        "print(x_train.shape, x_test.shape)"
    ]
},
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