**ASSIGNMENT – 2**

**-SHAKTHI SRI S**

**-RAVEENA M**

**-SARAH JACI J**

**-SHAFREEN FATHIMA**

**1.import** numpy **as** np

**import** pandas **as** pd

df**=**pd**.**read\_csv("Churn\_Modelling.csv")

df

**OUTPUT:**

|  | **RowNumber** | **CustomerId** | **Surname** | **CreditScore** | **Geography** | **Gender** | **Age** | **Tenure** | **Balance** | **NumOfProducts** | **HasCrCard** | **IsActiveMember** | **EstimatedSalary** | **Exited** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **0** | 1 | 15634602 | Hargrave | 619 | France | Female | 42 | 2 | 0.00 | 1 | 1 | 1 | 101348.88 | 1 |
| **1** | 2 | 15647311 | Hill | 608 | Spain | Female | 41 | 1 | 83807.86 | 1 | 0 | 1 | 112542.58 | 0 |
| **2** | 3 | 15619304 | Onio | 502 | France | Female | 42 | 8 | 159660.80 | 3 | 1 | 0 | 113931.57 | 1 |
| **3** | 4 | 15701354 | Boni | 699 | France | Female | 39 | 1 | 0.00 | 2 | 0 | 0 | 93826.63 | 0 |
| **4** | 5 | 15737888 | Mitchell | 850 | Spain | Female | 43 | 2 | 125510.82 | 1 | 1 | 1 | 79084.10 | 0 |
| **...** | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| **9995** | 9996 | 15606229 | Obijiaku | 771 | France | Male | 39 | 5 | 0.00 | 2 | 1 | 0 | 96270.64 | 0 |
| **9996** | 9997 | 15569892 | Johnstone | 516 | France | Male | 35 | 10 | 57369.61 | 1 | 1 | 1 | 101699.77 | 0 |
| **9997** | 9998 | 15584532 | Liu | 709 | France | Female | 36 | 7 | 0.00 | 1 | 0 | 1 | 42085.58 | 1 |
| **9998** | 9999 | 15682355 | Sabbatini | 772 | Germany | Male | 42 | 3 | 75075.31 | 2 | 1 | 0 | 92888.52 | 1 |
| **9999** | 10000 | 15628319 | Walker | 792 | France | Female | 28 | 4 | 130142.79 | 1 | 1 | 0 | 38190.78 | 0 |

10000 rows × 14 columns

2.df**.**shape

**OUTPUT:**

(10000, 14)

3.df**.**columns

**OUTPUT:**

Index(['RowNumber', 'CustomerId', 'Surname', 'CreditScore', 'Geography',

'Gender', 'Age', 'Tenure', 'Balance', 'NumOfProducts', 'HasCrCard',

'IsActiveMember', 'EstimatedSalary', 'Exited'],

dtype='object')

4.df["NumOfProducts"]**.**unique()

**OUTPUT:**

5.array([1, 3, 2, 4])

df["NumOfProducts"]**.**value\_counts()

**OUTPUT:**

1 5084

2 4590

3 266

4 60

Name: NumOfProducts, dtype: int64

6.df**.**dtypes

RowNumber int64

CustomerId int64

Surname object

CreditScore int64

Geography object

Gender object

Age int64

Tenure int64

Balance float64

NumOfProducts int64

HasCrCard int64

IsActiveMember int64

EstimatedSalary float64

Exited int64

dtype: object

df**.**head()

**OUTPUT:**

|  | **RowNumber** | **CustomerId** | **Surname** | **CreditScore** | **Geography** | **Gender** | **Age** | **Tenure** | **Balance** | **NumOfProducts** | **HasCrCard** | **IsActiveMember** | **EstimatedSalary** | **Exited** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **0** | 1 | 15634602 | Hargrave | 619 | France | Female | 42 | 2 | 0.00 | 1 | 1 | 1 | 101348.88 | 1 |
| **1** | 2 | 15647311 | Hill | 608 | Spain | Female | 41 | 1 | 83807.86 | 1 | 0 | 1 | 112542.58 | 0 |
| **2** | 3 | 15619304 | Onio | 502 | France | Female | 42 | 8 | 159660.80 | 3 | 1 | 0 | 113931.57 | 1 |
| **3** | 4 | 15701354 | Boni | 699 | France | Female | 39 | 1 | 0.00 | 2 | 0 | 0 | 93826.63 | 0 |
| **4** | 5 | 15737888 | Mitchell | 850 | Spain | Female | 43 | 2 | 125510.82 | 1 | 1 | 1 | 79084.10 | 0 |

7.df**.**describe()

|  | **RowNumber** | **CustomerId** | **CreditScore** | **Age** | **Tenure** | **Balance** | **NumOfProducts** | **HasCrCard** | **IsActiveMember** | **EstimatedSalary** | **Exited** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **count** | 10000.00000 | 1.000000e+04 | 10000.000000 | 10000.000000 | 10000.000000 | 10000.000000 | 10000.000000 | 10000.00000 | 10000.000000 | 10000.000000 | 10000.000000 |
| **mean** | 5000.50000 | 1.569094e+07 | 650.528800 | 38.921800 | 5.012800 | 76485.889288 | 1.530200 | 0.70550 | 0.515100 | 100090.239881 | 0.203700 |
| **std** | 2886.89568 | 7.193619e+04 | 96.653299 | 10.487806 | 2.892174 | 62397.405202 | 0.581654 | 0.45584 | 0.499797 | 57510.492818 | 0.402769 |
| **min** | 1.00000 | 1.556570e+07 | 350.000000 | 18.000000 | 0.000000 | 0.000000 | 1.000000 | 0.00000 | 0.000000 | 11.580000 | 0.000000 |
| **25%** | 2500.75000 | 1.562853e+07 | 584.000000 | 32.000000 | 3.000000 | 0.000000 | 1.000000 | 0.00000 | 0.000000 | 51002.110000 | 0.000000 |
| **50%** | 5000.50000 | 1.569074e+07 | 652.000000 | 37.000000 | 5.000000 | 97198.540000 | 1.000000 | 1.00000 | 1.000000 | 100193.915000 | 0.000000 |
| **75%** | 7500.25000 | 1.575323e+07 | 718.000000 | 44.000000 | 7.000000 | 127644.240000 | 2.000000 | 1.00000 | 1.000000 | 149388.247500 | 0.000000 |
| **max** | 10000.00000 | 1.581569e+07 | 850.000000 | 92.000000 | 10.000000 | 250898.090000 | 4.000000 | 1.00000 | 1.000000 | 199992.480000 | 1.000000 |

**8.import** matplotlib.pyplot **as** plt

**import** seaborn **as** sns

**%matplotlib** inline

plt**.**figure(figsize**=**(8,8))

sns**.**countplot(x**=**'Exited',data**=**df)

plt**.**xlabel("0 - Still with bank :: 1 - Exited From bank")

plt**.**ylabel("count")

plt**.**title("visual")

plt**.**show()

df**.**info()

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

RangeIndex: 10000 entries, 0 to 9999

Data columns (total 14 columns):

# Column Non-Null Count Dtype

--- ------ -------------- -----

0 RowNumber 10000 non-null int64

1 CustomerId 10000 non-null int64

2 Surname 10000 non-null object

3 CreditScore 10000 non-null int64

4 Geography 10000 non-null object

5 Gender 10000 non-null object

6 Age 10000 non-null int64

7 Tenure 10000 non-null int64

8 Balance 10000 non-null float64

9 NumOfProducts 10000 non-null int64

10 HasCrCard 10000 non-null int64

11 IsActiveMember 10000 non-null int64

12 EstimatedSalary 10000 non-null float64

13 Exited 10000 non-null int64

dtypes: float64(2), int64(9), object(3)

memory usage: 1.1+ MB

df**.**isna()**.**any()

**OUTPUT:**

RowNumber False

CustomerId False

Surname False

CreditScore False

Geography False

Gender False

Age False

Tenure False

Balance False

NumOfProducts False

HasCrCard False

IsActiveMember False

EstimatedSalary False

Exited False

9.dtype: bool

df**.**isnull()**.**sum()

**OUTPUT:**

RowNumber 0

CustomerId 0

Surname 0

CreditScore 0

Geography 0

Gender 0

Age 0

Tenure 0

Balance 0

NumOfProducts 0

HasCrCard 0

IsActiveMember 0

EstimatedSalary 0

Exited 0

dtype: int64

df1**=**df**.**copy()

10.df1**.**shape

**OUTPUT:**

(10000, 14)

updated\_df**=**df**.**dropna(axis**=**1)

updated\_df**.**info()

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

RangeIndex: 10000 entries, 0 to 9999

Data columns (total 14 columns):

# Column Non-Null Count Dtype

--- ------ -------------- -----

0 RowNumber 10000 non-null int64

1 CustomerId 10000 non-null int64

2 Surname 10000 non-null object

3 CreditScore 10000 non-null int64

4 Geography 10000 non-null object

5 Gender 10000 non-null object

6 Age 10000 non-null int64

7 Tenure 10000 non-null int64

8 Balance 10000 non-null float64

9 NumOfProducts 10000 non-null int64

10 HasCrCard 10000 non-null int64

11 IsActiveMember 10000 non-null int64

12 EstimatedSalary 10000 non-null float64

13 Exited 10000 non-null int64

dtypes: float64(2), int64(9), object(3)

memory usage: 1.1+ MB

updated\_df['Balance']**=**updated\_df['Balance']**.**fillna(updated\_df['Balance']**.**mean())

updated\_df**.**info()

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

RangeIndex: 10000 entries, 0 to 9999

Data columns (total 14 columns):

# Column Non-Null Count Dtype

--- ------ -------------- -----

0 RowNumber 10000 non-null int64

1 CustomerId 10000 non-null int64

2 Surname 10000 non-null object

3 CreditScore 10000 non-null int64

4 Geography 10000 non-null object

5 Gender 10000 non-null object

6 Age 10000 non-null int64

7 Tenure 10000 non-null int64

8 Balance 10000 non-null float64

9 NumOfProducts 10000 non-null int64

10 HasCrCard 10000 non-null int64

11 IsActiveMember 10000 non-null int64

12 EstimatedSalary 10000 non-null float64

13 Exited 10000 non-null int64

dtypes: float64(2), int64(9), object(3)

memory usage: 1.1+ MB

plt**.**scatter(df**.**index,df['Balance'])

11.plt**.**show()

sns**.**scatterplot(x**=**df**.**index,y**=**df['Balance'],hue**=**df['NumOfProducts'])

**OUTPUT:**

<matplotlib.axes.\_subplots.AxesSubplot at 0x7f2251ff7e50>

sns**.**barplot(x**=**'Gender',y**=**'Exited',data**=**df)

sns**.**countplot(x**=**'Gender',data**=**df)

**OUTPUT:**

<matplotlib.axes.\_subplots.AxesSubplot at 0x7f2251d44210>

g**=**sns**.**PairGrid(df)

g**.**map(sns**.**scatterplot)

**OUTPUT:**

<seaborn.axisgrid.PairGrid at 0x7f2251f6a850>

sns**.**pairplot(data**=**df[['Balance','CreditScore','Exited']],hue**=**'Exited')

**OUTPUT:**

<seaborn.axisgrid.PairGrid at 0x7f224bd66390>

12.df**.**describe(include**=**'all')

**OUTPUT:**

|  | **RowNumber** | **CustomerId** | **Surname** | **CreditScore** | **Geography** | **Gender** | **Age** | **Tenure** | **Balance** | **NumOfProducts** | **HasCrCard** | **IsActiveMember** | **EstimatedSalary** | **Exited** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **count** | 10000.00000 | 1.000000e+04 | 10000 | 10000.000000 | 10000 | 10000 | 10000.000000 | 10000.000000 | 10000.000000 | 10000.000000 | 10000.00000 | 10000.000000 | 10000.000000 | 10000.000000 |
| **unique** | NaN | NaN | 2932 | NaN | 3 | 2 | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN |
| **top** | NaN | NaN | Smith | NaN | France | Male | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN |
| **freq** | NaN | NaN | 32 | NaN | 5014 | 5457 | NaN | NaN | NaN | NaN | NaN | NaN | NaN | NaN |
| **mean** | 5000.50000 | 1.569094e+07 | NaN | 650.528800 | NaN | NaN | 38.921800 | 5.012800 | 76485.889288 | 1.530200 | 0.70550 | 0.515100 | 100090.239881 | 0.203700 |
| **std** | 2886.89568 | 7.193619e+04 | NaN | 96.653299 | NaN | NaN | 10.487806 | 2.892174 | 62397.405202 | 0.581654 | 0.45584 | 0.499797 | 57510.492818 | 0.402769 |
| **min** | 1.00000 | 1.556570e+07 | NaN | 350.000000 | NaN | NaN | 18.000000 | 0.000000 | 0.000000 | 1.000000 | 0.00000 | 0.000000 | 11.580000 | 0.000000 |
| **25%** | 2500.75000 | 1.562853e+07 | NaN | 584.000000 | NaN | NaN | 32.000000 | 3.000000 | 0.000000 | 1.000000 | 0.00000 | 0.000000 | 51002.110000 | 0.000000 |
| **50%** | 5000.50000 | 1.569074e+07 | NaN | 652.000000 | NaN | NaN | 37.000000 | 5.000000 | 97198.540000 | 1.000000 | 1.00000 | 1.000000 | 100193.915000 | 0.000000 |
| **75%** | 7500.25000 | 1.575323e+07 | NaN | 718.000000 | NaN | NaN | 44.000000 | 7.000000 | 127644.240000 | 2.000000 | 1.00000 | 1.000000 | 149388.247500 | 0.000000 |
| **max** | 10000.00000 | 1.581569e+07 | NaN | 850.000000 | NaN | NaN | 92.000000 | 10.000000 | 250898.090000 | 4.000000 | 1.00000 | 1.000000 | 199992.480000 | 1.000000 |

df[(df['NumOfProducts']**>**2) **|** (df['NumOfProducts']**<**3)]

**OUTPUT:**

|  | **RowNumber** | **CustomerId** | **Surname** | **CreditScore** | **Geography** | **Gender** | **Age** | **Tenure** | **Balance** | **NumOfProducts** | **HasCrCard** | **IsActiveMember** | **EstimatedSalary** | **Exited** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **0** | 1 | 15634602 | Hargrave | 619 | France | Female | 42 | 2 | 0.00 | 1 | 1 | 1 | 101348.88 | 1 |
| **1** | 2 | 15647311 | Hill | 608 | Spain | Female | 41 | 1 | 83807.86 | 1 | 0 | 1 | 112542.58 | 0 |
| **2** | 3 | 15619304 | Onio | 502 | France | Female | 42 | 8 | 159660.80 | 3 | 1 | 0 | 113931.57 | 1 |
| **3** | 4 | 15701354 | Boni | 699 | France | Female | 39 | 1 | 0.00 | 2 | 0 | 0 | 93826.63 | 0 |
| **4** | 5 | 15737888 | Mitchell | 850 | Spain | Female | 43 | 2 | 125510.82 | 1 | 1 | 1 | 79084.10 | 0 |
| **...** | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| **9995** | 9996 | 15606229 | Obijiaku | 771 | France | Male | 39 | 5 | 0.00 | 2 | 1 | 0 | 96270.64 | 0 |
| **9996** | 9997 | 15569892 | Johnstone | 516 | France | Male | 35 | 10 | 57369.61 | 1 | 1 | 1 | 101699.77 | 0 |
| **9997** | 9998 | 15584532 | Liu | 709 | France | Female | 36 | 7 | 0.00 | 1 | 0 | 1 | 42085.58 | 1 |
| **9998** | 9999 | 15682355 | Sabbatini | 772 | Germany | Male | 42 | 3 | 75075.31 | 2 | 1 | 0 | 92888.52 | 1 |
| **9999** | 10000 | 15628319 | Walker | 792 | France | Female | 28 | 4 | 130142.79 | 1 | 1 | 0 | 38190.78 | 0 |

10000 rows × 14 columns

13.df[(df['NumOfProducts']**>**2)]

**OUTPUT:**

|  | **RowNumber** | **CustomerId** | **Surname** | **CreditScore** | **Geography** | **Gender** | **Age** | **Tenure** | **Balance** | **NumOfProducts** | **HasCrCard** | **IsActiveMember** | **EstimatedSalary** | **Exited** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2** | 3 | 15619304 | Onio | 502 | France | Female | 42 | 8 | 159660.80 | 3 | 1 | 0 | 113931.57 | 1 |
| **7** | 8 | 15656148 | Obinna | 376 | Germany | Female | 29 | 4 | 115046.74 | 4 | 1 | 0 | 119346.88 | 1 |
| **30** | 31 | 15589475 | Azikiwe | 591 | Spain | Female | 39 | 3 | 0.00 | 3 | 1 | 0 | 140469.38 | 1 |
| **70** | 71 | 15703793 | Konovalova | 738 | Germany | Male | 58 | 2 | 133745.44 | 4 | 1 | 0 | 28373.86 | 1 |
| **88** | 89 | 15622897 | Sharpe | 646 | France | Female | 46 | 4 | 0.00 | 3 | 1 | 0 | 93251.42 | 1 |
| **...** | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| **9737** | 9738 | 15741197 | Calzada | 710 | Spain | Male | 22 | 8 | 0.00 | 3 | 1 | 0 | 107292.91 | 0 |
| **9747** | 9748 | 15775761 | Iweobiegbunam | 610 | Germany | Female | 69 | 5 | 86038.21 | 3 | 0 | 0 | 192743.06 | 1 |
| **9800** | 9801 | 15640507 | Li | 762 | Spain | Female | 35 | 3 | 119349.69 | 3 | 1 | 1 | 47114.18 | 1 |
| **9877** | 9878 | 15572182 | Onwuamaeze | 505 | Germany | Female | 33 | 3 | 106506.77 | 3 | 1 | 0 | 45445.78 | 1 |
| **9895** | 9896 | 15796764 | Bruno | 684 | Germany | Female | 56 | 3 | 127585.98 | 3 | 1 | 1 | 80593.49 | 1 |

326 rows × 14 columns

df['Age']**=**df['Age']**.**astype('float')

14.df**.**dtypes

**OUTPUT:**

RowNumber int64

CustomerId int64

Surname object

CreditScore int64

Geography object

Gender object

Age float64

Tenure int64

Balance float64

NumOfProducts int64

HasCrCard int64

IsActiveMember int64

EstimatedSalary float64

Exited int64

dtype: object

15.pd**.**get\_dummies(df,columns**=**['Tenure'])**.**head()

**OUTPUT:**

|  | **RowNumber** | **CustomerId** | **Surname** | **CreditScore** | **Geography** | **Gender** | **Age** | **Balance** | **NumOfProducts** | **HasCrCard** | **...** | **Tenure\_1** | **Tenure\_2** | **Tenure\_3** | **Tenure\_4** | **Tenure\_5** | **Tenure\_6** | **Tenure\_7** | **Tenure\_8** | **Tenure\_9** | **Tenure\_10** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **0** | 1 | 15634602 | Hargrave | 619 | France | Female | 42.0 | 0.00 | 1 | 1 | ... | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **1** | 2 | 15647311 | Hill | 608 | Spain | Female | 41.0 | 83807.86 | 1 | 0 | ... | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **2** | 3 | 15619304 | Onio | 502 | France | Female | 42.0 | 159660.80 | 3 | 1 | ... | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| **3** | 4 | 15701354 | Boni | 699 | France | Female | 39.0 | 0.00 | 2 | 0 | ... | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **4** | 5 | 15737888 | Mitchell | 850 | Spain | Female | 43.0 | 125510.82 | 1 | 1 | ... | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

5 rows × 24 columns

16.x**=**df**.**iloc[:,:**-**1]**.**values

y**=**df**.**iloc[:,4]**.**values

print(x,y)

**OUTPUT:**

[[1 15634602 'Hargrave' ... 1 1 101348.88]

[2 15647311 'Hill' ... 0 1 112542.58]

[3 15619304 'Onio' ... 1 0 113931.57]

...

[9998 15584532 'Liu' ... 0 1 42085.58]

[9999 15682355 'Sabbatini' ... 1 0 92888.52]

[10000 15628319 'Walker' ... 1 0 38190.78]] ['France' 'Spain' 'France' ... 'France' 'Germany' 'France']

x**=**df**.**iloc[1:3,:**-**1]**.**values

x

**OUTPUT:**

array([[2, 15647311, 'Hill', 608, 'Spain', 'Female', 41.0, 1, 83807.86,

1, 0, 1, 112542.58],

[3, 15619304, 'Onio', 502, 'France', 'Female', 42.0, 8, 159660.8,

3, 1, 0, 113931.57]], dtype=object)

17.x**=**df[['Gender','Age']]

print(x)

**OUTPUT:**

Gender Age

0 Female 42.0

1 Female 41.0

2 Female 42.0

3 Female 39.0

4 Female 43.0

... ... ...

9995 Male 39.0

9996 Male 35.0

9997 Female 36.0

9998 Male 42.0

9999 Female 28.0

[10000 rows x 2 columns]

**from** sklearn.model\_selection **import** train\_test\_split

training\_data,testing\_data**=**train\_test\_split(df,test\_size**=**1,random\_state**=**3)

print(training\_data,testing\_data)

**OUTPUT:**

RowNumber CustomerId Surname CreditScore Geography Gender \

6555 6556 15581505 Bales 641 France Male

1448 1449 15585367 Diribe 555 Germany Female

3351 3352 15792729 Holland 474 Germany Female

231 232 15627000 Freeman 610 France Male

1204 1205 15650098 Baranova 630 France Female

... ... ... ... ... ... ...

6400 6401 15585907 Collier 676 Spain Female

9160 9161 15753679 Mullawirraburka 778 France Male

9859 9860 15615430 Adams 678 Germany Male

1688 1689 15804610 Valdez 601 France Female

5994 5995 15746065 Lo Duca 580 Germany Male

Age Tenure Balance NumOfProducts HasCrCard IsActiveMember \

6555 35.0 5 0.00 2 1 0

1448 46.0 4 120392.99 1 1 0

3351 34.0 9 176311.36 1 1 0

231 40.0 0 0.00 2 1 0

1204 40.0 7 0.00 2 1 1

... ... ... ... ... ... ...

6400 30.0 5 0.00 2 0 0

9160 24.0 4 0.00 2 1 1

9859 55.0 4 129646.91 1 1 1

1688 41.0 1 0.00 2 0 1

5994 35.0 10 136281.41 2 1 1

EstimatedSalary Exited

6555 93148.93 0

1448 177719.88 1

3351 160213.27 0

231 62232.60 0

1204 34453.17 0

... ... ...

6400 179066.58 0

9160 162809.20 0

9859 184125.10 1

1688 160607.06 0

5994 24799.47 0

[9999 rows x 14 columns] RowNumber CustomerId Surname CreditScore Geography Gender Age \

5876 5877 15585379 Humphries 704 France Male 39.0

Tenure Balance NumOfProducts HasCrCard IsActiveMember \

5876 2 111525.02 1 1 0

EstimatedSalary Exited

5876 199484.96 0