

```
(11162, 17)
Index(['age', 'job', 'marital', 'education', 'default', 'balance', 'housing',
       'loan', 'contact', 'day', 'month', 'duration', 'campaign', 'pdays',
       'previous', 'poutcome', 'deposit'],
      dtype='object')
   age      job  marital  education  default  balance  housing  loan  contact \
0   59  admin.  married  secondary     no     2343     yes   no  unknown
1   56  admin.  married  secondary     no        45     no   no  unknown
2   41 technician  married  secondary     no    1270     yes   no  unknown
3   55  services  married  secondary     no    2476     yes   no  unknown
4   54  admin.  married   tertiary     no     184     no   no  unknown
```

```
   day month  duration  campaign  pdays  previous  poutcome  deposit
0    5   may     1042         1     -1         0  unknown     yes
1    5   may     1467         1     -1         0  unknown     yes
2    5   may     1389         1     -1         0  unknown     yes
3    5   may      579         1     -1         0  unknown     yes
4    5   may      673         2     -1         0  unknown     yes
```

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

```
RangeIndex: 11162 entries, 0 to 11161
```

```
Data columns (total 17 columns):
```

```
#   Column      Non-Null Count  Dtype
---  -
0   age         11162 non-null    int64
1   job          11162 non-null    object
2   marital      11162 non-null    object
3   education    11162 non-null    object
4   default      11162 non-null    object
5   balance      11162 non-null    int64
6   housing      11162 non-null    object
7   loan         11162 non-null    object
8   contact      11162 non-null    object
9   day          11162 non-null    int64
10  month        11162 non-null    object
11  duration      11162 non-null    int64
12  campaign      11162 non-null    int64
13  pdays         11162 non-null    int64
14  previous      11162 non-null    int64
15  poutcome      11162 non-null    object
16  deposit       11162 non-null    object
```

```
dtypes: int64(7), object(10)
```

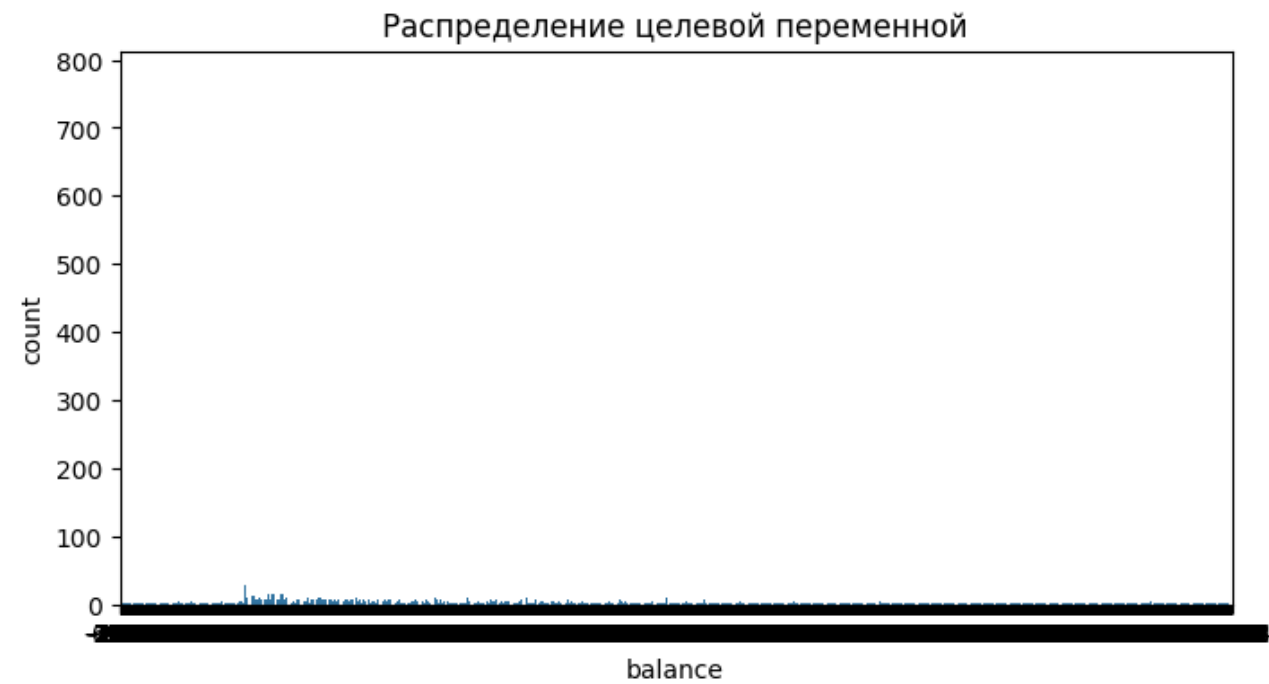
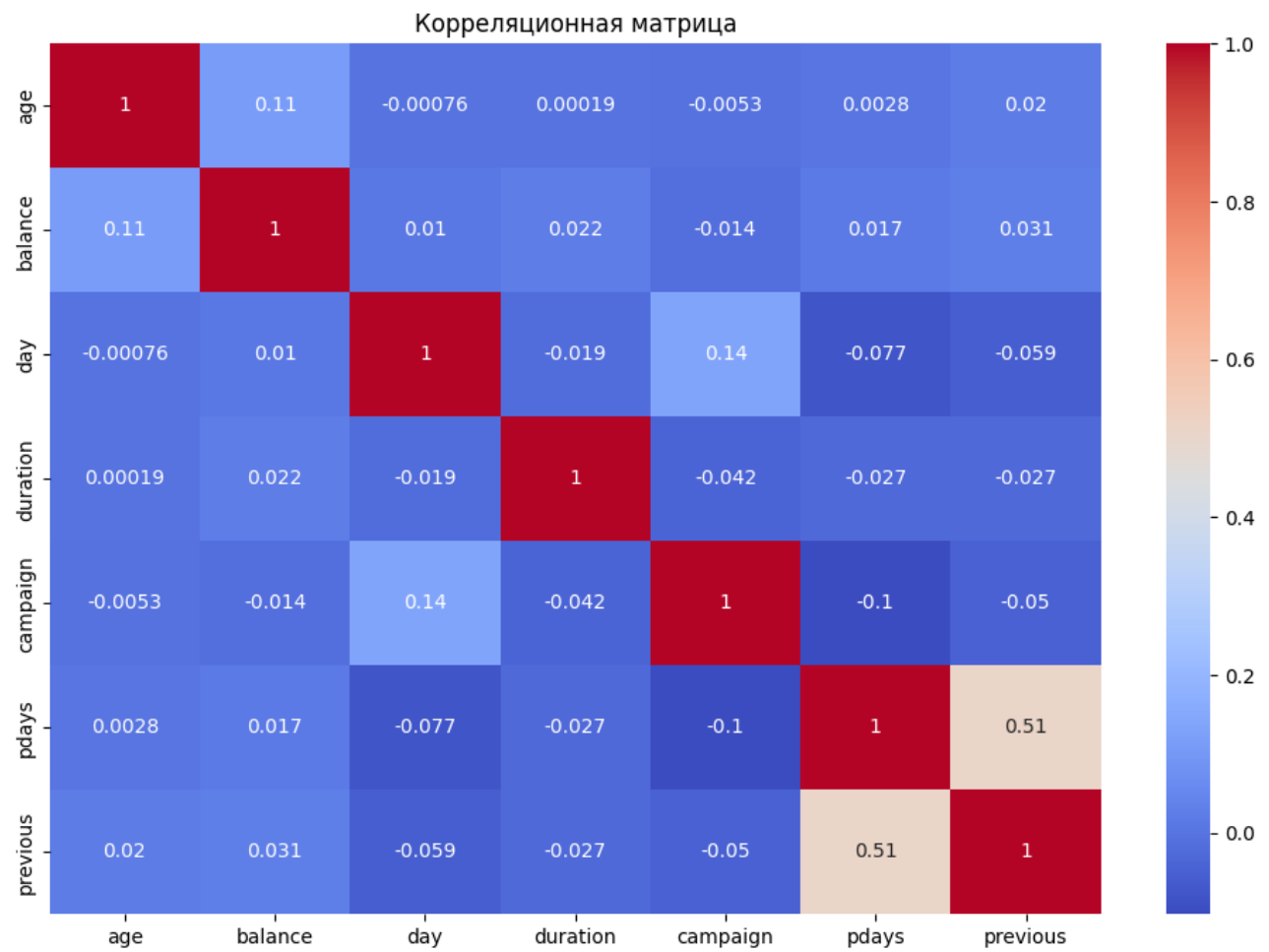
```
memory usage: 1.4+ MB
```

```
None
```

```
      age      balance      day      duration      campaign \
count  11162.000000  11162.000000  11162.000000  11162.000000  11162.000000
mean    41.231948   1528.538524    15.658036    371.993818    2.508421
std     11.913369   3225.413326     8.420740    347.128386    2.722077
min     18.000000  -6847.000000     1.000000     2.000000    1.000000
25%     32.000000   122.000000     8.000000    138.000000    1.000000
50%     39.000000   550.000000    15.000000    255.000000    2.000000
75%     49.000000  1708.000000    22.000000    496.000000    3.000000
max     95.000000  81204.000000    31.000000   3881.000000   63.000000
```

```
      pdays      previous
count  11162.000000  11162.000000
mean     51.330407    0.832557
std     108.758282    2.292007
min      -1.000000    0.000000
25%      -1.000000    0.000000
50%      -1.000000    0.000000
```

75%            20.750000            1.000000  
max            854.000000            58.000000



Пропуски в данных:

age	0
job	0
marital	0
education	0

```
default      0
balance      0
housing      0
loan         0
contact      0
day          0
month        0
duration     0
campaign     0
pdays       0
previous     0
poutcome     0
deposit      0
dtype: int64
```

Пропуски после обработки:

0

KNN с n\_neighbors=4:

Обучающая точность: 0.2647, Тестовая точность: 0.0154