

GEBZE TECHNICAL UNIVERSITY

CSE443 OBJECT ORIENTED PROGRAMMING

HOMEWORK – 4 REPORT

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Client ile Server RMI kullanılarak implement edilmiştir. User kullanıcı localhost veya istediği IP de sistemi kullanabilmektedir. Giriş ekranı aşağıda belirtilmektedir.

Kullanıcı giriş ekranı, kredi detayları yapılmıştır. Kullanıcı oluşturulabilmekte ve ödeme sistemine kart bilgileri ile ödeme yapılabilmektedir.

Birden çok kullanıcı farklı ağlardan bağlanabilir ve bağlanan kullanıcıların logları kendi sistemlerinde tutulmaktadır.

Her kullanıcı için LOG serverda ayrı ayrı tutulmaktadır.

Kullanıcıya kesinlikle obje bilgisi verilmemektedir. Kullanıcıya parçalayamayacağı Stringler yollanmaktadır. Kullanıcı sorgularında yalnızca ekrana basabileceği sonuçlar alır.

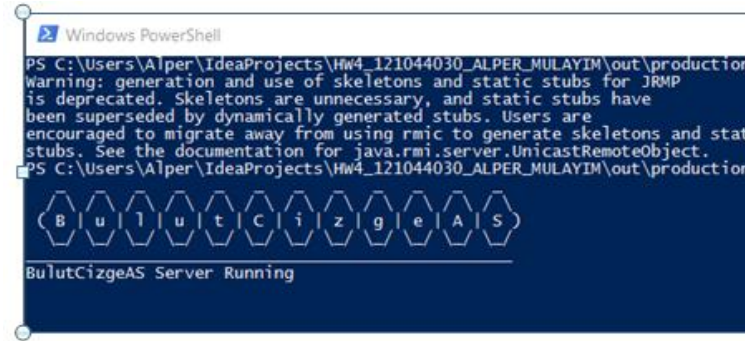
Kullanıcılar kesinlikle başka kullanıcının bilgilerine loglarına ulaşamazlar.

Credit Ücretlendirme

İşlem başına kullanıcıdan belli oranlarda işlem ücreti alınmaktadır. Aşağıdaki tabloda işlem başına alınan ücretler gösterilmektedir.

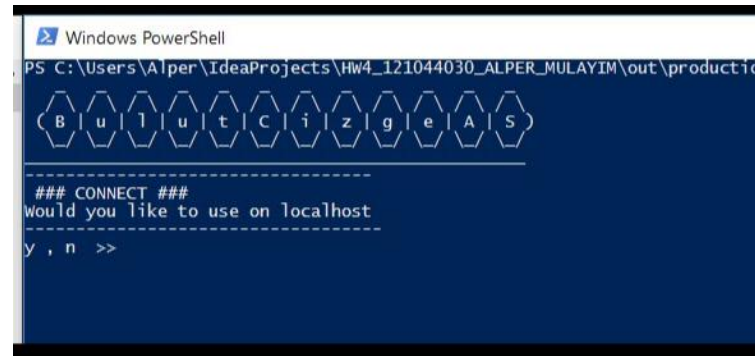
Process	Credit
User Creation	20
User Property Sorgulama	2.5
Credit Sorgulama	1.25
Log Sorgulama	1.75
Pay (Odeme) Komisyonu	Pay x 0.1
Creation Graph	5
Add Graph Element	0.1
Graph Structure Sorgulama	4
Dijkstra Report	6.5
Shortest Path	5

Server ekranı



Şekil 1:Server ekranı

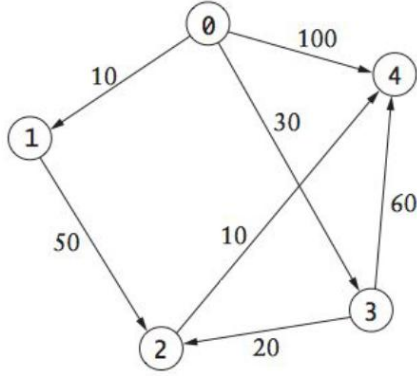
Client Giriş ekranı



Şekil 2Client giriş

Client hazır oluşturulmuş kullanıcı ve graph ile test sürüşü yapabileceği gibi kendi kullanıcı hesabını da oluşturabilir.

Test Graphı aşağıda gösterilmektedir.



```
PS C:\Users\Alper\IdeaProjects\HW4_121044030_ALPER_MULA
(B|u|l|u|t|C|i|z|g|e|A|S)

### CONNECT ###
Would you like to use on localhost
y, n >> y
Connecting localhost

1 . Test
2 . Create User
3 . Login

Please enter your process >>
```

Şekil 3: Client hazır oluşturulmuş graph ve kullanıcı bilgileri ile test sürüşü yapabili

```
-----
1 . Show User Properties
2 . Show Credit Details
3 . Graph
4 . Pay Credit
5 . Show Log
6 . Top Menu
-----
Please enter your process >> 1

### USER DETAILS ###

UserName : alper_mulayim
Name     : alper
Surname  : mulayim
Email    : alp@gtu.edu.tr

-----
1 . Show User Properties
2 . Show Credit Details
3 . Graph
4 . Pay Credit
5 . Show Log
6 . Top Menu
-----
Please enter your process >>
```

Şekil 4: Kullanıcı sorgusu

```
-----
1 . Show User Properties
2 . Show Credit Details
3 . Graph
4 . Pay Credit
5 . Show Log
6 . Top Menu
-----
Please enter your process >> 4

### CREDIT PAYMENT ###

Card Name   : ISBANK MAXIMUM
Card Number : IS1234-1234-123
Balance     : 84,05

Enter Cost to Pay >> 50
Card Credit UP-TO-DATE

-----
1 . Show User Properties
2 . Show Credit Details
3 . Graph
4 . Pay Credit
5 . Show Log
6 . Top Menu
-----
Please enter your process >>
```

Şekil 5: Kart Ödeme Para Yükleme

```

-----
1 . Show User Properties
2 . Show Credit Details
3 . Graph
4 . Pay Credit
5 . Show Log
6 . Top Menu
-----
Please enter your process >> 4

### CREDIT PAYMENT ###

Card Name   : ZIRAAT DEBIT
Card Number : 1234-1234-3556-6656
Balance     : 473,25

Enter Cost to Pay >> 50
Card Credit UP-TO-DATE
-----
1 . Show User Properties
2 . Show Credit Details
3 . Graph
4 . Pay Credit
5 . Show Log
6 . Top Menu
-----
Please enter your process >>

```

Şekil 6Kart sorgusu

```

-----
1 . Create Graph
2 . Add Element To Graph
3 . Show Graph Structure
4 . Show Dijikstra Report
5 . Find Shortest Path
6 . Top Menu
-----
Please Choose >> 3
### SHOW GRAPH DATA STRUCTURE ###

GraphStructure
0->[(1,10.0), (4,100.0), (3,30.0)]
1->[(2,50.0)]
2->[(4,10.0), (5,60.0)]
3->[(2,20.0), (4,60.0)]

-----
1 . Create Graph
2 . Add Element To Graph
3 . Show Graph Structure
4 . Show Dijikstra Report
5 . Find Shortest Path
6 . Top Menu
-----
Please Choose >>

```

Şekil 8Graph sorgusu

```

-----
1 . Show User Properties
2 . Show Credit Details
3 . Graph
4 . Pay Credit
5 . Show Log
6 . Top Menu
-----
Please enter your process >> 3

### GRAPH MENU ###

1 . Create Graph
2 . Add Element To Graph
3 . Show Graph Structure
4 . Show Dijikstra Report
5 . Find Shortest Path
6 . Top Menu
-----
Please Choose >>

```

Şekil 7Graph menusu

```

-----
1 . Create Graph
2 . Add Element To Graph
3 . Show Graph Structure
4 . Show Dijikstra Report
5 . Find Shortest Path
6 . Top Menu
-----
Please Choose >> 4
### DIJIKSTRA REPORT ###
V      p[V]      d[V]
-----
1         0        10.0
2         3        50.0
3         0        30.0
4         2        60.0
5         2       110.0

-----
1 . Create Graph
2 . Add Element To Graph
3 . Show Graph Structure
4 . Show Dijikstra Report
5 . Find Shortest Path
6 . Top Menu
-----
Please Choose >>

```

Şekil 9: Dijikstra Sorusu

```

-----
Please Choose >> 4
### DIJIKSTRA REPORT ###
V      p[V]      d[V]
-----
1         0        10.0
2         3        50.0
3         0        30.0
4         2        60.0
5         2       110.0

-----
1 . Create Graph
2 . Add Element To Graph
3 . Show Graph Structure
4 . Show Dijikstra Report
5 . Find Shortest Path
6 . Top Menu
-----
Please Choose >> 5
### SHORTEST PATH ###

s. Find Shortest Path
x. Top Menu
Enter your process >>

s
Enter Shortest Vertex
### Enter Node ###
Enter N1 >> 0
Enter N2 >> 5
Distance : ( 0 ) from ( 5 ) is 110.0   0->   2->   5

-----
a . Add Vertex
x . Top Menu
Enter your process >>

```

Şekil 10: Eleman ekleme

```
PS C:\Users\Alper\IdeaProjects\HW4_121044030_ALPER_MULAYIM\out\production\HW4_12
(B|u|l|u|t|C|i|z|g|e|A|S)

-----
### CONNECT ###
would you like to use on localhost
-----
y , n >> n
Enter Server IP >> 10.1.40.255
-----
1 . Test
2 . Create User
3 . Login
-----
Please enter your process >> 2
.... Create New User ....
UserName >>ayse34
Name >>Ayse
Surname >>Mahmutoglu
Password >>12345
MailAdres >>ayse@gmail.com
Ccredit Card Name >>ZIRAAT DEBIT
Credit Card Number >>1234-1234-3556-6656
Credit Card Balance >>500

UserName :ayse34
Name : Ayse
Surname : Mahmutoglu
Email : ayse@gmail.com
Card Name : ZIRAAT DEBIT
Card Number :1234-1234-3556-6656
Credit :500

Do you Confirm ? >>
y
-----
1 . Show User Properties
2 . Show Credit Details
3 . Graph
4 . Pay Credit
5 . Show Log
6 . Top Menu
-----
Please enter your process >>
```

Şekil 11 : Kullanıcı ekleme

```
Enter Cost to Pay >>50
Card Credit UP-TO-DATE
-----
1 . Show User Properties
2 . Show Credit Details
3 . Graph
4 . Pay Credit
5 . Show Log
6 . Top Menu
-----
Please enter your process >> 5

### USER LOG ###
1 . Hello User      Pzt 2017.01.02 at 06:31:16 PM    Pzt 2017.01.02 at 06:31:16 PM    0.0    500,00
2 . User Creation   Pzt 2017.01.02 at 06:31:16 PM    Pzt 2017.01.02 at 06:31:16 PM    20.0    480,00
3 . User Inquiry    Pzt 2017.01.02 at 06:31:41 PM    Pzt 2017.01.02 at 06:31:41 PM    2.5    477,50
4 . Log Innquiry    Pzt 2017.01.02 at 06:31:47 PM    Pzt 2017.01.02 at 06:31:47 PM    1.75    475,75
5 . Credit Innquiry Pzt 2017.01.02 at 06:32:19 PM    Pzt 2017.01.02 at 06:32:19 PM    1.25    474,50
6 . Credit Innquiry Pzt 2017.01.02 at 06:32:44 PM    Pzt 2017.01.02 at 06:32:44 PM    1.25    473,25
7 . Pay Credit : 50.0. Pzt 2017.01.02 at 06:32:48 PM    Pzt 2017.01.02 at 06:32:48 PM    0.25    473,00
8 . Log Innquiry    Pzt 2017.01.02 at 06:33:45 PM    Pzt 2017.01.02 at 06:33:45 PM    1.75    521,25
```

Şekil 12LOG SORGUSU

```

v      p[V]      d[V]
-      -      -
1      0      10.0
2      3      50.0
3      0      30.0
4      2      60.0

Distance : ( 0 ) from ( 1 ) is 10.0    0->    1
Distance : ( 0 ) from ( 4 ) is 60.0    0->    2->    4
Distance : ( 3 ) from ( 4 ) is 30.0    3->    2->    4
Distance : ( 3 ) from ( 2 ) is 20.0    3->    2
Distance : ( 1 ) from ( 4 ) is 50.0    1->    2->    4
Distance : ( 0 ) from ( 2 ) is 50.0    0->    3->    2

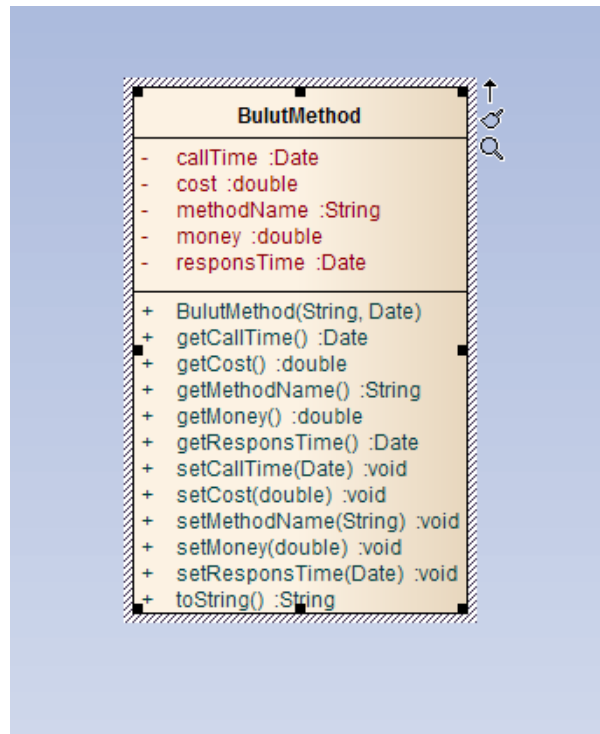
Card Name      : ISBANK MAXIMUM
Card Number    : IS1234-1234-123
Balance        : 47,05

1 . Hello User      Pzt 2017.01.02 at 05:54:11 PM Pzt 2017.01.02 at 05:54:11 PM 0.0      120,00
2 . User Creation   Pzt 2017.01.02 at 05:54:11 PM Pzt 2017.01.02 at 05:54:11 PM 20.0     100,00
3 . User Inquiry    Pzt 2017.01.02 at 05:54:11 PM Pzt 2017.01.02 at 05:54:11 PM 2.5      97,50
4 . Credit Innquiry Pzt 2017.01.02 at 05:54:11 PM Pzt 2017.01.02 at 05:54:11 PM 1.25     96,25
5 . Graph Creation  Pzt 2017.01.02 at 05:54:11 PM Pzt 2017.01.02 at 05:54:11 PM 5.0      91,25
6 . Graph Adding Elm. Pzt 2017.01.02 at 05:54:11 PM Pzt 2017.01.02 at 05:54:11 PM 0.1      91,15
7 . Graph Adding Elm. Pzt 2017.01.02 at 05:54:11 PM Pzt 2017.01.02 at 05:54:11 PM 0.1      91,05
8 . Graph Adding Elm. Pzt 2017.01.02 at 05:54:11 PM Pzt 2017.01.02 at 05:54:11 PM 0.1      90,95
9 . Graph Adding Elm. Pzt 2017.01.02 at 05:54:11 PM Pzt 2017.01.02 at 05:54:11 PM 0.1      90,85
10 . Graph Adding Elm. Pzt 2017.01.02 at 05:54:11 PM Pzt 2017.01.02 at 05:54:11 PM 0.1      90,75
11 . Graph Adding Elm. Pzt 2017.01.02 at 05:54:11 PM Pzt 2017.01.02 at 05:54:11 PM 0.1      90,65
12 . Graph Adding Elm. Pzt 2017.01.02 at 05:54:11 PM Pzt 2017.01.02 at 05:54:11 PM 0.1      90,55
13 . Graph Structure L. Pzt 2017.01.02 at 05:54:11 PM Pzt 2017.01.02 at 05:54:11 PM 4.0      86,55
14 . Log Innquiry    Pzt 2017.01.02 at 05:54:11 PM Pzt 2017.01.02 at 05:54:11 PM 1.75     84,80
15 . Dijkstra Report Pzt 2017.01.02 at 05:54:11 PM Pzt 2017.01.02 at 05:54:11 PM 6.5      78,30
16 . Shortest Path R. Pzt 2017.01.02 at 05:54:11 PM Pzt 2017.01.02 at 05:54:11 PM 5.0      73,30
17 . Shortest Path R. Pzt 2017.01.02 at 05:54:11 PM Pzt 2017.01.02 at 05:54:11 PM 5.0      68,30
18 . Shortest Path R. Pzt 2017.01.02 at 05:54:11 PM Pzt 2017.01.02 at 05:54:11 PM 5.0      63,30
19 . Shortest Path R. Pzt 2017.01.02 at 05:54:11 PM Pzt 2017.01.02 at 05:54:11 PM 5.0      58,30
20 . Shortest Path R. Pzt 2017.01.02 at 05:54:11 PM Pzt 2017.01.02 at 05:54:11 PM 5.0      53,30
21 . Shortest Path R. Pzt 2017.01.02 at 05:54:11 PM Pzt 2017.01.02 at 05:54:11 PM 5.0      48,30
22 . Credit Innquiry Pzt 2017.01.02 at 05:54:11 PM Pzt 2017.01.02 at 05:54:11 PM 1.25     47,05
23 . Log Innquiry    Pzt 2017.01.02 at 05:54:11 PM Pzt 2017.01.02 at 05:54:11 PM 1.75     45,30

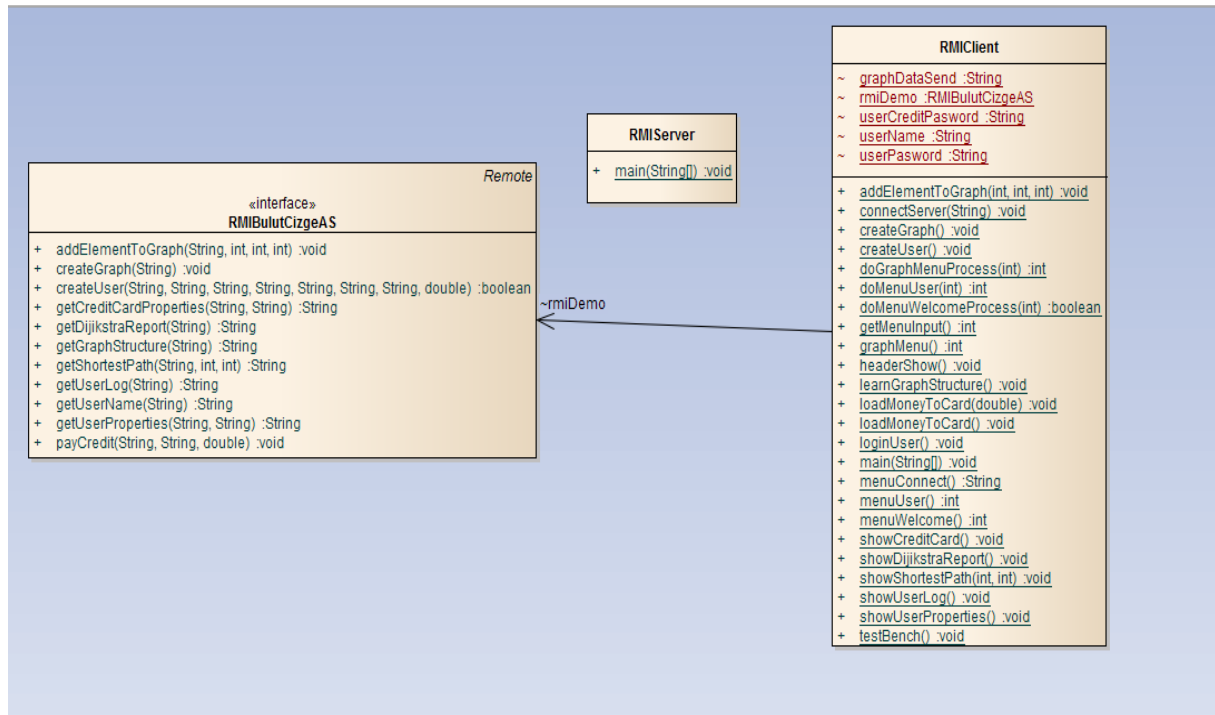
```

Şekil 13IOG SORGUSU

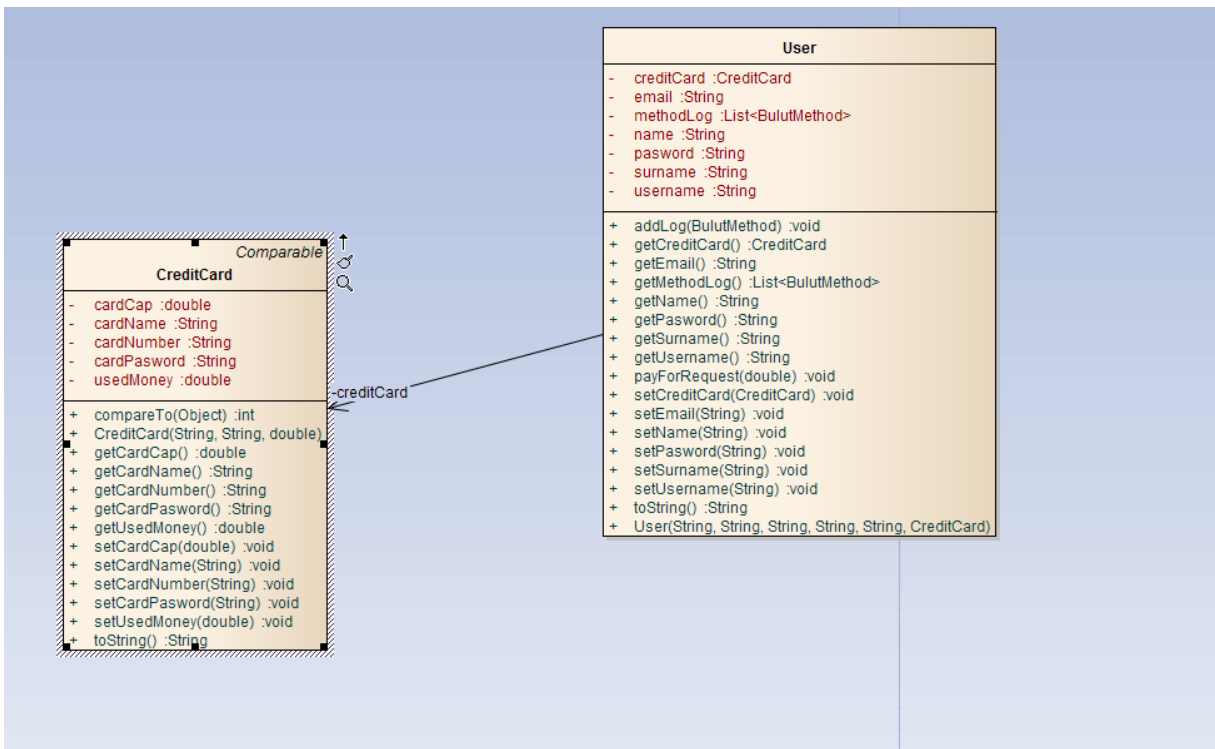
UML DIYAGRAMLARI



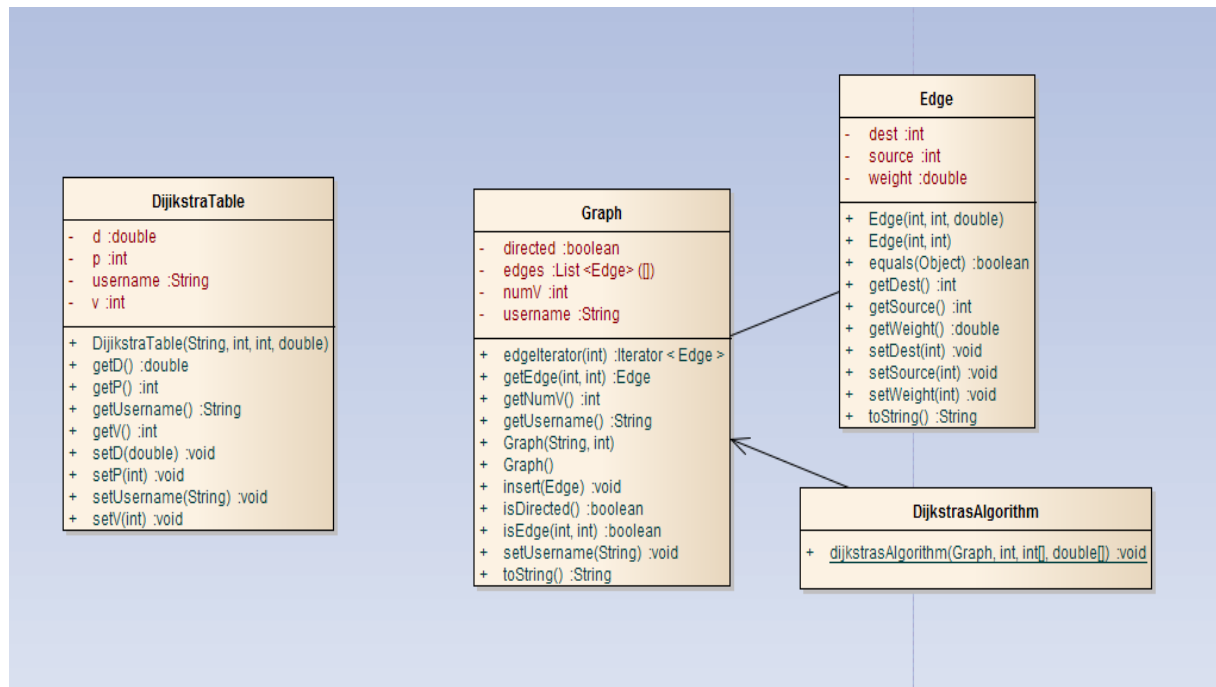
Şekil 14: Method loglama



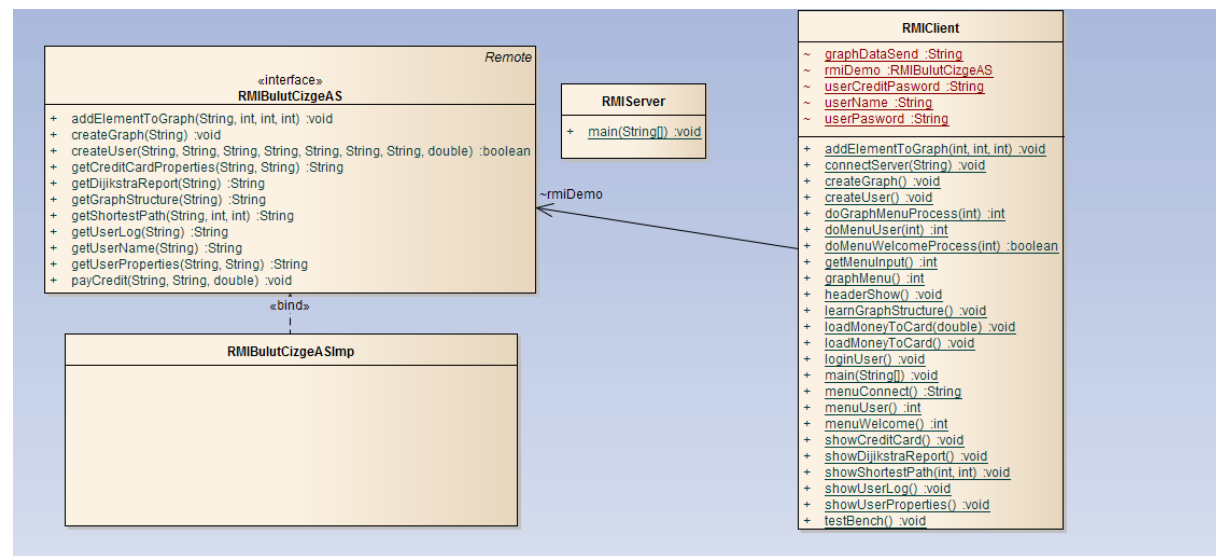
Şekil 15: RMI



Şekil 16: User



Şekil 17: Graph



Şekil 18stub