T.C.

GEBZE TEKNİK ÜNİVERSİTESİ

BİLGİSAYAR MÜHENDİSLİĞİ BÖLÜMÜ

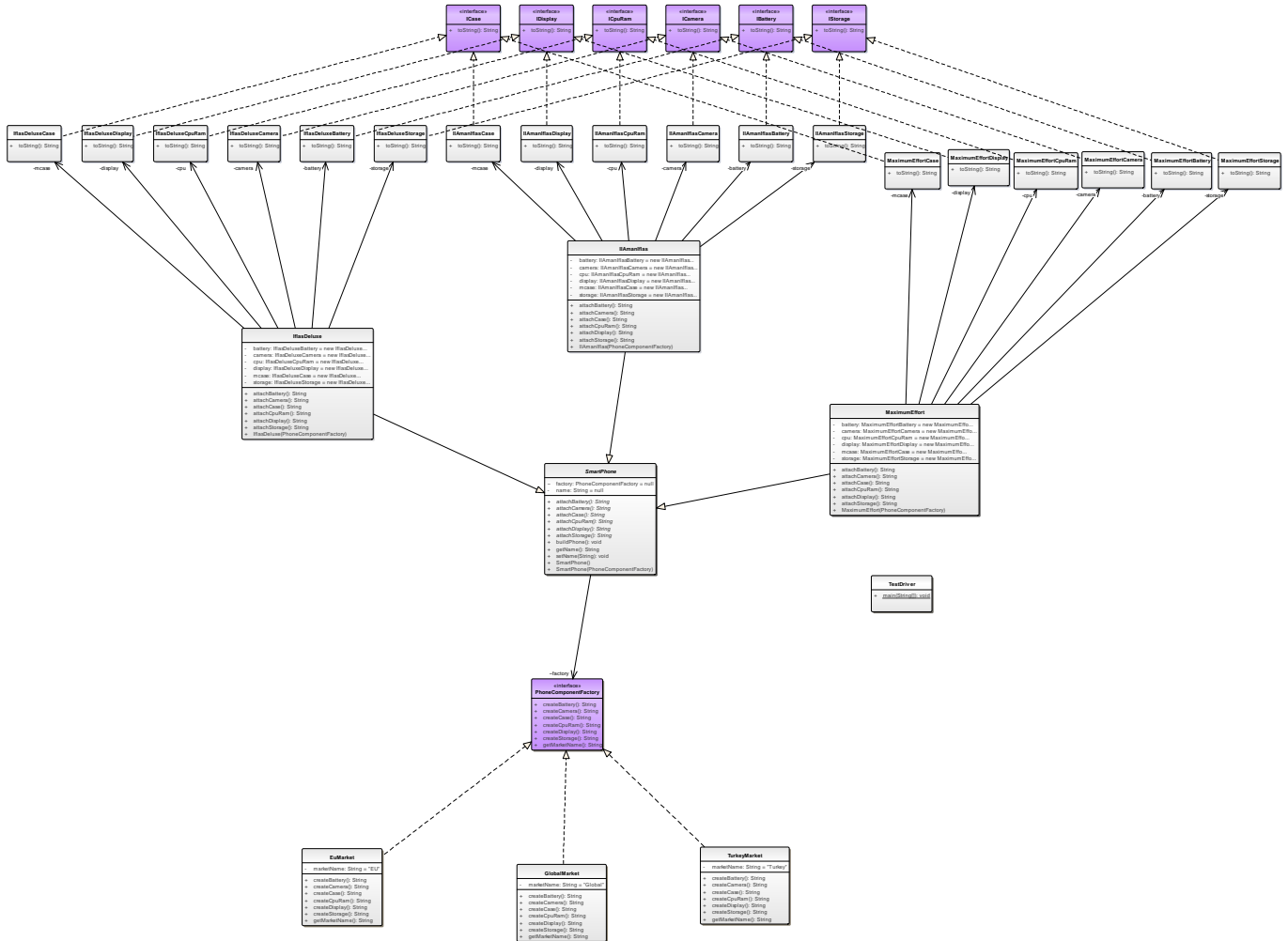# CSE443 - Object Oriented Analysis and Design
Fall 2016
HW3

Onur SEZER

121044074

Q1)

- İlk bölüm için çıkan class diyagramı aşağıdaki gibidir.

- Main çalıştırıldıktan sonra çıkan çıktı aşağıdaki gibidir.

```
Console
<terminated> TestDriver [Java Application] C:\Program Files\Java\jre1.8.0_111\bin\javaw.exe (14 Ara 2016 00:58:00)
Telefon ismi : MaximumEffort
Üretim yeri : Turkey
2.8GHz, 8GB 8 cores eklendi
5.5 inches 32 bit eklendi
27h, 3600mAh Lithium-Boron eklendi
MicroSD support, 64GB Max 128 GB  eklendi
12Mp front, 8Mp rear Opt. zoom x4 eklendi
151x73x7.7 mm dustproof, waterproof, aluminum Waterp,roof up to 2m oluşturuldu

Telefon ismi : MaximumEffort
Üretim yeri : EU
2.8GHz, 8GB 4 cores eklendi
5.5 inches 24 bit eklendi
27h, 3600mAh Lithium-Ion eklendi
MicroSD support, 64GB Max 64 GB eklendi
12Mp front, 8Mp rear Opt. zoom x3 eklendi
151x73x7.7 mm dustproof, waterproof, aluminum Waterproof up to 1m oluşturuldu

Telefon ismi : MaximumEffort
Üretim yeri : Global
2.8GHz, 8GB 2 cores eklendi
5.5 inches 24 bit  eklendi
27h, 3600mAh Lithium-Cobalt eklendi
MicroSD support, 64GB Max 32 GB eklendi
12Mp front, 8Mp rear Opt. zoom x2 eklendi
151x73x7.7 mm dustproof, waterproof, aluminum Waterproof up to 50cm oluşturuldu

Telefon ismi : IIAmanIflas
Üretim yeri : Global
2.2GHz, 4GB 2 cores eklendi
4.5 inches24 bit  eklendi
16h, 2000mAh Lithium-Cobalt eklendi
MicroSD support, 16GB Max 32 GB eklendi
8Mp front, 5Mp rear Opt. zoom x2 eklendi
143x69x7.3 mm waterproof, plastic Waterproof up to 50cm oluşturuldu
```
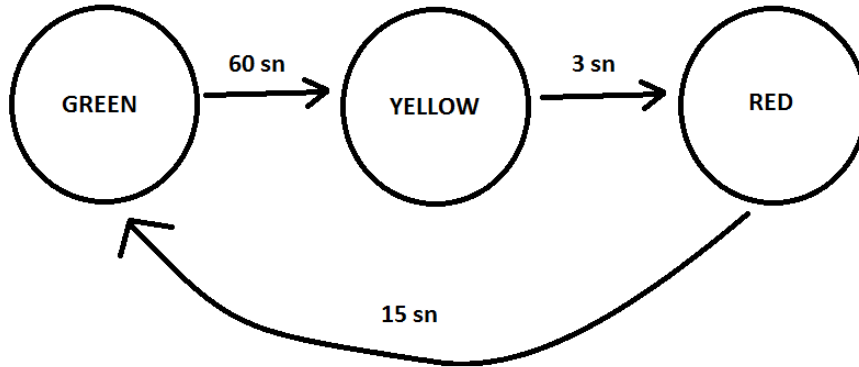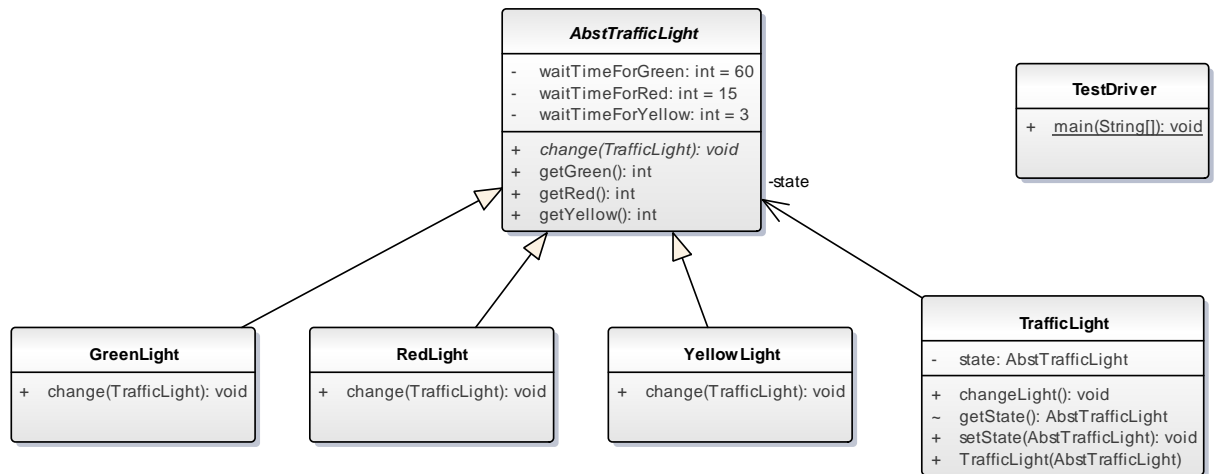
Q2_Part1)

- State diagramı :

- İkinci bölümün ilk kısmı için çıkan class diyagramı aşağıdaki gibidir.
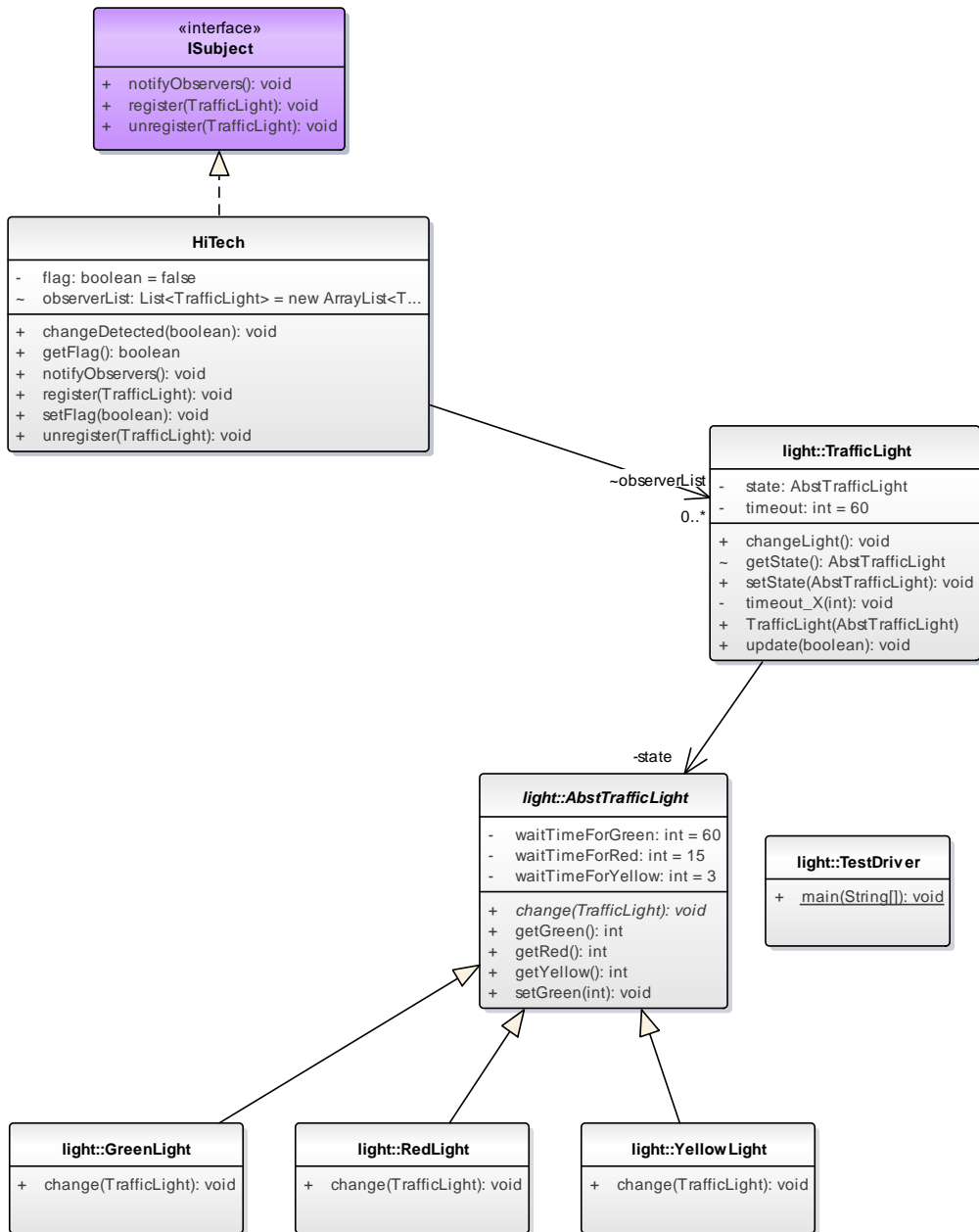

- Main çıktısı:


```
***State Pattern Demo***

I am RedLight. Going to be GreenLight after 15 seconds
I am GreenLight. Going to be YellowLight after 60 seconds
I am YellowLight. Going to be RedLight after 3 seconds
```

Q2_Part2)

- İkinci bölümün ikinci kısmı için çıkan class diyagramı aşağıdaki gibidir.

«interface»
ISubject

+ notifyObservers(): void
+ register(TrafficLight): void
+ unregister(TrafficLight): void

HiTech

- flag: boolean = false
~ observerList: List<TrafficLight> = new ArrayList<T...

+ changeDetected(boolean): void
+ getFlag(): boolean
+ notifyObservers(): void
+ register(TrafficLight): void
+ setFlag(boolean): void
+ unregister(TrafficLight): void

~observerList

0..*

light::TrafficLight

- state: AbstTrafficLight
- timeout: int = 60

+ changeLight(): void
~ getState(): AbstTrafficLight
+ setState(AbstTrafficLight): void
- timeout_X(int): void
+ TrafficLight(AbstTrafficLight)
+ update(boolean): void

-state

light::AbstTrafficLight

- waitTimeForGreen: int = 60
- waitTimeForRed: int = 15
- waitTimeForYellow: int = 3

+ change(TrafficLight): void
+ getGreen(): int
+ getRed(): int
+ getYellow(): int
+ setGreen(int): void

light::TestDriver

+ main(String[]): void

light::GreenLight

+ change(TrafficLight): void

light::RedLight

+ change(TrafficLight): void

light::YellowLight

+ change(TrafficLight): void

- Main çıktısı:

```
Console ⊠
<terminated> TestDriver (3) [Java Application] C:\Program Files\Java\jre1.8.0_111\bin\javaw.exe (14 Ara 2016 01:43:14)
           ***Observer & State Pattern Demo***

light registered to HiTech
light2 registered to HiTech
light3 registered to HiTech

Trafiğin sıkışık olduğu farkedildi.Yeşil ışıklar 90 sn yapildi.

 light
I am RedLight. Going to be GreenLight after 15 seconds
I am GreenLight. Going to be YellowLight after 90 seconds
I am YellowLight. Going to be RedLight after 3 seconds

 light2
I am RedLight. Going to be GreenLight after 15 seconds
I am GreenLight. Going to be YellowLight after 90 seconds
I am YellowLight. Going to be RedLight after 3 seconds

 light3
I am RedLight. Going to be GreenLight after 15 seconds
I am GreenLight. Going to be YellowLight after 90 seconds
I am YellowLight. Going to be RedLight after 3 seconds

Trafiğin normal olduğu farkedildi.Yeşil ışık eski haline getirildi.

 light
I am RedLight. Going to be GreenLight after 15 seconds
I am GreenLight. Going to be YellowLight after 60 seconds
I am YellowLight. Going to be RedLight after 3 seconds

 light2
I am RedLight. Going to be GreenLight after 15 seconds
I am GreenLight. Going to be YellowLight after 60 seconds
I am YellowLight. Going to be RedLight after 3 seconds

 light3
I am RedLight. Going to be GreenLight after 15 seconds
I am GreenLight. Going to be YellowLight after 60 seconds
I am YellowLight. Going to be RedLight after 3 seconds
```