

# Telephone Shop

## *RVA projekat*

### MVVM

Model View ViewModel je pattern ili obrazac koji omogućava odvajanje prezentacijskog dijela aplikacije (GUI-a) od implementacije same aplikacije. WPF tehnologija je od samog početka osmišljena sa ciljem da ide ruku pod rukom sa MVVM obrascem. Ovaj obrazac je podijeljen u tri dijela. Model, gdje se definiraju podaci i njihovi tipovi. View ili pogled definira izgled korisničkog sučelja programa i prikazuje konačan izgled podataka te ViewModel koji je posrednik Modela i View-a te je zadužen za prezentaciju podataka i za navigaciju kroz korisničko sučelje. Binder je XAML koji oslobađa programera da ne mora pisati logiku koja služi za sinkronizaciju View-a i ViewModela. Ovakvim načinom rada se bitno olakšava održavanje aplikacije te dodavanje novih mogućnosti.

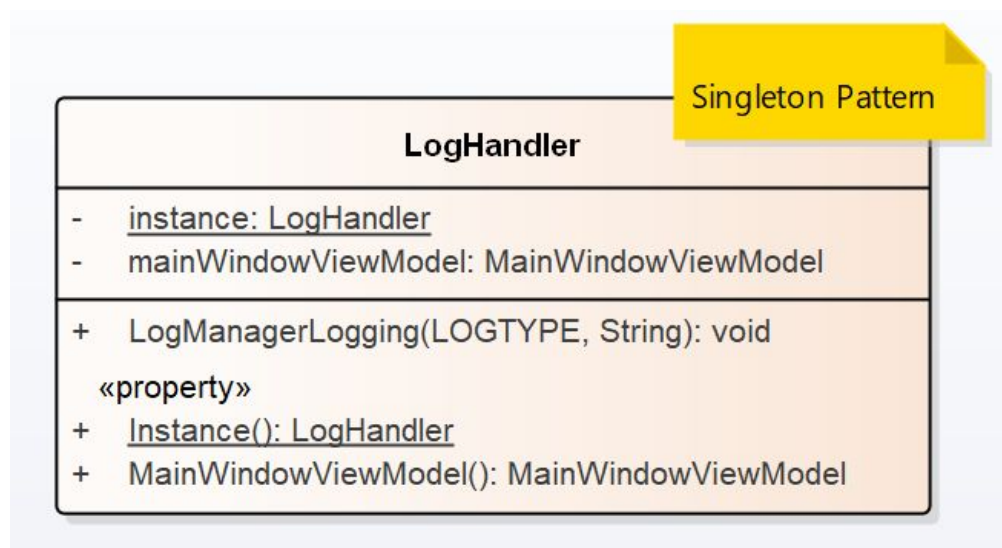
### PATERNI

Kreacioni paterni	Strukturalni paterni	Bihevioralni paterni
Singleton	Proxy	Command
Prototype		Strategy
Factory		Observer

## SINGLETON

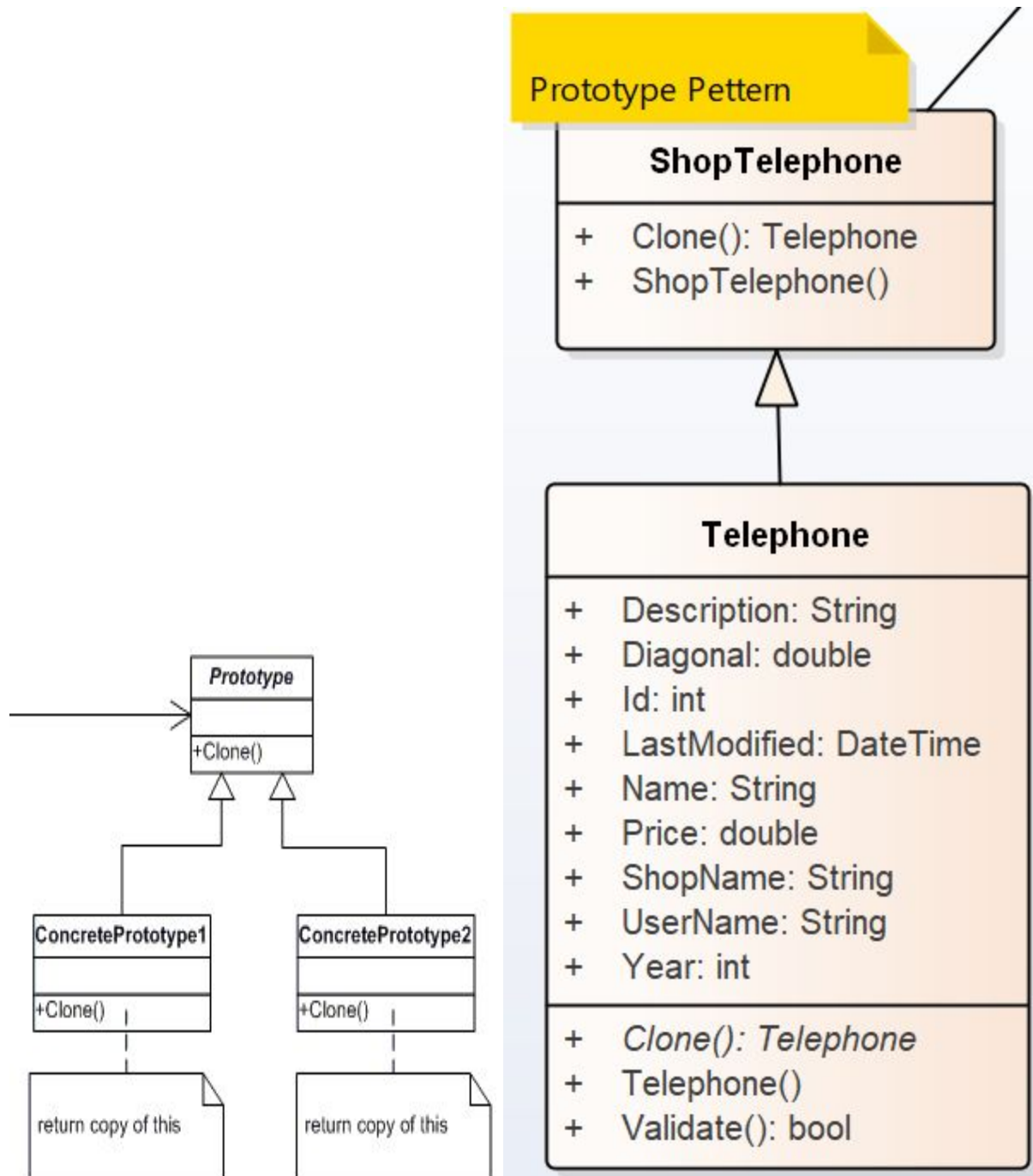
Obezbeđuje da klasa ima samo jednu instancu i daje globalni pristup toj instanci. Odgovorna za kreiranje i rad sa svojom sopstvenom jedinstvenom instancom.

Singleton
-instance : Singleton
-Singleton() +Instance() : Singleton



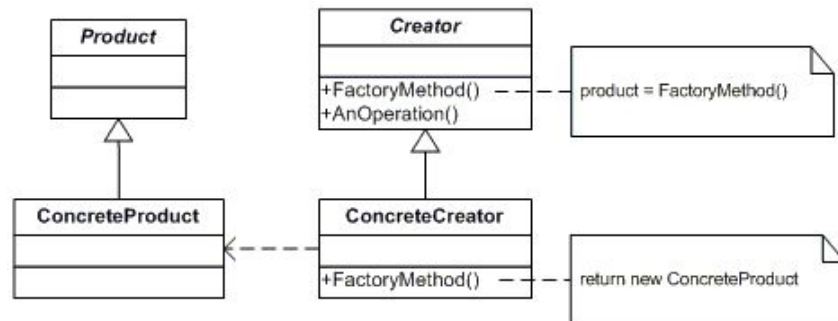
## PROTOTYPE

Definiše mehanizam kako da se pravljenje objekta-duplikata određene klase poveri posebnom objektu date klase, koji predstavlja prototipski objekat te klase i koji se može klonirati. Ukratko, govori kako klonirati određenu instancu objekta



## FACTORY & PROXY

Prosleđuje se zahtev za kreiranje objekata Factory metodi Factory klasa definiše interfejs za kreiranje objekata, a sama implementacija kreiranja objekta je prepuštena podklasama.



```
public Channel()
{
    ChannelFactory<IUserServer> channelFactoryUser = new ChannelFactory<IUserServer>(new NetTcpBinding(),
                                                                                      new EndpointAddress("net.tcp://localhost:4000/IUserServer"));
    userProxy = channelFactoryUser.CreateChannel();

    ChannelFactory<IShopServer> channelFactoryShop = new ChannelFactory<IShopServer>(new NetTcpBinding(),
                                                                                      new EndpointAddress("net.tcp://localhost:4000/IShopServer"));
    shopProxy = channelFactoryShop.CreateChannel();

    ChannelFactory<ITelephoneServer> channelFactoryTelephone = new ChannelFactory<ITelephoneServer>(new NetTcpBinding(),
                                                                                                  new EndpointAddress("net.tcp://localhost:4000/ITelephoneServer"));
    telephoneProxy = channelFactoryTelephone.CreateChannel();

    ChannelFactory<ILogger> channelFactoryLogger = new ChannelFactory<ILogger>(new NetTcpBinding(),
                                                                                new EndpointAddress("net.tcp://localhost:4000/ILogger"));
    logProxy = channelFactoryLogger.CreateChannel();
}
```

Komunikacija WCF tehnologijom implementirana u ovoj klasi predstavlja Factory i Proxy Pattern.

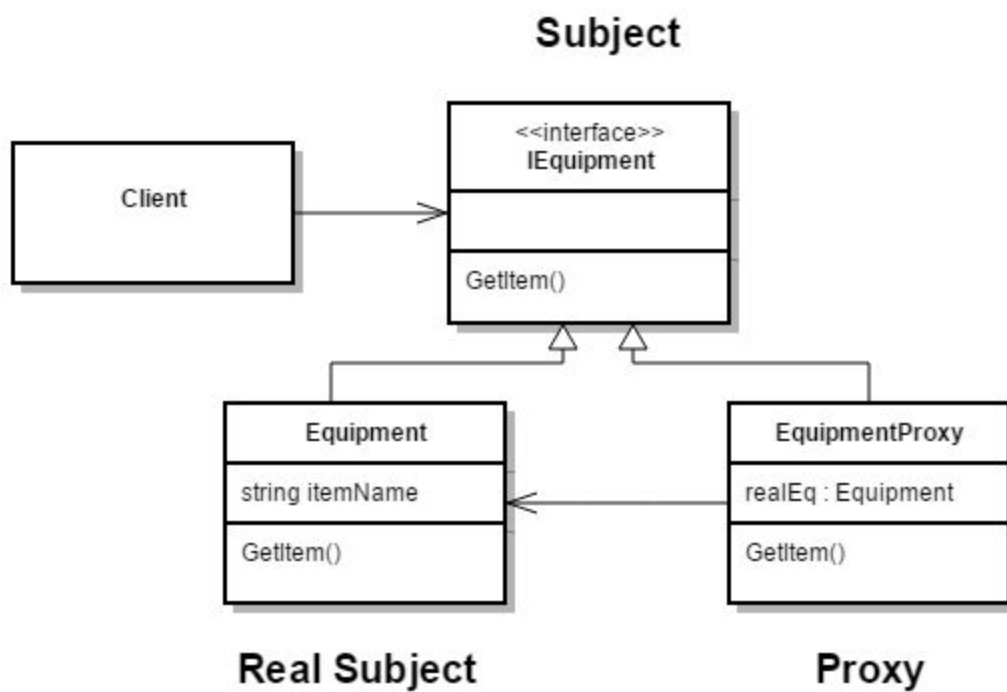
Singleton Pattern

Channel

```
- instance: Channel
+ logProxy: ILogger
+ shopProxy: IShopServer
+ telephoneProxy: ITelephoneServer
+ userProxy: IUserServer

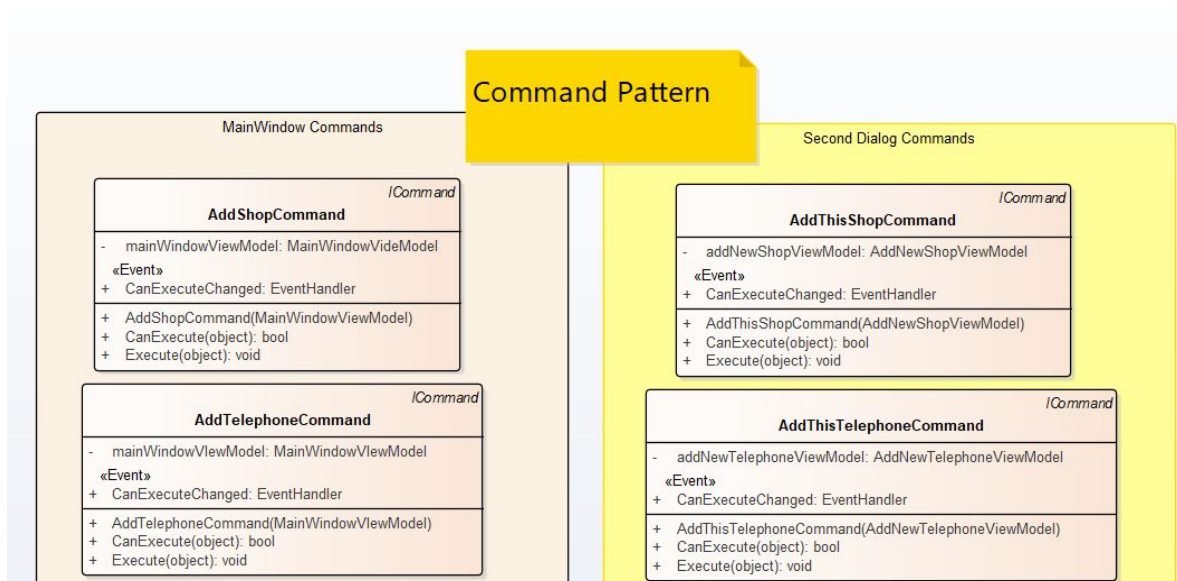
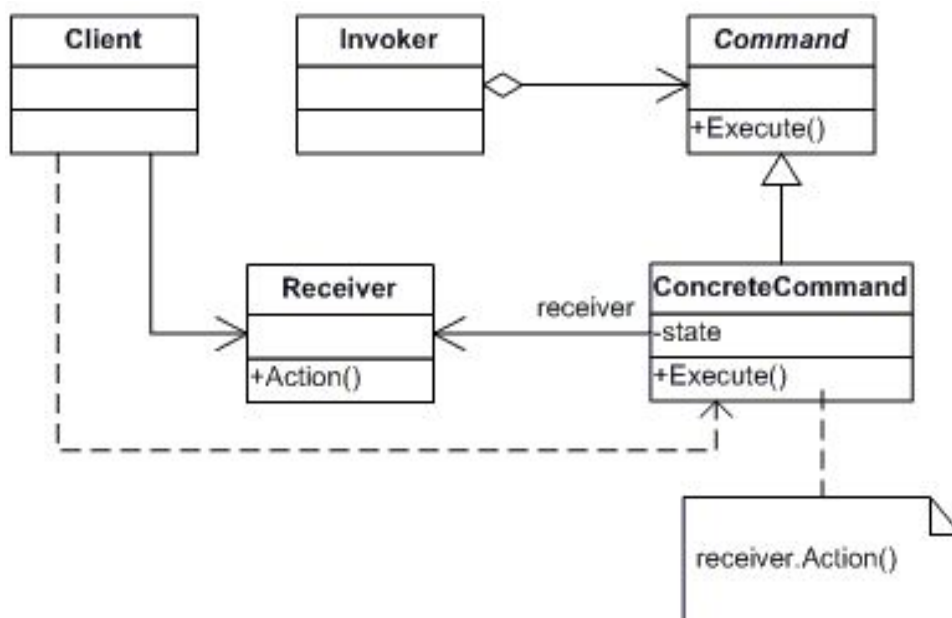
+ Channel()
«property»
+ Instance(): Channel
```

Posrednik za pristupanje drugom objektu (obično zbog kontrole pristupa). Kontrolisani pristup. Održava referencu koja mu omogućava pristup stvarnom objektu. Obezbeđuje interfejs identičan interfejsu Subjekta. Kontrolise prava pristupa.



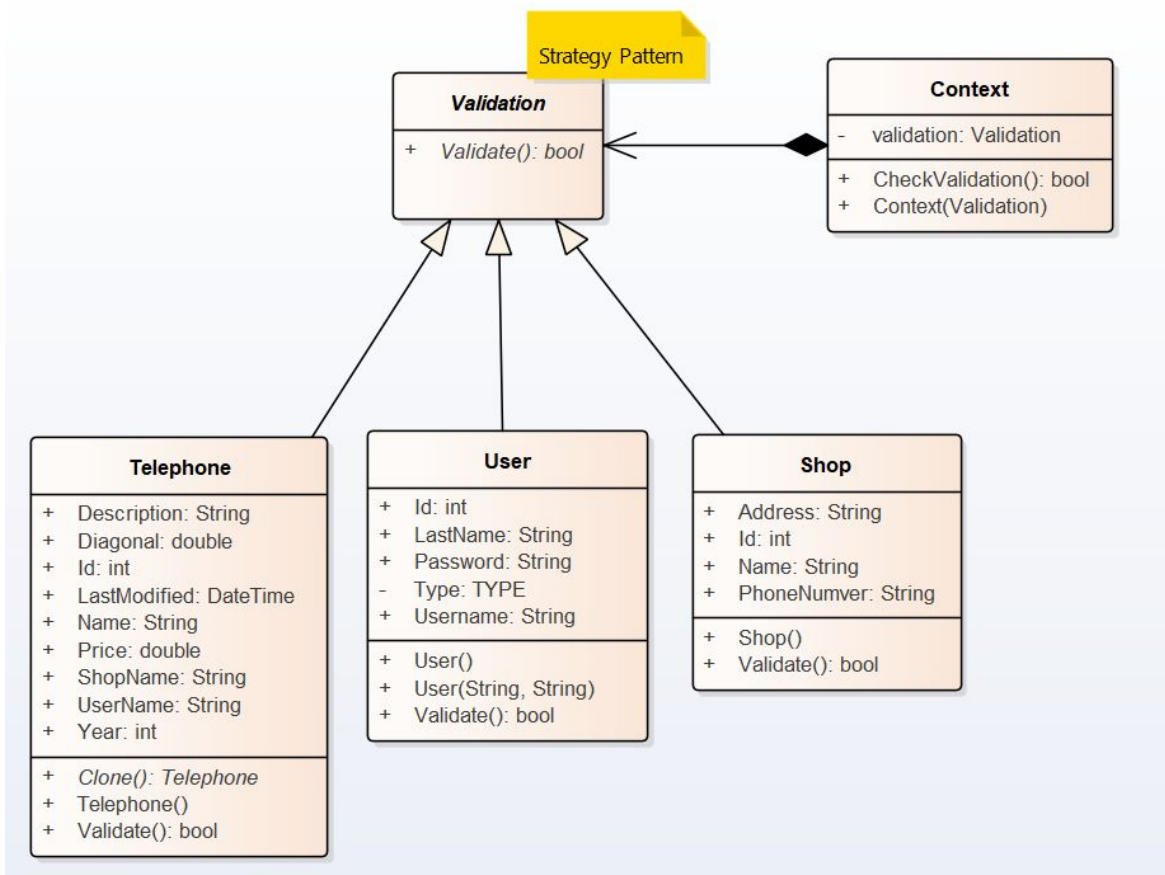
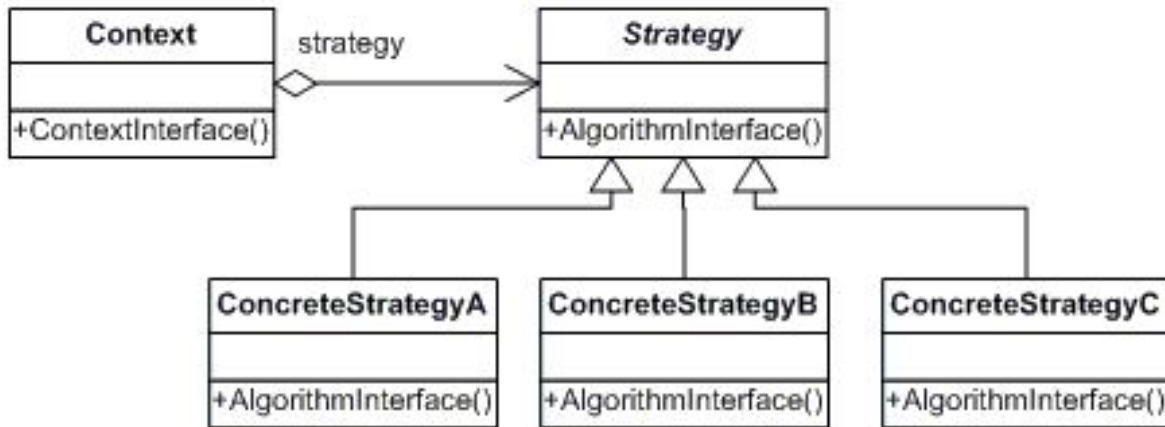
## COMMAND

Enkapsulira zahtev za izvršenjem određene operacije u jedan objekat. Umesto da se direktno izvrši određena operacija, kreira se objekat-komanda, koji se potom prosleđuje na izvršenje. Konkretno klase koje implementiraju komande obično imaju mnogo zajedničkih osobina koje se lokalizuju u osnovnu apstraktnu klasu.



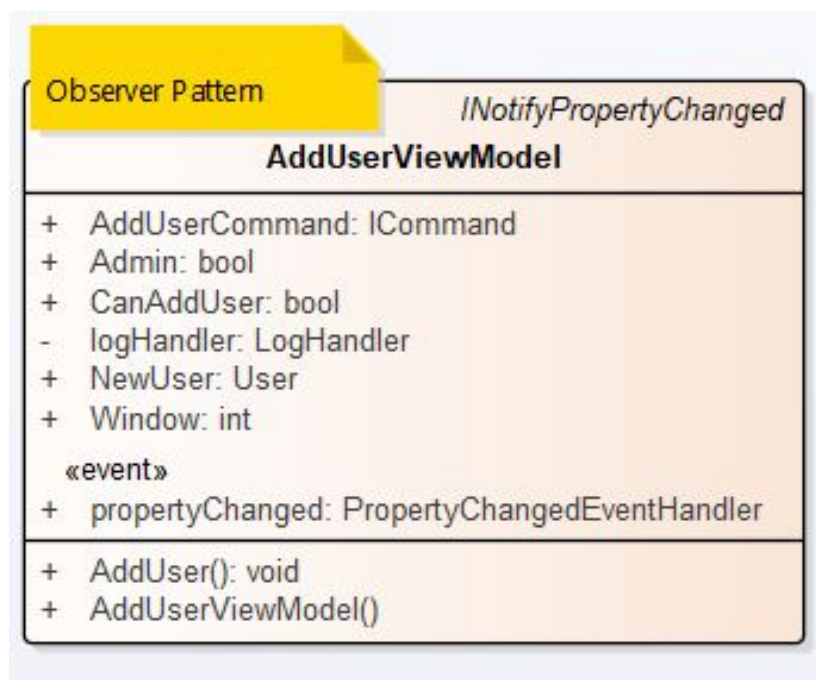
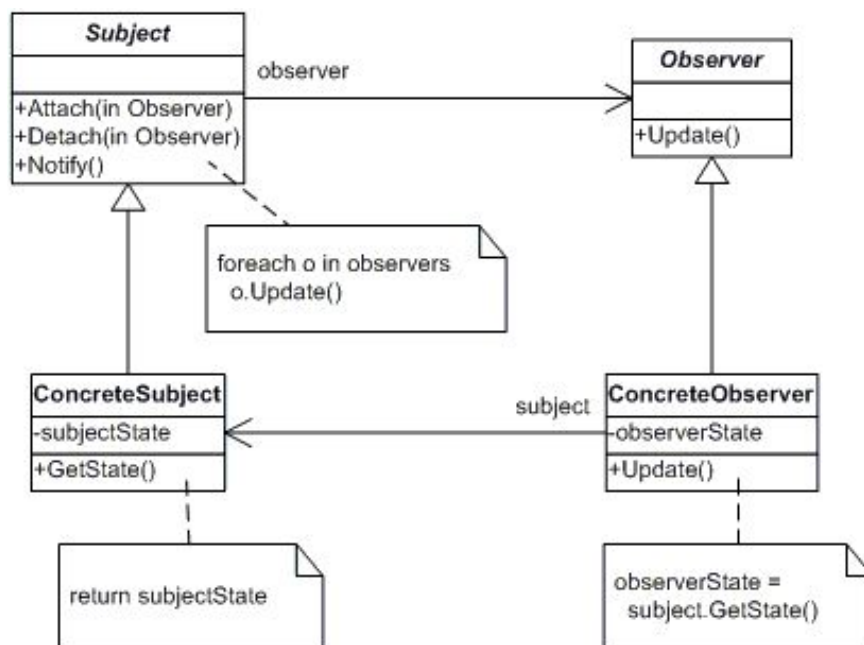
## STRATEGY

Definise grupu algoritama, enkapsulirajući ih, tako da su međusobno zamenljivi. Omogućava laku zamenu algoritama tokom izvršavanja programa.



## OBSERVER

Omogućuje da se promena sadržaja u jednom elementu, odmah pojavi i u svim delovima programa koji daju element prikazuju u nekom obliku. Obezbeđuje mehanizam pomoću kojeg se između zavisnih delova (posmatrača: dijaloga, tabela, grafova) automatski ažurira promena stanja koja se desila nad podacima koje prikazuju (promena nad subjektom, modelom).



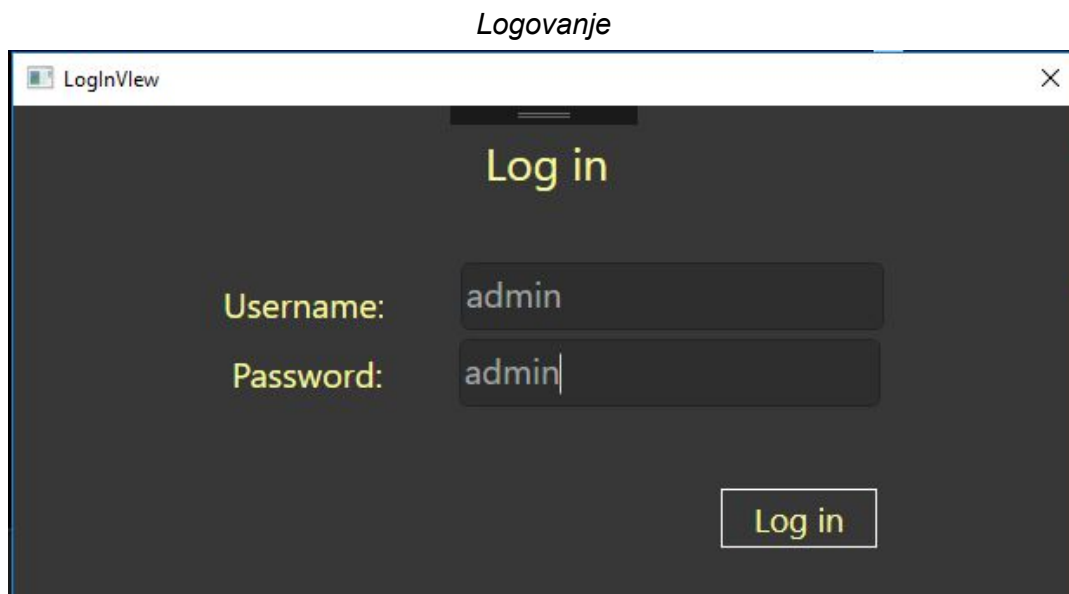


# Opis Aplikacije

“Telephone Shop” je klijent/server aplikacija za prodaju telefona, sastoji se iz tri dela

1. Console Application (Server)
2. WPF (Klijent)
3. Class Library (Common)

## Vizuelni Prikaz Aplikacije



Glavni prozor

MainWindow

Add User

Change Informations

Add Telephone

Add Shop

Change Telephones

Delete Telephones

Save Telephones

LogOut

admin

Change Shop

Delete Shop

Filter

Shops

Telephones

Logging

Telephone	Price	Year	Diagonal	Shop	User	Description
OnePlus6	440	2016	5	MobilnaProdaja	stefanr	OnePlus phone of 2018.
SamsungS9	909	2018	6	MobilniSvet	admin	Samsung phone of 2018.
GooglePixel2	500	2017	5	ProdajaTelefona	admin	Google phone of 2017.
IPhoneX	850	2017	5	MobilnaProdaja	admin	Apple phone of 2017.
GooglePixel2	500	2017	5	ProdajaTelefona	admin	Google phone of 2017.
MotorolaX4	200	2016	5	MobilnaProdaja	admin	Motorola phone of 2016
GooglePixel2	500	2017	5	ProdajaTelefona	admin	Google phone of 2017.

## Dodavanje korisnika

AddUserView

New user

Name:

perap

Lastname:

peric

Username:

perap

Password:

perappp

Admin

Add

## Korisnikove informacije

ProfilInformationView

## Profil Information

Name: Admin

Lastname: Adminovic

Change

### Dodavanje telefona

AddNewTelephoneView

## New Telephone

Name: Telefon

Year: 2017

Price: 900

Description: Desc

Diagonal: 5

Shop Name: MobilnaProdaja

Add

## Dodavanje radnje

AddNewShopView

New Shop

Name	Shop
Address	add
Ph. Number	123123123

Add

## Pregled i izmena telefona

ChangeTelephoneInfoView

View and change Telephone

Name	OnePlus6
Price	440
Year	2016
Description	OnePlus phone of 2018.
Diagonal	5

Change

## Glavni prozor kad je telefon selektovan

MainWindow

Add User

Change Informations

Add Telephone

Add Shop

Change Telephone

Delete Telephone

Clone Telephone

LogOut

admin

Change Shop

Insert Shop

Filter

Shops

Telephones

Logging

Telephone	Price	Year	Diagonal	Shop	User	Description
OnePlus6	440	2016	5	MobilnaProdaja	stefanr	OnePlus phone of 2018.
SamsungS9	909	2018	6	MobilniSvet	admin	Samsung phone of 2018.
GooglePixel2	500	2017	5	ProdajaTelefona	admin	Google phone of 2017.
IPhoneX	850	2017	5	MobilnaProdaja	admin	Apple phone of 2017.
GooglePixel2	500	2017	5	ProdajaTelefona	admin	Google phone of 2017.
MotorolaX4	200	2016	5	MobilnaProdaja	admin	Motorola phone of 2016
GooglePixel2	500	2017	5	ProdajaTelefona	admin	Google phone of 2017.

## Glavni prozor kad je radnjaselektovan

MainWindow

Add User

Change Informations

Add Telephone

Add Shop

Change Telephone

Delete Informations

Clone Informations

LogOut

admin

Change Shop

Delete Shop

Filter

Shops

Telephones

Logging

Telephone	Price	Year	Diagonal	Shop	User	Description
SamsungS9	909	2018	6	MobilniSvet	admin	Samsung phone of 2018.

Logging

Telephones		Logging
Type	Text	
INFO	Dialog for Add new User is opened.	
INFO	Dialog for View and Change User information is opened.	
INFO	Change Information is clicked.	
INFO	Add Telephone is clicked.	
INFO	Dialog for Add Shop is opened.	
INFO	Dialog for Change Telephone is opened.	

Glavni prozor uz odabrani filter za pretragu

MainWindow							
<div> <div>Add User</div> <div>Change Informations</div> <div>Add Telephone</div> <div>Add Shop</div> <div>Change Telephone</div> <div>Change Telephone</div> <div>Change Telephone</div> <div>LogOut</div> </div>							
admin							
<div> <div>Change Shop</div> <div>Delete Shop</div> <div>Filter</div> <div>2017</div> <div>Year</div> <div>Shops</div> <div>All</div> </div>							
<div> <div>Telephones</div> <div>Logging</div> </div>							
Telephone	Price	Year	Diagonal	Shop	User	Description	
GooglePixel2	500	2017	5	ProdajaTelefona	admin	Google phone of 2017.	
IPhoneX	850	2017	5	MobilnaProdaja	admin	Apple phone of 2017.	
GooglePixel2	500	2017	5	ProdajaTelefona	admin	Google phone of 2017.	
GooglePixel2	500	2017	5	ProdajaTelefona	admin	Google phone of 2017.	

Serverska strana

```
E:\GitHub\III Godina\VI Semestar\RA\Projekat\RVAProjekat\Server\bin\Debug\Server.exe
8/23/2018 9:50:07 PM: User Updated to Database.
8/23/2018 9:50:07 PM: Getting all Shops from Database.
8/23/2018 9:50:07 PM: Getting all Telephones from Database.
8/23/2018 9:50:08 PM: Getting all Telephones from Database.
8/23/2018 9:50:10 PM: Getting all Shops from Database.
8/23/2018 9:50:13 PM: Getting all Telephones from Database.
8/23/2018 9:50:18 PM: Getting all Telephones from Database.
8/23/2018 9:50:23 PM: Getting all Telephones from Database.
8/23/2018 9:50:28 PM: Getting all Telephones from Database.
8/23/2018 9:50:33 PM: Getting all Telephones from Database.
8/23/2018 9:50:38 PM: Getting all Telephones from Database.
8/23/2018 9:50:43 PM: Getting all Telephones from Database.
8/23/2018 9:50:46 PM: Getting all Telephones from Database.
8/23/2018 9:50:46 PM: Getting all Shops from Database.
8/23/2018 9:50:46 PM: Getting all Telephones from Database.
8/23/2018 9:50:48 PM: Getting all Telephones from Database.
8/23/2018 9:50:53 PM: Getting all Telephones from Database.
8/23/2018 9:50:58 PM: Getting all Telephones from Database.
8/23/2018 9:51:03 PM: Getting all Telephones from Database.
8/23/2018 9:51:08 PM: Getting all Telephones from Database.
8/23/2018 9:51:13 PM: Getting all Telephones from Database.
8/23/2018 9:51:18 PM: Getting all Shops from Database.
8/23/2018 9:51:18 PM: Getting all Shops from Database.
8/23/2018 9:51:18 PM: Getting all Telephones from Database.
8/23/2018 9:51:18 PM: Getting all Telephones from Database.
8/23/2018 9:51:23 PM: Getting all Telephones from Database.
8/23/2018 9:51:28 PM: Getting all Telephones from Database.
8/23/2018 9:51:33 PM: Getting all Telephones from Database.
8/23/2018 9:51:39 PM: Getting all Telephones from Database.
8/23/2018 9:51:44 PM: Getting all Telephones from Database.
```