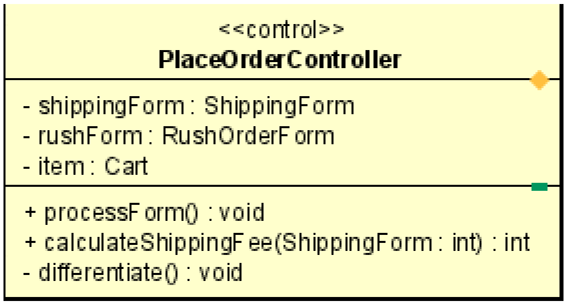
CLASS DESIGN

1. Class design:

1.1. Class ”PlaceOrderController”:


<<control>>
PlaceOrderController
- shippingForm : ShippingForm
- rushForm : RushOrderForm
- item : Cart
+ processForm() : void
+ calculateShippingFee(ShippingForm : int) : int
- differentiate() : void

Attribute:

#	*Name*	*Data type*	*Default Value*	*Description*
1	shippingForm	ShippingForm	Null	Information in the shipping form that customer has given
2	rushForm	RushOrderForm	Null	Information in the rushForm that customer has given
3	item	Cart	Null	All the items that customer has offered

Operation:

#	*Name*	*Return type*	*Description (purpose)*
1	processForm	null	Checking information in the form (address for rush order)
2	calculateShippingFee	int	Calculate the new fee (because rush order has more fee than normal order)

Parameter:

- Name: name of customer
- Phone: phone number of customer

- Province: province of customer
- Address: address of customer
- Instruction: instruction of customer
- timeToShip: the time that customer want to receive items

Exception:

- FormException – if responded with a pre-defined error code

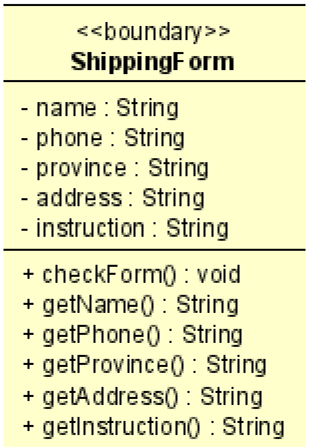
Method:

- Differentiate: differentiate which items support Rush Order & which items don't support, hence calculate the fee based on these items.

State:

- None

1.2. Class "ShippingForm":



Attribute:

#	*Name*	*Data type*	*Default Value*	*Description*
1	name	String	Null	Name of customer
2	phone	String	Null	Phone number of customer
3	province	String	Null	Province of customer

4	address	String	Null	Address of customer
5	instruction	String	Null	Instruction of customer

Operation:

#	*Name*	*Return type*	*Description (purpose)*
1	checkForm	null	Checking information in the form (information is identified or not)
2	getName	String	Get name of customer
3	getAddress	String	Get address of customer
4	getPhone	String	Get phone of customer
5	getProvince	String	Get name of customer
6	getName	String	Get name of customer

Exception:

- ShippingFormException – if responded with a pre-defined error code

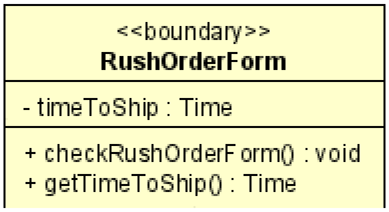
Method:

- none

State:

- none

1.3. Class “RushOrderForm”:



Attribute:

#	*Name*	*Data type*	*Default Value*	*Description*
1	timeToShip	Time	Null	The time that customer want to receive items

Operation:

#	*Name*	*Return type*	*Description (purpose)*
1	checkRushOrderForm	null	Checking information in the form (information is identified or not)
2	getTimeToShip	Time	Get the time that customer has given

Exception:

- ShippingFormException – if responded with a pre-defined error code

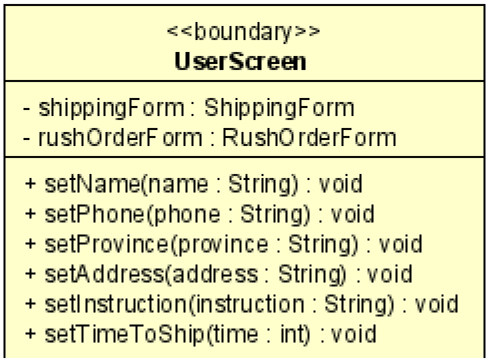
Method:

- none

State:

- none

1.4. Class “UserScreen”:


<<boundary>>
UserScreen
- shippingForm : ShippingForm
- rushOrderForm : RushOrderForm
+ setName(name : String) : void
+ setPhone(phone : String) : void
+ setProvince(province : String) : void
+ setAddress(address : String) : void
+ setInstruction(instruction : String) : void
+ setTimeToShip(time : int) : void

Attribute:

#	*Name*	*Data type*	*Default Value*	*Description*
1	shippingForm	ShippingForm	Null	A form that has all information of customer
2	rushOrderForm	RushOrderForm	Null	A form for rush order

Operation:

#	*Name*	*Return type*	*Description (purpose)*
1	setName	null	Process the name of customer to shipping form
2	setPhone	null	Process the phone of customer to shipping form
3	setProvince	null	Process the province of customer to shipping form
4	setAddress	null	Process the address of customer to shipping form
5	setInstruction	null	Process the instruction of customer to shipping form
6	setTimeToShip	null	Process the input time to rush order form

Exception:

- ShippingFormException – if responded with a pre-defined error code

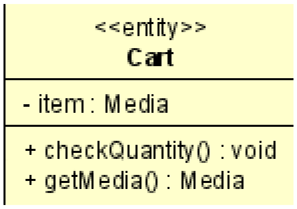
Method:

- none

State:

- none

1.5. Class “Cart”:



Attribute:

#	*Name*	*Data type*	*Default Value*	*Description*
1	item	Media	Null	The item that customer has offered

Operation:

#	*Name*	*Return type*	*Description (purpose)*
1	checkQuantity	null	Checking the quantity is enough or not
2	getMedia	Media	Get all item that customer has offered

Exception:

- quantityException – if responded with a pre-defined error code

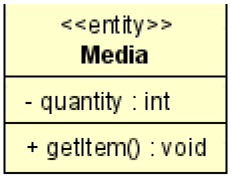
Method:

- none

State:

- none

1.6. Class “Media”:



Attribute:

#	*Name*	*Data type*	*Default Value*	*Description*
1	quantity	int	Null	The quantity of item that shop contains

Operation:

#	*Name*	*Return type*	*Description (purpose)*
1	getItem	null	Get information of item

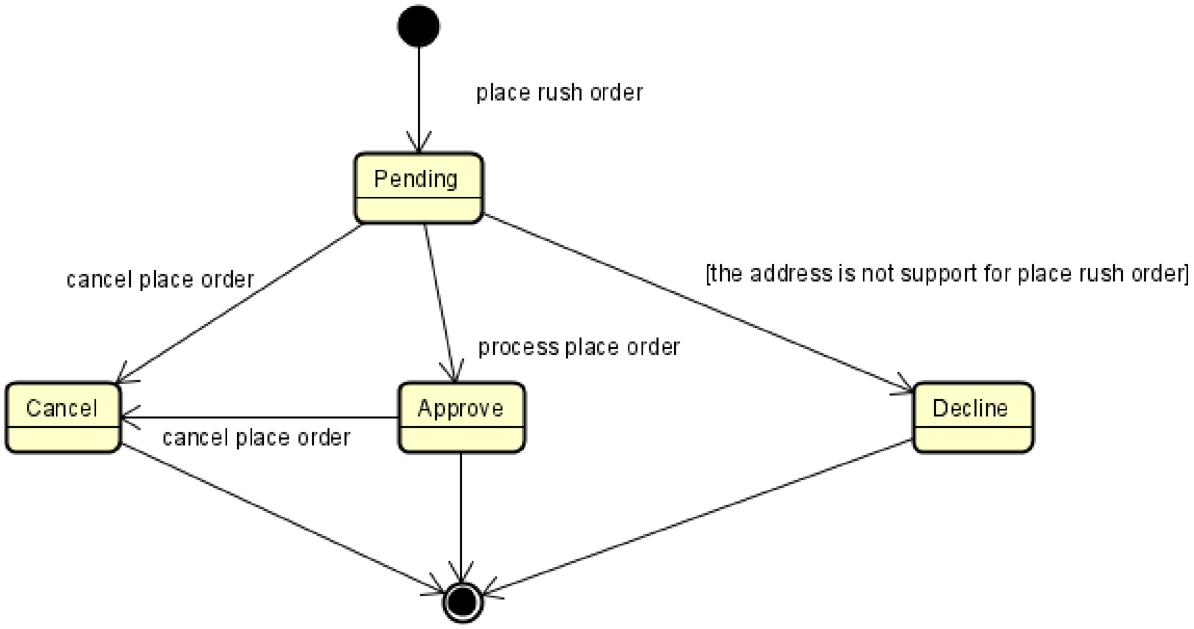
Method:

- none

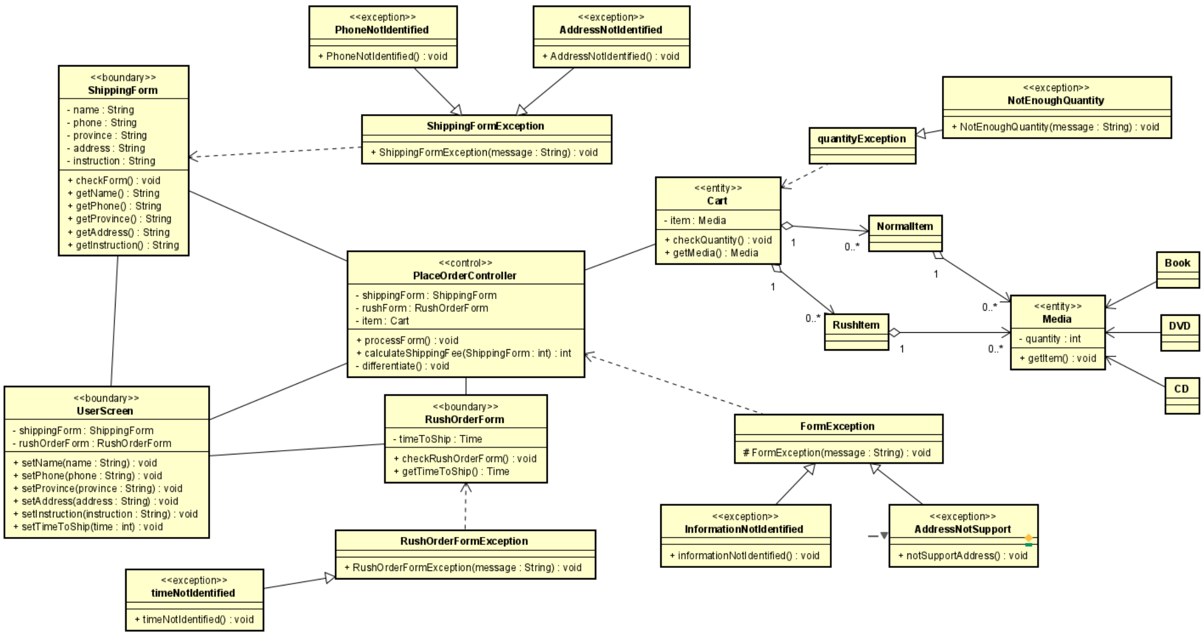
State:

- none

2. State Machine Diagram:



3. Class diagram:


<<exception>>
PhoneNotIdentified
+ PhoneNotIdentified() : void
<<exception>>
AddressNotIdentified
+ AddressNotIdentified() : void
<<boundary>>
ShippingForm
- name : String
- phone : String
- province : String
- address : String
- instruction : String
+ checkForm() : void
+ getName() : String
+ getPhone() : String
+ getProvince() : String
+ getAddress() : String
+ getInstruction() : String
ShippingFormException
+ ShippingFormException(message : String) : void
<<exception>>
NotEnoughQuantity
+ NotEnoughQuantity(message : String) : void
quantityException
<<entity>>
Cart
- item : Media
+ checkQuantity() : void
+ getMedia() : Media
NormalItem
1
0..*
1
Book
<<control>>
PlaceOrderController
- shippingForm : ShippingForm
- rushForm : RushOrderForm
- item : Cart
+ processForm() : void
+ calculateShippingFee(ShippingForm : int) : int
- differentiate() : void
1
0..*
RushItem
0..*
<<entity>>
Media
- quantity : int
+ getItem() : void
1
0..*
DVD
CD
<<boundary>>
UserScreen
- shippingForm : ShippingForm
- rushOrderForm : RushOrderForm
+ setName(name : String) : void
+ setPhone(phone : String) : void
+ setProvince(province : String) : void
+ setAddress(address : String) : void
+ setInstruction(instruction : String) : void
+ setTimeToShip(time : int) : void
<<boundary>>
RushOrderForm
- timeToShip : Time
+ checkRushOrderForm() : void
+ getTimeToShip() : Time
FormException
# FormException(message : String) : void
<<exception>>
InformationNotIdentified
+ informationNotIdentified() : void
<<exception>>
AddressNotSupport
+ notSupportAddress() : void
RushOrderFormException
+ RushOrderFormException(message : String) : void
<<exception>>
timeNotIdentified
+ timeNotIdentified() : void