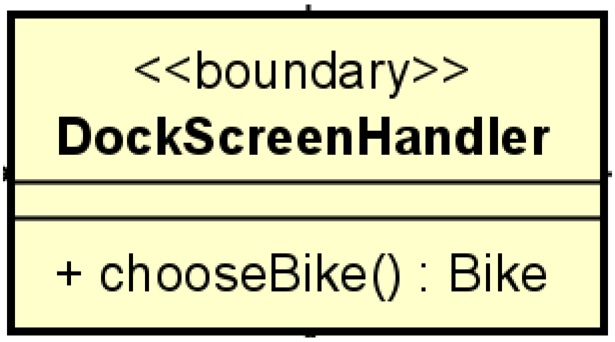
Class Design - Dock

1. Create Initial Design Classes

2. Define Relationships Between Classes

3. Class Design

3.1. Class “DockScreenHandler”



Attribute

None

Operation

#	Name	Return type	Desciption
1	chooseBike	Bike	forward bike to the BikeScreenHandler

Parameter:

None

Exception:

None

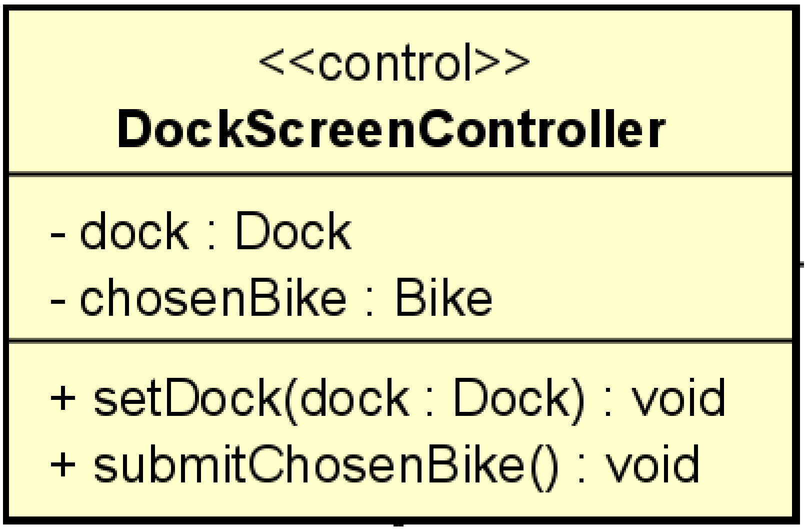
Method

None

State

None

3.2. Class “DockScreenController”



Attribute

#	Name	Data type	Default value	Description
1	dock	Dock	NULL	store the dock it works with
2	chosenBike	Bike	NULL	the bike user chooses from UI

Operation

#	Name	Return type	Desciption
1	setDock	void	set value for dock
2	submitChosenBike	void	send the chosen bike to other object

Parameter:

dock – the dock instance

Exception:

None

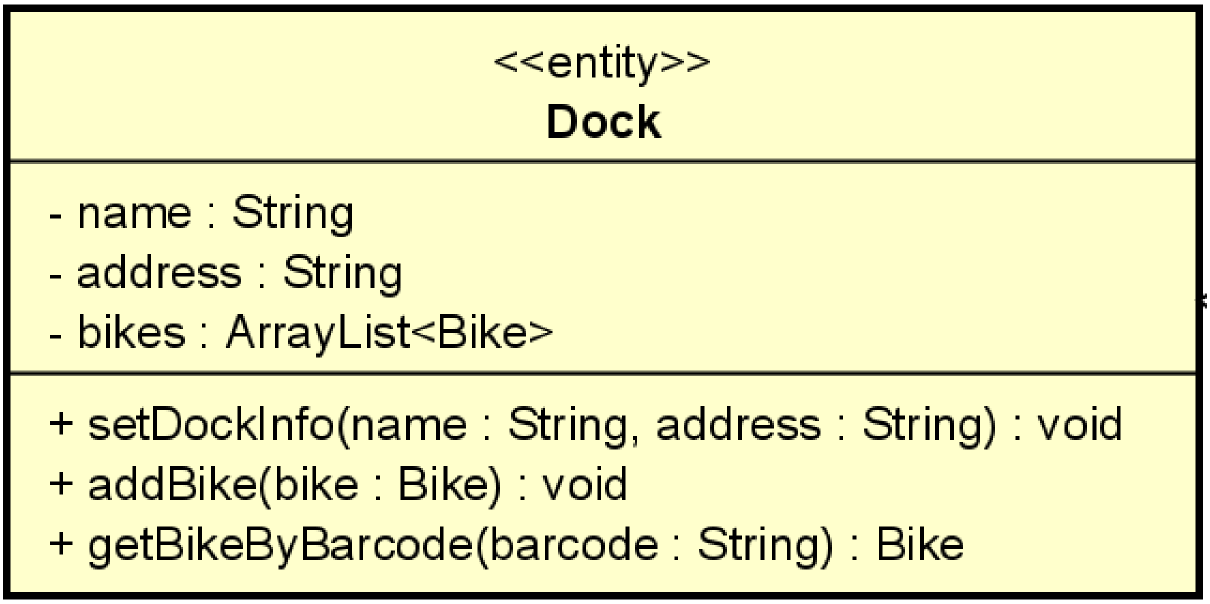
Method

None

State

None

3.3. Class “Dock”


<<entity>>
Dock
- name : String
- address : String
- bikes : ArrayList<Bike>
+ setDockInfo(name : String, address : String) : void
+ addBike(bike : Bike) : void
+ getBikeByBarcode(barcode : String) : Bike

Attribute

#	Name	Data type	Default value	Description
1	name	String	NULL	name of the dock
2	address	String	NULL	location of the dock
3	bikes	ArrayList<Bike>	empty ArrayList	all available bikes

Operation

#	Name	Return type	Desciption
1	setDockInfo	void	update dock
2	addBike	void	add new bike to dock
3	getBikeByBarcode	Bike	search bike by barcode

Parameter:

name – name of the dock

address – dock’s address

bike – the bike instance

barcode – bike’s barcode

Exception:

None

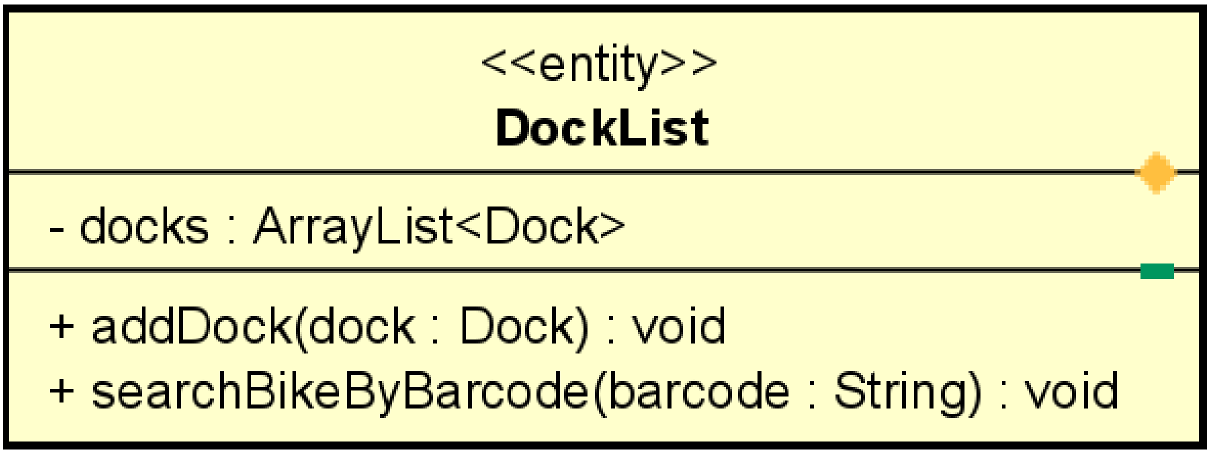
Method

None

State

None

3.4. Class “DockList”


<<entity>>
DockList
- docks : ArrayList<Dock>
+ addDock(dock : Dock) : void
+ searchBikeByBarcode(barcode : String) : void

Attribute

#	Name	Data type	Default value	Description
1	name	String	NULL	name of the dock

Operation

#	Name	Return type	Desciption
1	addDock	void	add new Dock
2	searchBikeByBarcode	Bike	search and return bike with matching barcode

Parameter:

dock – dock’s instance

barcode – the string barcode of a bike

Exception:

None

Method

None

State

None

4. Class Diagram