I. Packages

II. Class diagram
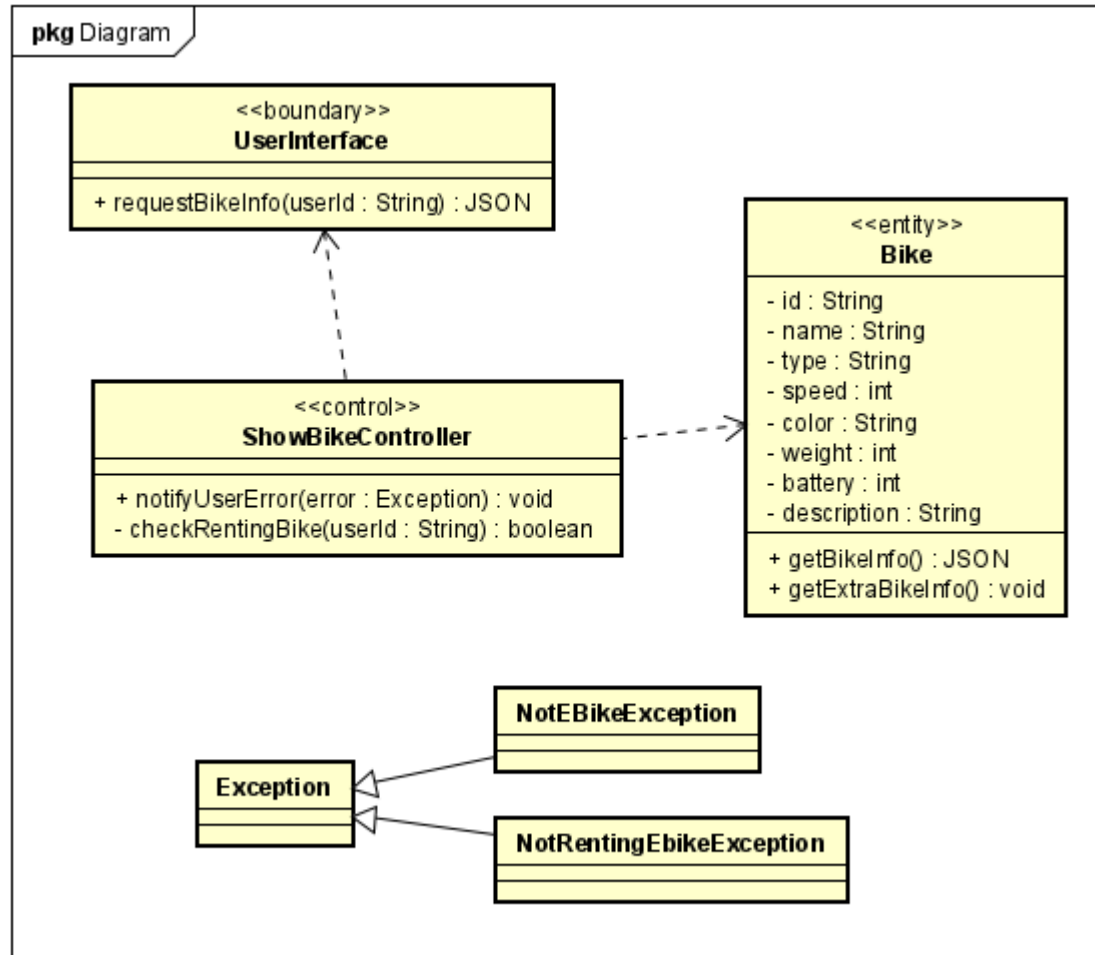
III. Class specification
1. Class Bike
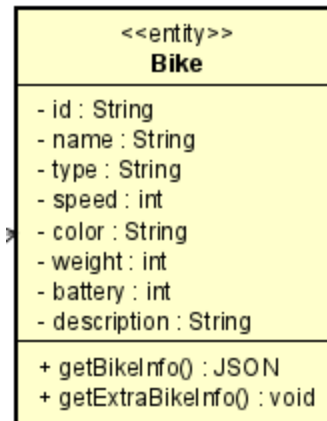
Attributes:

#	Name	Data Type	Default value	Description
1	id	String	Null	//
2	name	String	Null	//
3	type	String	Null	//
4	speed	int	Null	//
5	color	String	null	//
6	weight	int	Null	//
7	battery	String	Null	//
8	description	String	Null	//

Operations:

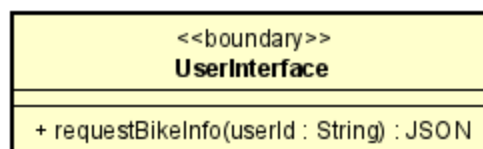| #	Name	Return Type	Description	Parameter	Exception
1	getBikeInfo	Json	get the bike attributes	null	null
2	getExtraBikeInfo	Json	get Ebike info, only work with Ebike	null	NotEBikeException– If bike is not Ebike

Method:

None

State:

None

2. Class UserInterface

Attributes:

#	Name	Data Type	Default value	Description

Operations:

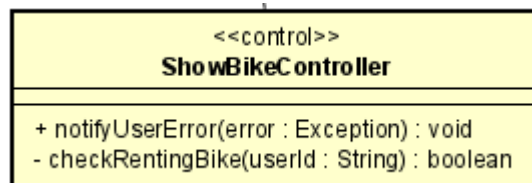| #	Name	Return Type	Description	Parameter	Exception
1	requestBikeInfo	Json	Get the info of the renting bike	userId–id of the requester	null

Method:

 None

State:

 None

   3. **Class ShowBikeController**

Attributes:

#	Name	Data Type	Default value	Description

Operations:

None

Method:

#	Name	Return Type	Description	Parameter	Exception
1	checkRentingBike	boolean	Check if requester user renting a bike	userId	NotRentingBikeException– if the user not renting a bike
2	notifyUser	void	Notify user if an error occurs	error	null

State:

 None