

## Homework 4 – Understanding a dynamic interaction scenario between objects (Generating a UML Sequence Diagram)

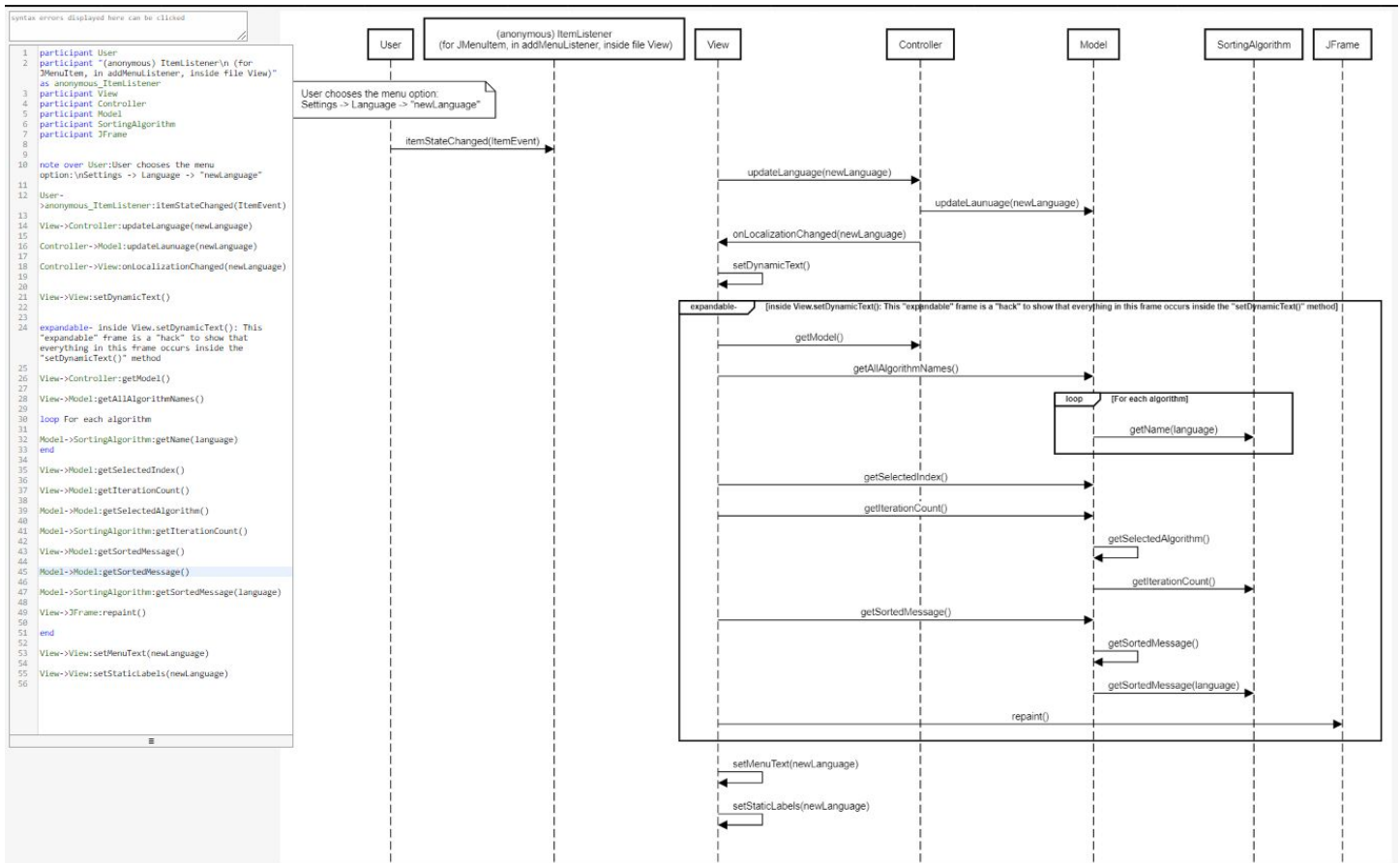
### Change Request:

There are numerous interaction scenarios that can be captured using a UML Sequence Diagram for this project. For this homework, we will focus on creating a UML Sequence Diagram for the use case of a user changing the language.(i.e., if a user changes the language from English to Spanish, what sequence of object interactions occur in the program?)

### UML Sequence Diagram:

The URL of sequencediagram.org :

<https://sequencediagram.org/index.html#initialData=A4QwTgLglxloDsIAICqBnApmAUKSs8ISyARABTED2CAngLZUCu6AlMgJISb0AyU6bgmwAdBMnIAzKmGQApALKYETLjwA0yKOJAATXUpX9By7Ju3oouzMklQANjYBqUTAHdWpZCHTeENBmZ0AH01PgEhbDxwaDhEFBd3aII44hQAYRoIMCp7R1x8WKISBSpre2Si+OOAZRloBABzAEF7RpkoCAALekrCarkAMTAQekwcCf9uZCoAN2w0LDAALgwFmC6qKixfbpsxlRngaBplsRrMCABG3wBaAD5kXmJGphBGmweyYTdnprePqQJmswA9qHRGCxQtxwiZhCtOjwahAQNx0l0XphdOQwgBReZIVgTRJuB6ZJA5PLYZZMYC6VGYP6vd6Ycg-JkAzBEnDk7K5fIPUrlGI0hnPJgqFls9wclnc3mUgX3EnLGi8KgwED2KAAL1RUBo6Mx2PZL053JwJleKqwEAAIrQEKNYAAVTAADwg5AtHsQ9IARo5bloEJZrMgSQA6W0Op30V0er2sZbIF1dARkX3EAOOLySEZjLS+EBkDEwADWXggVGQ6E2bmQ3VRyEw8zAtG62kaIcb6d8+dGNglMCYYF8FisNj2ZBjjudMDdnu9XjG3TKxNcpPuCv51I+ECFmHs3o37kFZSPy33rXsrXaYE6PQAcop0CecPYtsBkIMZC2QBs3htB03S9Dgh72A8dQEE0d4gT0V6XC+YzkPYZpyjgyi6KeW4QYhEAXI4MDcLoHAINY7rvla9x4fuagiCcCCZBKSYTBB57CvuhGYMRWJwQ+oHvux9zQdc-GPvQ+H0fqhrMEgVGbhl5cfUWJKOg6BStywm0ZcolqZgGlaWxF6QSI9RduJoH4fpBiGZpHyoeHHzctRQwFpgyxgJgoDaKxmHkTh1qbsstqGEwi5eqa-wYZainKiFtrlvqMDPP6R5vtFzluTgQA>



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1 participant User
2 participant "(anonymous) ItemListener\n (for JMenuItem, in addMenuListener, inside file
  View)" as anonymous_ItemListener
3 participant View
4 participant Controller
5 participant Model
6 participant SortingAlgorithm
7 participant JFrame
8
9
10 note over User:User chooses the menu option:\nSettings -> Language -> "newLanguage"
11
12 User->anonymous_ItemListener:itemStateChanged(ItemEvent)
13
14 View->Controller:updateLanguage(newLanguage)
15
16 Controller->Model:updateLaunuage(newLanguage)
17
18 Controller->View:onLocalizationChanged(newLanguage)
19
20
21 View->View:setDynamicText()
22
23
24 expandable- inside View.setDynamicText(): This "expandable" frame is a "hack" to show
  that everything in this frame occurs inside the "setDynamicText()" method
25
26 View->Controller:getModel()
27
28 View->Model:getAllAlgorithmNames()
29
30 loop For each algorithm
31
32 Model->SortingAlgorithm:getName(language)
33 end
34
35 View->Model:getSelectedIndex()
36
37 View->Model:getIterationCount()
38
39 Model->Model:getSelectedAlgorithm()
40
41 Model->SortingAlgorithm:getIterationCount()
42
43 View->Model:getSortedMessage()
44
45 Model->Model:getSortedMessage()
46
47 Model->SortingAlgorithm:getSortedMessage(language)
48
49 View->JFrame:repaint()
50
51 end
52
53 View->View:setMenuText(newLanguage)
54
55 View->View:setStaticLabels(newLanguage)
56
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