

Cyclomatic Complexity Metrics

Analysis

The first table below demonstrates that we currently have 11 classes that have high cyclomatic complexity. The classes are highlighted in orange to signify that their complexity is high. In my last metric submission, I was able to use Metrics Reloaded to get the complexity of each method in our project. Unfortunately, Metrics Reloaded does not analyze Kotlin files, therefore this time I used CodeMR and SonarCloud to calculate our cyclomatic complexity. Both CodeMR and SonarCloud show the cyclomatic complexity of classes, instead of individual methods. Since our cyclomatic complexity is high for 11 classes, we should look into refactoring in order to lower their complexity.

The complexity numbers in the table come from SonarCloud. Meanwhile, I used the results from CodeMR to decide whether a class's complexity was high or not. The complete results from CodeMR can be seen in the second table below. In the second table, it shows all of the metrics CodeMR took into account while calculating the complexity. For instance, CodeMR could distinguish inner classes within a class and would calculate the inner class metrics separately. On the other hand, SonarCloud did not distinguish inner classes from classes. That is why a class such as ChooseEquipment, was given a high complexity number of 32, by SonarCloud, however CodeMR did not mark it as high.

Class Name	Complexity
AddLocationLogin	12
AddLocationSettings	16
AddPreferredProvidersLogin	15
AddPreferredProvidersSettings	19
ChangeLocationSettings	15
ChooseEquipment	32
Dashboard	15
Equipment	23
EquipmentType	6
JobDetails	18
Jobs	22

JobsArchived	13
JsonRequest	0
JsonType	0
Landing	5
LocationLogin	10
LocationSettings	11
Login	10
NavigationBar	11
PreferredProviderDetails	11
PreferredProviderLogin	10
PreferredProviderSettings	15
Registration	20
RestApi	81

List of all classes (#42)

ID	CLASS	COUPLING	COMPLEXITY	LACK OF COHESION	SIZE	LOC	COMPLEXITY	COUPLING	LACK OF COHESION	SIZE
1	Equipment					210	high	medium-high	medium-high	low-medium
2	AddLocationSettings					103	high	medium-high	low-medium	low-medium
3	AddPreferredProvi...					102	high	medium-high	low-medium	low-medium
4	ChangeLocationSet...					94	high	medium-high	high	low-medium
5	JobsCustomerAdapter					122	low-medium	medium-high	medium-high	low-medium
6	EquipmentCustomAd...					118	low-medium	medium-high	medium-high	low-medium
7	PreferredProvider...					52	low	medium-high	medium-high	low-medium
16	ChooseEquipment					229	medium-high	low-medium	low-medium	low-medium
17	Registration					102	medium-high	low-medium	low-medium	low-medium
18	AddLocationLogin					81	medium-high	low-medium	low-medium	low-medium
19	AddPreferredProvi...					80	medium-high	low-medium	low-medium	low-medium
20	PreferredProvider...					72	medium-high	low-medium	low-medium	low-medium
21	Login					67	medium-high	low-medium	low-medium	low-medium
22	LocationLogin					67	medium-high	low-medium	high	low-medium
23	JsonArrayRequest					41	low-medium	low-medium	low	low
24	LocationCustomAda...					47	low	low-medium	medium-high	low
25	NavigationBar					74	medium-high	low	low	low-medium

33	JobsData					14	low	low	low	low
34	ServiceProviderData					8	low	low	low	low
35	Companion					5	low	low	low	low
36	Companion					5	low	low	low	low
37	Companion					4	low	low	low	low
38	Companion					3	low	low	low	low
39	Companion					3	low	low	low	low
40	Companion					2	low	low	low	low
41	JsonRequest					2	low	low	low-medium	low
42	NewFilter					1	low	low	low	low