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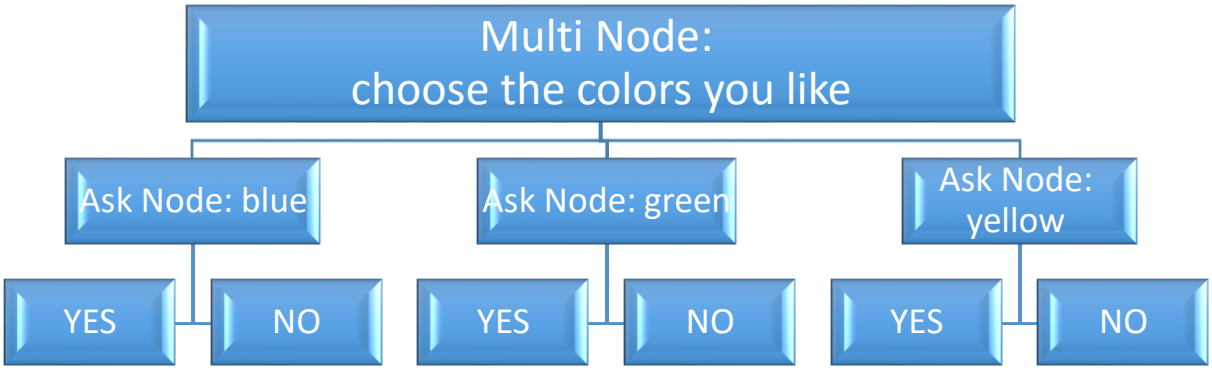
Data Tags Mini Project
Adding Multiple Choice Node

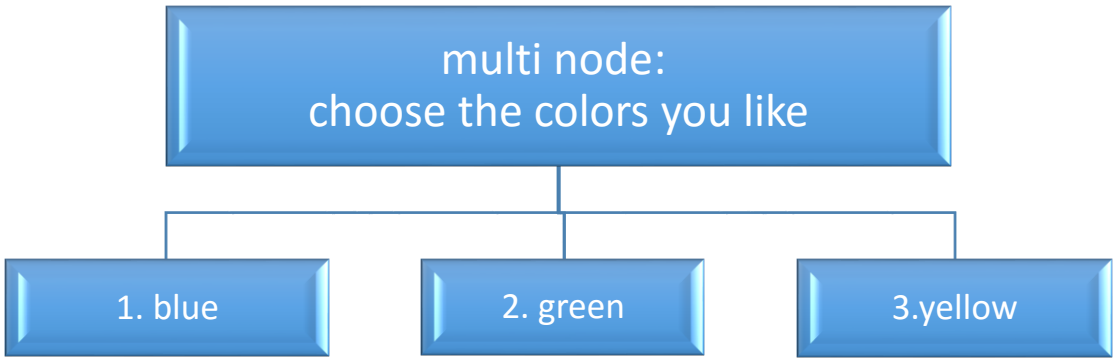
Our task was to add the possibility of a question to receive multiple answers rather than just one single answer.

At first we thought about implementing this using the existing *AskNode* class. Our idea was to implement the *MultiNode* object so that it will be composed of the question and each answer will be an *AskNode* such that the answer is the *AskNode*'s question, and the answers for the *AskNode* will be only yes or no. when yes means the user chose this answer and no means the user didn't choose the answer. For example:



We realized this implementation is wrong because the flow of the question will still be one question at a time.

Finally, we decided to implement the *MultiNode* exactly like the *AskNode*, where the changes will take place at run time. Meaning when the question is prompt to the user, the user will insert the numbers of the answers that he wants to choose for example:



Suppose the user wants to answer blue and yellow, he will type 1 3 to the console.

Changes in the code:

1. We added classes "*MultiNode*" and "*AstMultiNode*" and changed other classes so that they will support the new node.

2. In class "*DecisionGraphRuleParser*" we added the method "*multiNode*" that parses multi nodes and creates an *AstMultiNode* object.

3.In class "*cliRunner*" we changed the method "*printCurrentAskNode*" to "*printCurrentAskOrMultiNode*" to support printing multi nodes as well. We also added support for multi nodes in the method "*promptUserForAnswer*", where we check the correctness of the numbers inserted.

4. Also in class "*cliRunner*" we changed the method "go" to behave different when the current node is multi node. We built a stack that holds all the chosen answers and according to stack we know how to advance in the graph.