A is regular

Because A is regular there exists a finite automaton that accepts it. One can take this finite automaton and reverses the direction of its transitions such that the map now starts at the previous end points and ends at the original start point. Since the ending is now the beginning but the order of the transitions have not swapped (other than being reversed) we now have a finite automaton that leads from the end of the original sequence to the beginning. Next multiple endings need to be accounted for. A finite automaton can only have one starting point. To account for this fact we can “walk along” the paths starting from the end points and going towards the start point. In the new automaton each node is a combination of all of the nodes at that step.