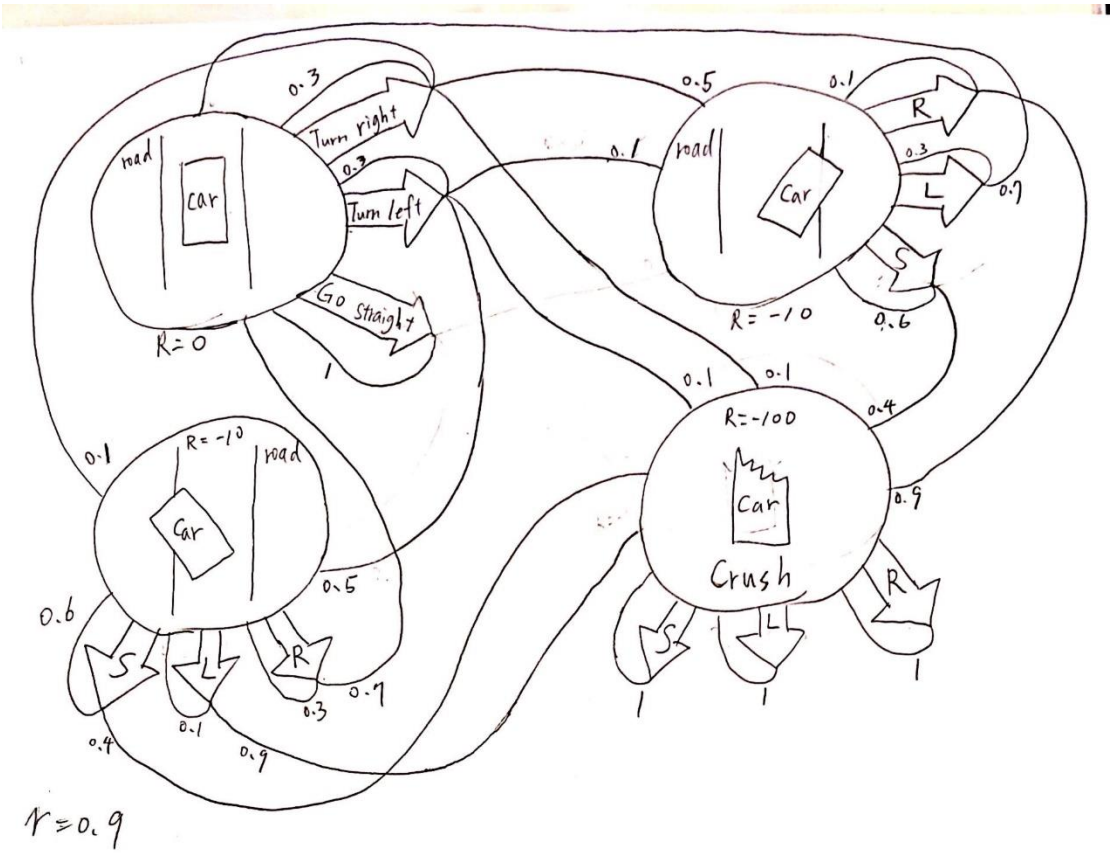
3. MDP in real life problems



We have to find the action of the maximum utility at each state, for example, at the state that the car at the middle of the road, the action is {R,L,S}, and the utility is 0.9*(0+(-100)*0.1+(-10)*0.5+(-10)*0.1+0*0.3)=0.9*(-16)=-14.4, 0.9*(0+(-100)*0.1+(-10)*0.5+(-10)*0.1+0*0.3)=0.9*(-16)=-14.4, 0.9*(0+0*1)=0.9*0=0 respectively, then the action of the maximum utility is S:Go straight. After doing this process at every state, if the initial state is the car that at the middle of the road, then the optimal solution should be keep choosing the action Go straight and the state will always at the same state that the car is at the middle of the road with the maximum utility 0.