Algorithm *RRT-Planning(G, $||.||_J$, number of iterations)*

($*$ samples trajectories using RRTs $*$)

1. n $\leftarrow 0$
2. **while** n $<$ number of iterations
3. Randomly sample a point x_{begin} from V(G)
4. Find a trajectory Y with x_{begin} as the root
5. **for** each pair $(s_i, a_i, r_{i+1}, s_{i+1}) \in Y$
6. $$J(s_i) = (1 - \alpha)J(s_i) + \alpha(r_i + \gamma J(s_{i+1})$$
7. return J
8. End of Algorithm