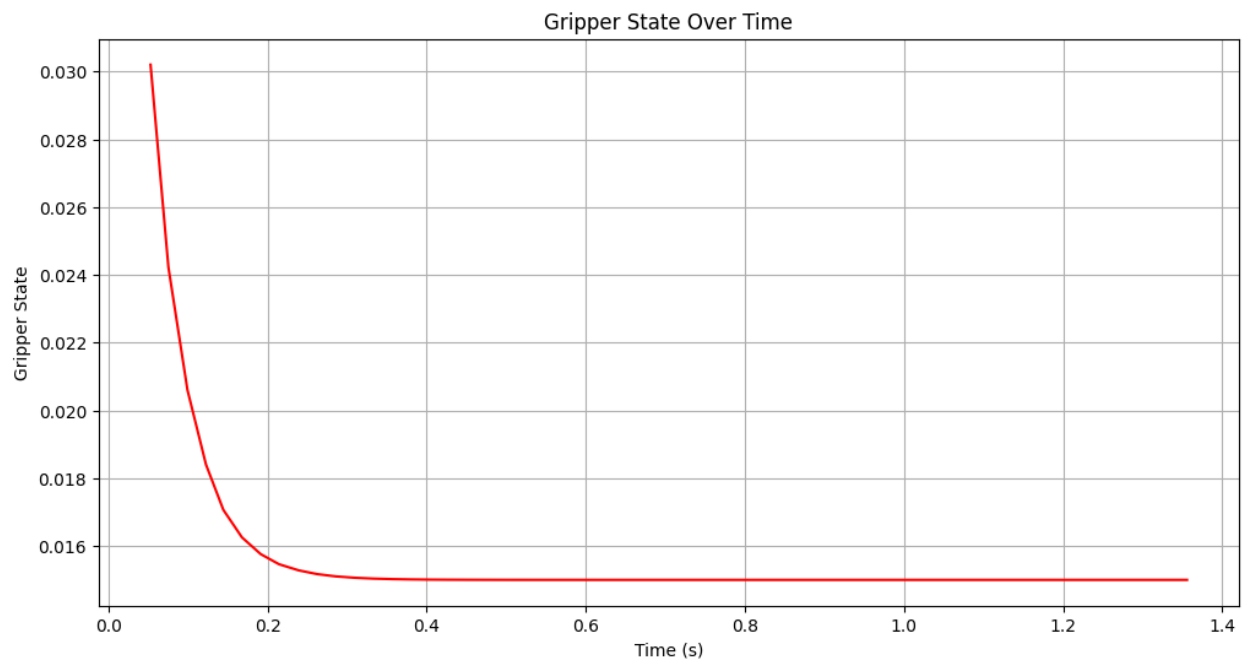
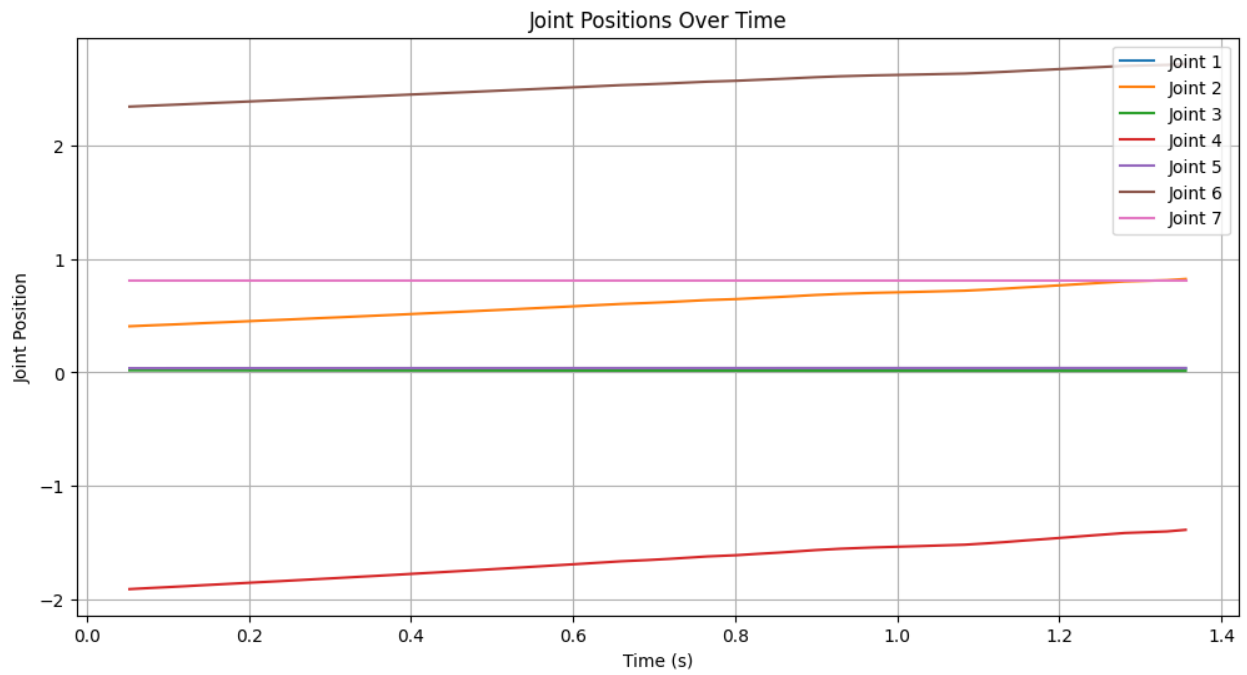


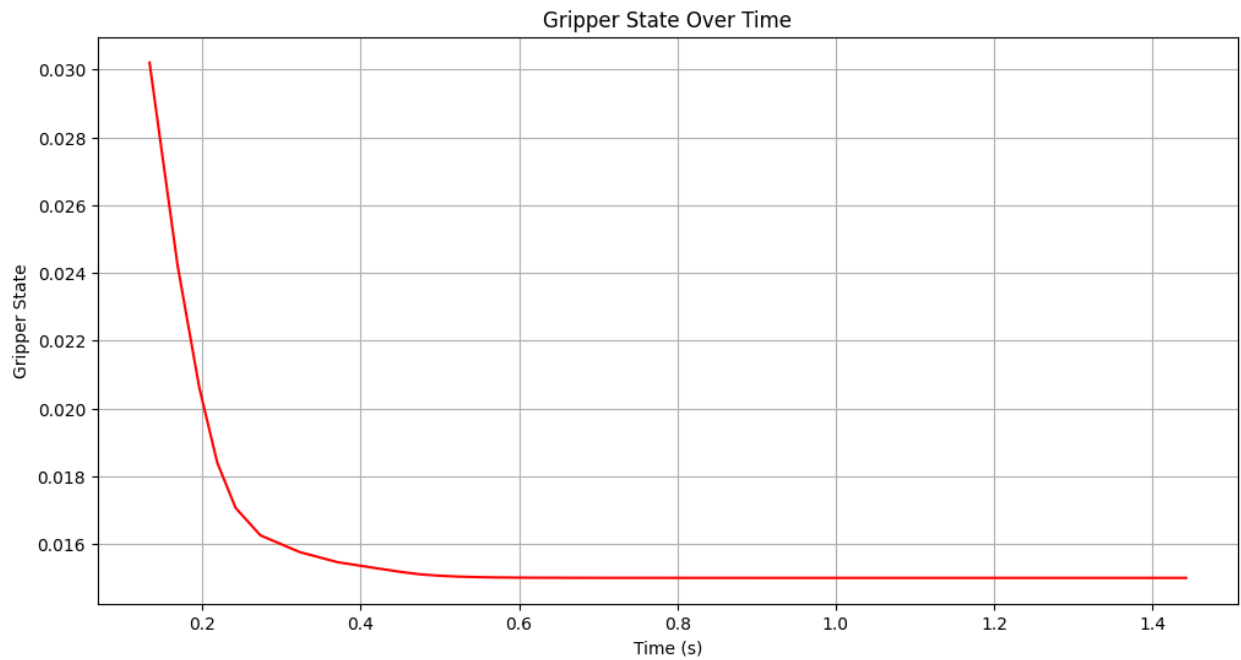
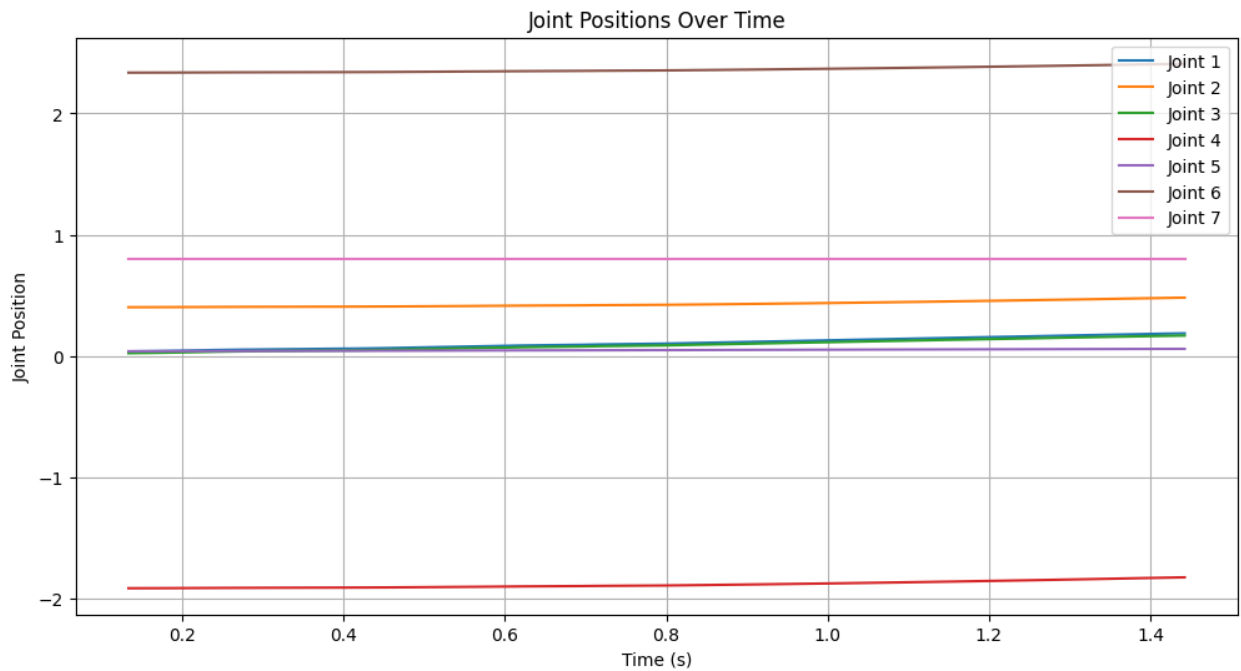
PROBLEM 1.2:

Forward plot and observations



```
joint positions: [[ 0.0353519  0.40695536  0.01950861 -1.9103278  0.03741637  2.3436232]
 0.80440146]
[ 0.03530774  0.4138439  0.01937911 -1.9016922  0.03745811  2.350676
 0.80440104]
[ 0.03523723  0.42079872  0.01923639 -1.8930303  0.03750173  2.3577368
 0.8044008 ]
[ 0.03516283  0.42780235  0.0190923 -1.8843145  0.03754544  2.3648112
 0.8044006 ]
[ 0.03508954  0.4348529  0.01894942 -1.8755426  0.03758907  2.3718994
 0.80440044]
[ 0.03501845  0.441951  0.01880832 -1.8667132  0.0376326  2.3790028
 0.8044002 ]
[ 0.03494981  0.44909742  0.01866912 -1.8578246  0.03767601  2.3861215
 0.80439997]
[ 0.03488364  0.456293  0.01853183 -1.8488758  0.03771925  2.3932562
 0.80439967]
[ 0.03481196  0.46353868  0.01839643 -1.8398653  0.0377623  2.4004076
 ...
 0.01499999 0.01499999 0.01499999 0.01499999 0.01499999 0.01499999
 0.01499999 0.01499999 0.01499999 0.01499999 0.01499999 0.01499998
 0.01499999 0.01499999 0.01499999 0.01499998 0.01499999 0.01499999
 0.01499999 0.01499999 0.01499999 0.01499999 0.01499999 0.01499999
 gripper positions: [0.03020017 0.02422771 0.02060194 0.01840082 0.01706456 0.01625334
 0.01576088 0.01546191 0.01528041 0.01517022 0.01510334 0.01506273
 0.01503808 0.01502311 0.01501403 0.01500851 0.01500516 0.01500313
 0.01500189 0.01500114 0.01500069 0.01500041 0.01500024 0.01500013
 0.01500008 0.01500004 0.01500001 0.015 0.01499999 0.01499999
 0.01499999 0.01499999 0.01499999 0.01499999 0.01499999 0.01499999
 0.01499999 0.01499999 0.01499999 0.01499999 0.01499999 0.01499998
 0.01499999 0.01499999 0.01499999 0.01499998 0.01499999 0.01499999
 0.01499999 0.01499999]
```

Right plot and observations



```

..
joint positions: [[ 0.03624965  0.40113914  0.02159173 -1.91814      0.03782644  2.3370562
0.80440426]
[ 0.03888591  0.4016246   0.02446779 -1.9175808   0.03827586  2.337485
0.80440515]
[ 0.04188632  0.4021435   0.02752871 -1.9169769   0.03871889  2.337954
0.8044056 ]
[ 0.04496554  0.40270615  0.03062801 -1.9163207   0.03916006  2.3384671
0.80440605]
[ 0.04806115  0.4033154   0.03373346 -1.9156113   0.03960036  2.3390248
0.80440646]
[ 0.0511595   0.4039717   0.03683787 -1.9148481   0.04003992  2.3396277
0.80440694]
[ 0.05425753  0.40467548  0.03993944 -1.9140315   0.04047874  2.3402755
0.8044074 ]
[ 0.05735451  0.40542668  0.04303761 -1.9131609   0.04091671  2.340969
0.8044079 ]
[ 0.06045023  0.40622544  0.04613206 -1.9122368   0.0413538   2.341707
...
[ 0.18269052  0.47741815  0.16430707 -1.8311669   0.05727061  2.4072526
0.80443263]
[ 0.18570931  0.4801918   0.16706587 -1.8280283   0.05761216  2.4097664
0.80443335]]

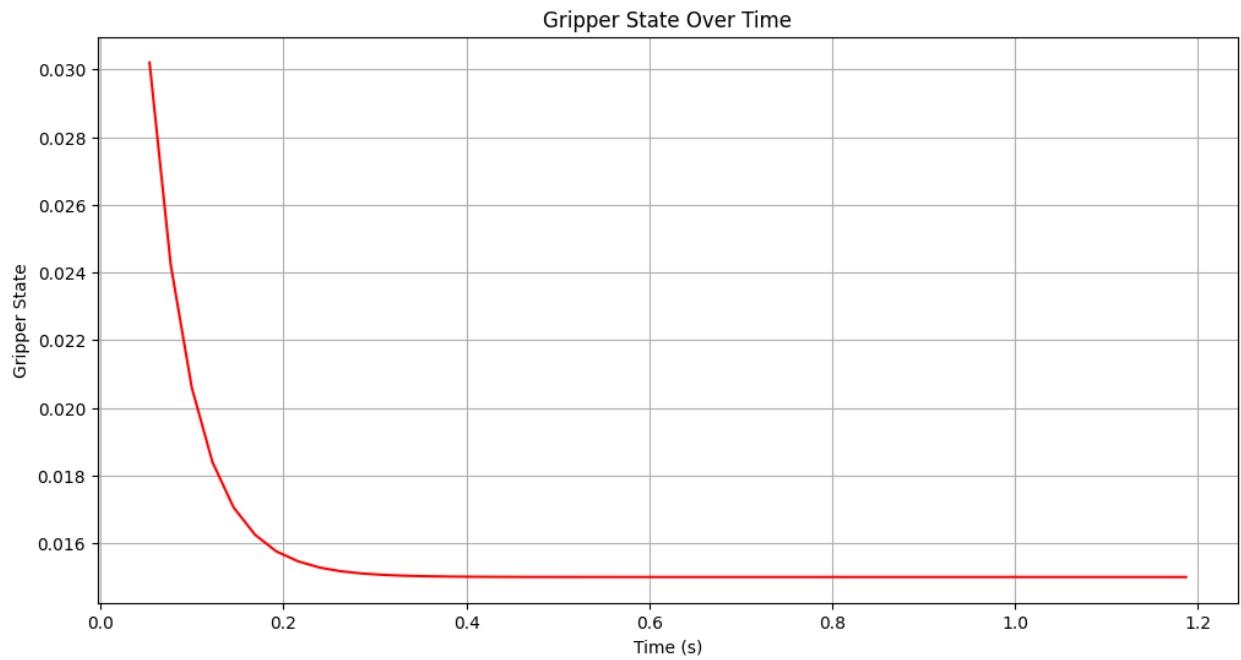
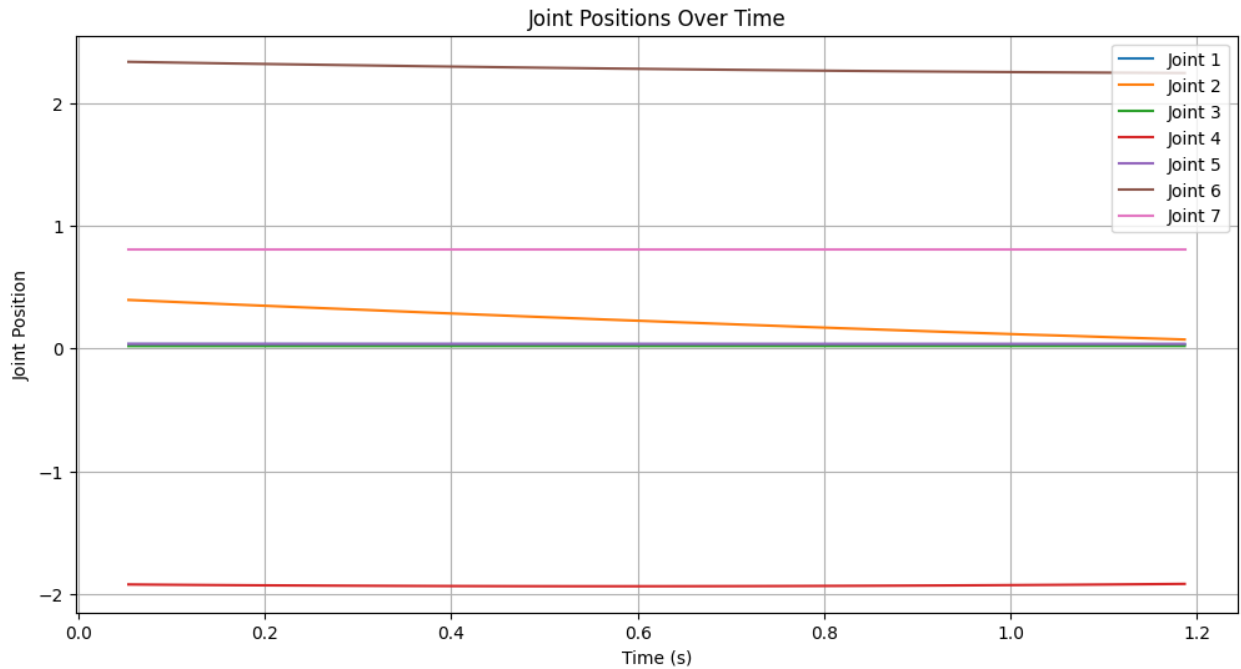
```

```

gripper positions: [0.03020056 0.0242278  0.02060201 0.01840089 0.01706464 0.01625342
0.01576095 0.01546197 0.01528047 0.01517029 0.01510339 0.01506278
0.01503813 0.01502316 0.01501408 0.01500856 0.01500521 0.01500318
0.01500195 0.0150012  0.01500074 0.01500046 0.0150003  0.01500019
0.01500013 0.01500009 0.01500006 0.01500005 0.01500005 0.01500005
0.01500004 0.01500004 0.01500004 0.01500003 0.01500003 0.01500003
0.01500003 0.01500002 0.01500002 0.01500002 0.01500002 0.01500002
0.01500002 0.01500002 0.01500002 0.01500002 0.01500002 0.01500002
0.01500001 0.01500001]

```

Upward plot and observations



```

joint positions: [[ 0.03520562  0.39519256  0.01957075 -1.9210074   0.03737345  2.3336601
 0.8044009 ]
 [ 0.03514665  0.38770545  0.01959242 -1.9223857   0.03736426  2.330802
 0.8044004 ]
 [ 0.03510092  0.38010797  0.019621   -1.923613    0.03735103  2.3279922
 0.8043998 ]
 [ 0.03505931  0.37253723  0.01965062 -1.9247738    0.03733772  2.3252203
 0.8043992 ]
 [ 0.03501931  0.36500508  0.01967987 -1.9258754    0.03732464  2.3224852
 0.8043986 ]
 [ 0.03498024  0.35751274  0.01970844 -1.9269176    0.03731183  2.3197865
 0.804398   ]
 [ 0.03494199  0.35006085  0.01973628 -1.9279008    0.03729931  2.3171256
 0.8043974 ]
 [ 0.03490453  0.34264967  0.01976334 -1.928825    0.03728708  2.3145013
 0.80439687]
 [ 0.03486783  0.33527946  0.01978965 -1.9296907    0.03727514  2.3119166
 ...
 0.015      0.015      0.015      0.015      0.015      0.015
 0.015      0.015      0.015      0.015      0.015      0.015
 0.015      0.015      0.015      0.015      0.015      0.015
 0.015      0.015      ]

```

```

gripper positions: [0.03020026 0.02422774 0.02060196 0.01840083 0.01706457 0.01625336
 0.01576088 0.01546191 0.01528041 0.01517023 0.01510335 0.01506274
 0.01503809 0.01502312 0.01501404 0.01500852 0.01500517 0.01500314
 0.01500191 0.01500116 0.01500071 0.01500043 0.01500027 0.01500016
 0.0150001  0.01500006 0.01500004 0.01500002 0.01500001 0.015
 0.015      0.015      0.015      0.015      0.015      0.015
 0.015      0.015      0.015      0.015      0.015      0.015
 0.015      0.015      0.015      0.015      0.015      0.015
 0.015      0.015      ]

```

PROBLEM 2.2:

