

We simulated the match ball by ball.
We applied on 10 matches and we got around 70% accurate

Match Number	Teams	Actual Score	Actual Overs	Predicted Score	Predicted Overs	Actual win	Predicted win	Prediction
53	KXIP	172/7	20	123	20	RPS	RPS	1
	RPS	173/6	20	124	18			
54	MUM	172/8	20	146	20	GL	GL	1
	GL	173/4	17.5	148	20			
55	KKR	171/6	20	143	20	KKR	KKR	1
	SRH	149/8	20	119	20			
56	DD	138/8	20	114	15.6	RCB	RCB	1
	RCB	139/4	18.1	115	13.3			
57	GL	158/10	20	168	20	RCB	GL	0
	RCB	159/6	18.2	135	20			
58	SRH	162/8	20	130	20	SRH	KKR	0
	KKR	140/8	20	132	18.2			
59	GL	162/7	20	120	20	SRH	SRH	1
	SRH	163/6	19.2	123	18.5			
60	SRH	208/7	20	161	20	SRH	SRH	1
	RCB	200/7	20	147	20			

Here accuracy is $6/8 = 0.75$

We have repeatedly ran the simulation function on the same match and printing the winner team index.
Here out of 20 it predicted 18 correctly.

```
In [25]: #match 55
t1bat=["RV Uthappa","G Gambhir","C Munro","MK Pandey","YK Pathan","JO Holder","Shakib Al Hasan","SA Yadav","AS Rajpoot","SP Narin
t2bat=['S Dhawan','DA Warner ','NV Ojha ','Yuvraj Singh','KS Williamson','DJ Hooda','MC Henriques','KV Sharma','B Kumar','BB Sran
'Mustafizur Rahman']
t1bowl=["YK Pathan","AS Rajpoot","Shakib Al Hasan","SP Narine","AS Rajpoot","SP Narine","JO Holder","C Munro","JO Holder","Kuldeep
t2bowl=["B Kumar","BB Sran","B Kumar","BB Sran","KS Williamson","DJ Hooda","KV Sharma","DJ Hooda","KV Sharma","MC Henriques","Must

In [27]: #actual win team 0
prediction=[]
for i in range(20):
    prediction.append(predict_score(t1bat,t2bat,t1bowl,t2bowl,"winner"))
prediction

Out[27]: [0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0]
```

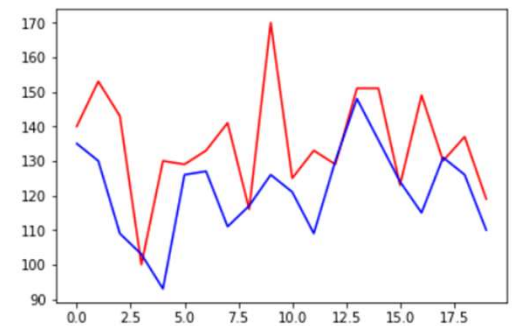
Here accuracy is $18/20 = 0.9$

Again we are printing overs and index of the team won and scores as (team0,team1) and plotting graph for every trial

```
In [119]: #actual win team 0
#actual score (171,149)
score_pred=[]
win_prediction=[]
for i in range(20):
    a=predict_score(t1bat,t2bat,t1bowl,t2bowl,"winner")
    win_prediction.append(a[0])
    score_pred.append((a[1],a[2]))
print(win_prediction)
print(score_pred)
```

```
19.6 19.6
19.6 19.6
19.6 19.6
19.6 11.4
19.6 19.6
19.6 19.6
19.6 19.6
19.6 13.6
19.6 19.6
19.6 19.6
19.6 19.6
19.6 19.6
19.6 19.3
19.6 19.6
19.6 19.6
19.6 15.1
19.6 19.6
19.6 15.5
19.6 19.6
19.6 19.6
[0, 0, 0, 1, 0, 0, 0, 0, 1, 0, 0, 0, 1, 0, 0, 1, 0, 1, 0, 0]
[(140, 135), (153, 130), (143, 109), (100, 103), (130, 93), (129, 126), (133, 127), (141, 111), (116, 117), (170, 126), (125, 121), (133, 109), (129, 130), (151, 148), (151, 136), (123, 124), (149, 115), (130, 131), (137, 126), (119, 110)]
```

```
Out[120]: [<matplotlib.lines.Line2D at 0x1e896a6f048>,
<matplotlib.lines.Line2D at 0x1e896adfa0>]
```



Here accuracy is $15/20 = 0.75$