

Stat 270: Ignore this unless you happen to be curious about R

These programs simulate the sequence of goals in a hockey game (hockeygame program) or the result of several matches between two teams (A and B say) (hockey program - which also uses the hockey1 subprogram).
you can specify the average number of goals in a game (avg); the probability that the A team wins (ateam); and the number of games between the two teams that you want to simulate (to get a summary, without the game detail of the hockeygame program).

To run the programs you open R and at the > prompt type
hockey()
or hockeygame()

If you want to vary the defaults, you put them in the brackets, like

```
hockeygame(avg=5,ateam=.6)
```

The defaults are the values that appear in the program definition. They will be over-ridden when you use the above form.

You need to place each program in a textfile and place it in the place R expects programs to be. This can be found out by issuing
getwd()
which is the command to "get working directory".

```
}  
> hockey  
function (avg=6,ateam=.5,ngames=10)  
{  
  agames=0  
  ties=0  
  print("A B goals")  
  for (j in 1:ngames)  
  {  
    score=hockey1(avg,ateam)  
  
    print(score)  
    if (score[1]>score[2]) {agames=agames+1}  
    if (score[1]==score[2]) {ties=ties+1}  
  }  
  print("Games, A Wins, Ties")  
  print(c(ngames,agames,ties))  
}  
> hockey1  
function (avg=6,ateam=.5)
```

```

{
    tota=0
    ngoals=rpois(1,avg)
    b=runif(ngoals)
    for (i in 1:ngoals)
        {if (b[i]<ateam) {tota=tota+1}
        }
    totb=ngoals-tota
    score=c(tota,totb)
    invisible(score)
}

```

> hockeygame

```
function (avg=6,ateam=.5)
```

```

{
    tota=0
    totb=0
    ngoals=rpois(1,avg)
    b=runif(ngoals)
    for (i in 1:ngoals)
        {if (b[i]<ateam) {print("A");tota=tota+1} else {print
("B");totb=totb+1}
        print(c(tota,totb))
        pause()
        }
    totb=ngoals-tota
    score=c(tota,totb)
    print("Final Score is")
    print("A B")
    print(score)
    invisible(score)
}

```