Q2 Report

NOTE : Since semaphores don't work on macOS, I had to create my own semaphores in semaphoreP.c using some online help.

Working

- I created a thread for each zone per student as per his support.

  - If a person Raina supports 'H', then I create 2 threads whose wantedZone will be 'H' and 'N' respectively.

- The thread goes through personStimulater() where it gets allocated seat

- stadium_reached() : gets the person into stadium at the waiting gate after the time given.

- gettingSeat() : Whichever thread for a spectator gets an empty seat in zone, gets the spectator allocated into that zone

- exiting() : The thread which gets the spectator allocated a seat in zone, then gets him to exit stadium based on the various situations.

- I also created threads for each goal

- Which calculate probability and then increment teams scores at appropriate times

Sample Output of given TC

```
t=1 : Rachit has reached the stadium
t=1 : Rachit has got a seat in zone H
t=1 : Adarsh has reached the stadium
t=1 : Adarsh has got a seat in zone A
t=1 : Team H has scored their 1st goal
t=1 : Adarsh is leaving due to the bad defensive performance of his team
t=1 : Sarthak has reached the stadium
t=1 : Sarthak has got a seat in zone H
t=2 : Ayush has reached the stadium
t=2 : Ayush has got a seat in zone A
t=2 : Team A has scored their 1st goal
```

```
t=2 : Roshan has reached the stadium
t=2 : Roshan has got a seat in zone N
t=3 : Pranav has reached the stadium
t=3 : Pranav has got a seat in zone N
t=3 : Vibhav has reached the stadium
t=3 : Team A has scored their 2nd goal
t=3 : Sarthak is leaving due to the bad defensive performance of his team
t=3 : Vibhav has got a seat in zone H
t=4 : Rachit watched the match for 3 seconds and is leaving
t=5 : Roshan watched the match for 3 seconds and is leaving
t=5 : Team H missed the chance to score their 2nd goal
t=5 : Ayush watched the match for 3 seconds and is leaving
t=6 : Vibhav watched the match for 3 seconds and is leaving
t=6 : Pranav watched the match for 3 seconds and is leaving
t=6 : Team H missed the chance to score their 3rd goal
```