Q1: Could you predict the output of the program before execution?

Ans: No, I could not predict the outcome of the program before execution.

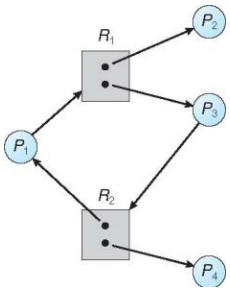
Q2:

Ans: can be found in a4_badoutput.txt

Q3: Is it possible to become deadlock in my updated version?

Ans: No, the possible chances of the program becoming deadlocked is 0.

Explain:



In the above graph there are 4 processes (p1 – p4) and 2 requests (R1 – R2), each request consisting of 2 instances of the request. Whenever the instance of R2 is over it releases the memory for p4 and frees the instance that was used so that R2 can send a request to p3. The instance will request p3 since it was freed from process 4. This will continue until the cycle is finished or returns to p1.