**HW-2**

Part I:

1-A:

1. [Sentence 1,[NP[Awful, game]0,2]], [Sentence 1,[NP[you]3,4]], [Sentence 1,[NP[ games, trying]5,7]], [Sentence 1,[NP[toxic, players]9,11]], [Sentence 1,[NP[you]19,20]],[Sentence 1,[NP[they]21,22]], [Sentence 1,[NP[you]26,27]],[Sentence1,[NP[flame]28,29]], [Sentence 1,[NP[you]32,33]], [Sentence 1,[NP[the, nicest, guy]35,38]]
2. [Sentence 2,[NP[course]2,3]], [Sentence 2,[NP[they]3,4]], [Sentence 2,[NP[you]5,6]], [Sentence 2,[NP[the end]7,9]], [Sentence 2,[NP[of]9,10]], [Sentence 2,[NP[the game]10,12]], [Sentence 2,[NP[5,-,10]15,18]], [Sentence 2,[NP[games]18,19]],[Sentence 2,[NP[of this]19,21]], [Sentence2,[NP[you]25,26]],[Sentence2,[NP[you]27,28]], [Sentence 2,[NP[your, behaviour, score]29,32]], [Sentence 2,[NP[toxic, player]34,36]], [Sentence 2,[NP[toxic, player]37,39]]
3. [Sentence 3,[NP[There]0,1]], [Sentence 3,[NP[someone, feeding, on, your, team]3,8]], [Sentence 3,[NP[They]9,10]], [Sentence 3,[NP[you]12,13]], [Sentence 3,[NP[The, problem]14,16]], [Sentence 3,[NP[you]19,20]], [Sentence 3,[NP[the, good, person]22,25]], [Sentence 3,[NP[on, the, team]25,28]]
4. [Sentence 4,[NP[casual, or, competitive]0,3]], [Sentence 4,[NP[This]3,4]], [Sentence 4,[NP[game]4,5]], [Sentence 4,[NP[just, isn’t, worth]5,8]], [Sentence 4,[NP[your, time, effort]8,11]], [Sentence 4,[NP[and]11,12]], [Sentence 4,[NP[money]12,13]]
5. [Sentence 5,[NP[They]1,2]], [Sentence 5,[NP[this, game]4,6]], [Sentence 5,[NP[They]8,9]], [Sentence 5,[NP[The, reporting, system]14,17]], [Sentence 5,[NP[view, toxic, players]20,23]], [Sentence 5,[NP[proper, action]26,28]], [Sentence 5,[NP[accounts, that, deserve, it]31,35]], [Sentence 5,[NP[me]37,38]], [Sentence 5,[NP[there]38,39]], [Sentence 5,[NP[it]44,45]]
6. [Sentence 6, [NP[They]0,1]], [Sentence 6, [NP[it]4,5]]
7. [Sentence 7, [NP[It]0,1]]

1-B:

1. [Sentence 1,[VP[Spend]4,5]], [Sentence 1,[VP[trying, to, talk, toxic, players, down, and, no, matter]6,15]], [Sentence 1,[VP[are, they, always]20,23]], [Sentence 1,[VP[turn, on, you]24,27]], [Sentence 1,[VP[and, flame, you, even]27, 31]], [Sentence 1,[VP[could, be]33,35]]
2. [Sentence 2,[VP[are, you, get]26,29]], [Sentence 2,[VP[lowered]32,33]], [Sentence 2,[VP[by, toxic, player]33,36]]
3. [Sentence 3,[VP[could]1,2]], [Sentence 3,[VP[be]2,3]], [Sentence 3,[VP[someone]3,4]], [Sentence 3,[VP[feeding]4,5]], [Sentence 3,[VP[will]10,11]], [Sentence 3,[VP[rationilze]11,12]], [Sentence 3,[VP[you, ’re, the , problem]12,16]], [Sentence 3,[VP[and]16,17]], [Sentence 3,[VP[still, report, you]17,20]], [Sentence 3,[VP[being]21,22]]
4. Zero verb phrases
5. [Sentence 5,[VP[want, this, game]3,6]], [Sentence 5,[VP[to, flourish]6,8]], [Sentence 5,[VP[would, really]9,11]], [Sentence 5,[VP[pick, up]11,13]], [Sentence5, [VP[and, actually, take, proper, action]23,28]], [Sentence 5,[VP[banning]30,31]], [Sentence 5,[VP[deserve]33,34]], [Sentence 5,[VP[it]44,45]]
6. [Sentence 6, [VP [will]2,3]], [Sentence 6, [VP [do, it]3,5]]
7. [Sentence 7, [VP [just, slowly]2,4]], [Sentence 7, [VP [going, to, die]4,7]]

2:

1. [VP -> VP, CC, VP, SBAR {(1[4,38])}
2. [VP -> VBP, NP, PP, ADVP {(2[4,39])}
3. [VP -> MD, VP {(3[1,8])};  
   [VP -> MD, VP {(3[10,28])}
4. Zero verb phrases.
5. [VP ->VBD, NP, S {(5[3,7])};  
   [VP -> VB, SBAR {(5[7,9])};  
   [VP ->MD, ADVP {(5[9,11])};  
   [VP -> VB, PRT, PP {(5[11,23])};   
   [VP -> CC, ADVP, VP, CC, VP {(5[23,45])}
6. [VP ->VBZ, ADVP, VP {(6[1,7])}
7. [VP ->VBZ, ADVP, VP {(6[1,7])}

3:

1. [S ---->NP NP VP {(1[0,32])};  
   [S ---->NP VP {(1[32,39])};  
   [S ---->NP ADVP VP {(1[5,27])};  
   [S ---->NP VP {(1[19,23])};  
   [S ---->NP ADVP {(1[29,31])}
2. [S ---->ADVP PP NP VP ADVP {(2[0,25])};  
   [S ---->NP VP {(2[25,27])};  
   [S ---->NP VP {(2[27,29])};  
   [S ---->NP VP {(2[29,40])}
3. [S ---->NP VP {(3[0,8])};  
   [S ---->CC {(3[8,9])};  
   [S ----> NP VP {(3[9,12])};  
   [S ----> NP VP {(3[12,21])};  
   [S ----> VP {(3[21,29])}
4. Zero S rules.
5. [S ----> NP ADVP VP {(5[1,6])};  
   [S ----> VP {(5[6,8])};  
   [S ----> NP VP VP {(5[8,29])};  
   [S ----> ADVP VP {(5[29,33])};  
   [S ----> VP {(5[33,35])};  
   [S ----> NP VP {(5[38,46])}
6. [S ----> NP ADVP VP {(6[0,6])}
7. [S ----> NP VP {(7[0,8])}

Part II:

**Question 1:**

* For creating the regex, I have taken one example, I found that the quantities tags as <CD> for whole numbers like 1,2,3 etc. Coming to quantities like ½ or 3/4 sometimes it is showing as CD or JJ. So, I have included <JJ> with ‘?’ modifier, for repetition on 0 or once. I choose CD within range {1 ,2}. Because quantities may be 1 or 1 ½.
* For names like cup, cups, tbs, I choose <NN.?>, so that it can include both NN, NNS & NNP.
* For examples like 1 cup of rice, for ‘of’ I have included <IN>?
* For verbs like frozen or chopped I have included <VB.> to include all types of verbs.
* At last, I have included <NN.?> for ingredient names.