

## Session 2

1. (0.5 points) Provide the order and size of the four obtained undirected graphs( $g'_B$ ,  $g'_D$ ,  $g_{wB}$ , and  $g_{wD}$ ).
2. (1 point) Justify the strategy used to obtain  $g_{wB}$  and  $g_{wD}$ .
3. (0.5 points) Justify whether the directed graphs obtained from the initial exploration of the crawler ( $g_B$  and  $g_D$ ) can have more than one weakly connected component and strongly connected component, and explain why. Indicate the relationship with the selection of a single seed.
4. (0.5 points) Also justify the relationship between the previous results and the number of connected components in the undirected graphs ( $g_B$  and  $g_D$ ).
5. (0.5 points) Compute the size of the largest connected component from  $g'_B$  and  $g'_D$ . Which one is bigger? Justify the result.