## Task 1A

Here, we have two lists — at that stones the nodes with no prereasuisite and of that stones the resulting seawance. The function ToposortBFs takes the graph and list of indegrees as input while there are elements in the queue, they are popped and stored in f and the indegrees of the neighbours are decreased. If any of the indegrees are now 0, they are pushed in queue. Finally, we check if there was a cycle by comparing the count variable that was incrementing with each pop from a vere, and the number of nodes. If they don't match, there exists a cycle

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Here, there are two functions—DFS and iscycle iscycle checks for cycle within the graph and DFS conducts the DFS algorithm. The iscycle function caus DFS function for the unvisited nodes and looks for cycle DFS function also hardles starting time and ending time. In First the iscycle function is called and it handles calling DFS. lastly if there is a cycle, the iscycle function returns it. It also returns the ending time that is used to get the topological order.

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Task's there are puered in oriend. Financy test of Here, first DFs is run. Then the graph is toomsposed. The transposed graph is underwent DFs again but in order of the descending ending time of the nodes. From here, we can identify the different Arongly connected components, that can

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