

Iterative Breadth-First Search

Note: This de

```

bfs( $G$ ,  $sr$ ):
    Input: graph  $G$ , vertex  $sr$ 

    create visited array, initialised to false
    create predecessor array, initialised to null
    create queue  $Q$ 

    enqueue  $sr$  into  $Q$ 

    while  $Q$  is not empty:
         $v$  = dequeue from  $Q$ 
        if visited[ $v$ ] == true:
            continue // i.e., return to start of while loop

        visited[ $v$ ] = true

        for each neighbour  $w$  of  $v$  in  $G$  where  $w \neq v$ :
            predecessor[ $w$ ] =  $v$ 
            enqueue  $w$  into  $Q$ 

```