Q4: Convert the given maze into a graph. (Hint: For simplicity’s sake, use those specified grids (with the alphabet) to name the nodes, and their distance is the number of grids in between the paired named nodes as their distance. For example, node C and node R are reachable by forwarding 6 grids from C towards R, or from R towards C.)

**The following graph is a maze example: Assume A is the entrance. G and g are exits.**

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| **C** |  |  |  |  |  | **R** |  |  |  |  |  |  | **k** |  |  |  |  | **w** | **g1** |
|  |  |  |  |  |  | **Q** |  |  | **b** |  |  |  | **j** |  |  |  |  |  |  |
| **B** |  |  |  |  | **O** |  |  |  |  |  |  |  | **i** |  |  |  | **r1** |  | **z** |
|  |  |  |  | **L** | **N** |  |  |  |  | **c** |  | **e** |  |  |  | **o** | **r** | **v** |  |
|  |  | **E** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |  |  | **a** |  |  |  | **h** |  |  |  |  |  |  |
|  |  | **D** | **H** | **K** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | **P** |  | **Y** |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | **J** | **M** |  | **T** |  |  |  |  |  |  |  |  |  | **q** | **u** | **y** |
|  |  |  | **G** | **I** |  |  |  |  | **Z** |  |  |  |  |  |  | **n** | **p** | **t** | **x** |
|  |  |  |  |  |  |  |  | **X** |  |  |  | **d** | **g** |  |  |  |  |  |  |
|  |  |  |  |  |  |  | **S** | **V** |  |  |  |  |  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | **m** |  |  |  |
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|  |  |  |  |  |  |  |  |  |  |  |  |  | **f** |  |  |  |  |  |  |
| **A** |  |  | **F** |  |  |  |  | **U** |  |  |  |  |  |  | **l** |  |  | **s** | g2 |

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