

$i \backslash j$	1	2	\dots	N
1	$(1, 1)$	$(1, 2)$	\dots	$(1, N)$
2	$(2, 1)$	$(2, 2)$	\dots	$(2, N)$
\vdots	\vdots	\vdots	\ddots	\vdots
N	$(N, 1)$	$(N, 2)$	\dots	(N, N)

The diagram illustrates an $N \times N$ grid with rows and columns indexed from 1 to N . The grid contains the following elements:

- Header Row:** The first row of the grid contains the indices $1, 2, \dots, N$ as column headers.
- Header Column:** The first column of the grid contains the indices $1, 2, \vdots, N$ as row headers.
- Grid Cells:** Each cell in the grid contains a pair of coordinates (i, j) , where i is the row index and j is the column index. For example, the cell at row 1, column 1 contains $(1, 1)$, and the cell at row N , column N contains (N, N) .
- Blue Arrows:** A series of blue arrows indicates a path through the grid:
 - A horizontal arrow points from $(1, 1)$ to $(1, 2)$.
 - A vertical arrow points from $(1, 2)$ down to $(2, 2)$.
 - A horizontal arrow points from $(2, 2)$ to $(2, 1)$.
 - A vertical arrow points from $(2, 1)$ down to $(N, 1)$.
 - A horizontal arrow points from $(N, 1)$ to $(N, 2)$.
 - A vertical arrow points from $(N, 2)$ down to (N, N) .
 - A horizontal arrow points from (N, N) to $(N, 1)$.