Minesweeper Tile Descriptions

* **Tile Type: Unchecked** - The unchecked tile type is the default or starting state for each tile when a minesweeper board is generated. Upon clicking / interaction, the unchecked tile will be transformed into one of three tile states: Unnumbered, Numbered, and Bomb.

A white tile with squares

Description automatically generated

* Condition: None/Default
* Relevant Game Rules: The first unchecked tile to be clicked after board generation can not be transformed/designated as a mine tile. This rule is implemented to prevent the player from losing on their first click by pure chance.
* Flag Markers: Unchecked tiles can be transformed into flag tiles when the player applies a flag item to an unchecked tile. The flag is intended to be used when the player suspects a tile is a bomb and prevents the player from checking the flag tile by mistake.
* **Tile Type: Unnumbered** – The unnumbered tile type is one of the three states the unchecked tile can enter after being clicked. The unnumbered state indicates that the clicked tile is not a bomb and does not have a bomb in any of the surrounding eight tiles. Upon clicking, adjacent unnumbered tiles are also revealed until a perimeter of numbered tiles is reached. Below are examples of this mechanic in application:

A screenshot of a computer screen

Description automatically generated

A screenshot of a game

Description automatically generated

* Condition: Transitioned from an unchecked tile and does not have any bombs within the surrounding eight tiles.

**Tile Type: Numbered** – The numbered tile type is one of the three states the unchecked tile can enter upon being clicked. The numbered tile indicates that there is 1-8 mines within the surrounding unchecked tiles. The number of mines within the surrounding unchecked tiles will be indicated by the number that appears on the numbered tile. Below is an example of this tiles function, Diamonds represent potential mines.

A screenshot of a game

Description automatically generated

* Condition: Transitioned from an unchecked tile and has 1-8 mines in the surrounding 8 tile perimeter.

**Tile Type: Mine –** The mine tile type is one of the three states the unchecked tile can enter upon clicked. If the mine tile is reached/achieved, the player has lost, all mines on the board are revealed, and the game ends.

A screenshot of a game

Description automatically generated

* Condition: Transitioned from an unchecked tile and one of the randomly generated mines on the board is hit.

**Tile Type: Flagged (Optional) –** The flag tile type is an optional tile type that the unchecked tile enters when the player applies a flag to it. Once entered, the unchecked tile will no longer be able to be clicked/checked while the flag is active. The intention of this mechanic is to allow the player to indicate where they believe mines are located without clicking/revealing them.

A screenshot of a game

Description automatically generated

* Condition: Transitioned from an unchecked tile when the player places a flag on a unchecked tile. The flagged tile can return to being an unchecked tile if the flag is removed.

State Diagram as of: 11/19/2024: <https://lucid.app/lucidchart/14d9c2f4-ee04-479e-a910-d2b9330b8f40/edit?viewport_loc=-1940%2C-1696%2C7664%2C4169%2C0_0&invitationId=inv_8513ba11-859b-4c24-ad15-b3173f36083e>