User Stories

INVEST Criteria

1) Independent - (Independent of other user stories)
2) Negotiable - (Not a specific contract for features)
3) Valuable
4) Estimable
5) Small - (Small enough to fit into 1 sprint)
6) Testable - (Can be tested in principle)

Developer

As a **developer**, I want to implement a GameBoard class that supports flexible board configurations so that the game can accommodate different layouts beyond a standard 5×5 grid.

As a **developer**, I want to create a Player class that allows two players to take turns moving and building so that the core Santorini gameplay is properly structured.

As a **developer**, I want to ensure the game enforces valid moves and building actions so that players cannot break the rules during gameplay.

As a **developer**, I want to create a system that tracks game history and logs all moves made during a game so that players can review past actions and learn from them. (Vinnie)

As a **developer**, I want to build a simple and intuitive user interface that clearly shows available actions to the current player so that the game is easy to understand and play. (Vinnie)

As a **developer**, I want to design a simple credits page that lists the developers' names so that contributors are acknowledged. (Dul)

As a **developer**, I want to ensure that the game handles ties and stalemates correctly so that edge cases don't break the game. (Dul)

Player

1. As a **player**, I want to be able to move my builder to any adjacent space so that I can position myself strategically for future moves.
   a. Independent: Movement can be implemented separately from other mechanics.
   Negotiable: The exact movement rules (e.g., diagonal moves, restrictions) can be adjusted.
   b. Valuable: Players need movement to navigate and plan strategies.
   c. Estimable: The complexity of implementing movement can be estimated based on board size and constraints.
   d. Small: Moving a builder is a single action, making it manageable within a sprint.
   e. Testable: Can be verified by checking if a player can move to adjacent spaces and is restricted correctly.

2. As a **player**, I want to construct a building on an adjacent space after moving so that I can work towards reaching the third level.
    a. Independent: Building can be implemented separately from movement mechanics.
    b. Negotiable: The rules (e.g., where to build, height limits) can be adjusted.
    c. Valuable: Essential to progression, as building is necessary to achieve victory.
    d. Estimable: The logic for adding a level to a structure can be estimated.
    e. Small: A single action (placing a level on an adjacent space), making it small enough for implementation.
    f. Testable: Can be verified by checking if a structure is properly built on an adjacent space.
3. As a **player**, I want to win the game by moving my builder onto a third-level structure so that I can achieve victory.
    a. Independent: Winning conditions can be checked separately from movement and building mechanics.
    b. Negotiable: The victory condition (e.g., requiring a full turn on level 3) can be adjusted for balance.
    c. Valuable: Defines the main objective of the game, providing motivation for players.
    d. Estimable: The logic for checking win conditions (builder on level 3) can be determined.
    e. Small: The win condition is a straightforward check, making it a small feature.
    f. Testable: Can be tested by verifying if a player wins when stepping onto a third-level structure.
4. As a **player**, I want to know the other players' god powers so that I can make a strategy around them. (John)
    a. Independent: Only requires the ability to display other players' god powers
    b. Negotiable: How it's presented can be negotiated
    c. Valuable: Players can plan around other players' god powers
    d. Estimable: We can estimate how to add the god power data and how to display it to the players
    e. Small: Only requires the ability to read others' god cards
    f. Testable: We can see if we see the god powers while in play
5. As a **player**, I want to be able to set the game mode so that I can have a new experience with the same game. (John) (Extension)
    a. Independent: While this may change the setup of the game initially, once players start playing the game, they play otherwise as normal
    b. Negotiable: How the mode card is chosen is negotiable
    c. Valuable: This allows gives the game replayability
    d. Estimable: Adjusting the settings of games depending on the mode card and the ability to select them can be estimated
    e. Small: This primarily deals with altering attributes of the game rather than fundamentally altering how Santorini is player
    f. Testable: We can test if a mode card is appropriately changing the game
6. As a **player**, I want to be able to use my god power so that I can have an advantage and win the game. (John)
    a. Independent: This only depends on the god power itself
    b. Negotiable: How the player activates their god power (if needed) is negotiable

      c. Valuable: Players can use their god power to attempt victory

      d. Estimable: Implementing the god power interacting with the current game state can be estimated.

      e. Small: Adding each god power can be done within a sprint (though adding all of them is outside of the scope of Sprint 2)

      f. Testable: We can test if activating a god power actually works

7. As a **player**, I want to see a clear visual representation of the board with different building heights and worker positions, so I can make informed decisions during gameplay. (Vinnie)

      a. Independent:

      b. Negotiable:

      c. Valuable:

      d. Estimable:

      e. Small:

      f. Testable:

8. As a **player,** I want the game to highlight valid movement spaces for my selected builder, so I can easily see my available options.

      a. Independent:

      b. Negotiable:

      c. Valuable:

      d. Estimable:

      e. Small:

      f. Testable:

9. As a **player**, I want a simple scoreboard that tracks wins between players across multiple games, so we can keep track of our overall performance.

      a. Independent:

      b. Negotiable:

      c. Valuable:

      d. Estimable:

      e. Small:

      f. Testable:

10. As a **player**, I want an end-game screen that displays a victory message and the option to play again or return to the main menu so that I can smoothly transition to my next action. (Dul)

      a. Independent:

      b. Negotiable:

      c. Valuable:

      d. Estimable:

      e. Small:

      f. Testable:

11. As a **player**, I want to a information page that explains how to play the game so I can understand all the rules. (Dul)

      a. Independent:

      b. Negotiable:

      c. Valuable:

      d. Estimable:

      e. Small:

      f. Testable:

12. As a **player**, I want to have a confirmation step when selecting my god so that I don't accidentally pick the wrong one. (Dul)
    a. Independent:
    b. Negotiable:
    c. Valuable:
    d. Estimable:
    e. Small:
    f. Testable:
13. As a **player**, I want the option to concede the game when I feel it's unwinnable so that I can end the game and let my opponent win, avoiding unnecessary frustration. (Dul)
    a. Independent:
    b. Negotiable:
    c. Valuable:
    d. Estimable:
    e. Small:
    f. Testable: