**Functional**

**Input**

*FN-IN-01: The system should support the use of the W A S and D keys to turn Paku Paku.*

*FN-IN-02: The system should support the use of the arrow keys to turn Paku Paku.*

*FN-IN-03: The system should support the use of the 2 4 6 and 8 keys on the numpad to turn Paku Paku.*

*FN-IN-04: The system should support the use of a joystick to turn Paku Paku.*

*FN-IN-05: The system should allow the user to start a new game by pressing the enter key on the main menu screen.*

*FN-IN-06: The system should allow the user to exit the game by pressing the escape key on the main menu page.*

*FN-IN-07: The system should allow the user to enter their initials upon achieving a high score.*

**Output**

*FN-OUT-01: The system should redraw Paku Paku’s sprite in the direction that the user last entered.*

*FN-OUT-02: The system should display the ghosts facing the direction that they are currently moving.*

*FN-OUT-03: The system should display the high scores in the high score table upon the menu being shown.*

*FN-OUT-04: The system should display the initials corresponding to each high score upon the menu being shown.*

*FN-OUT-05: The system should play a death animation when Paku Paku collides with a non-consumable ghost.*

*FN-OUT-06: The system should display “Game Over” and return to the main menu if Paku Paku dies with zero lives.*

*FN-OUT-07: The system should play the level clear animation when all pellets are consumed on the game field.*

*FN-OUT-08: The system should remove a pellet from the grid when Paku Paku collides with it.*

*FN-OUT-09: The system should display the points earned from consuming a consumable ghost or bonus item.*

*FN-OUT-10: The system should play a unique sound upon the consumption of a bonus item or ghost.*

*FN-OUT-11: The system should prompt the user to enter their initials if the user achieves a high score.*

**System**

*FN-SYS-01: The system should use an internal timer to control movement.*

*FN-SYS-02: The system should automatically speed up the timer upon the completion of a level until level 21 of the game.*

*FN-SYS-03: The system should automatically move the characters in the direction they are facing when the time designated by the level is reached on the timer.*

*FN-SYS-04: The system should allow Paku Paku to turn in any direction when the input is given.*

*FN-SYS-05: The system should not allow Paku Paku to move on or through wall tiles.*

*FN-SYS-06: The system should allow Paku Paku to warp to the opposite side of the map when Paku Paku reaches the end of the tunnel in the center.*

*FN-SYS-07: The system should not allow the ghosts in their normal state to turn the opposite direction that they are currently moving.*

*FN-SYS-08: The system should set the ghosts currently on the stage that are not consumed to fleeing upon Paku Paku consuming a super pellet.*

*FN-SYS-08: The system should reverse the current direction of the ghosts when Paku Paku consumes a super pellet.*

*FN-SYS-09: The system should allow Paku Paku to consume the ghosts for points.*

*FN-SYS-10: The system should calculate the ghost’s points as 200 times the number of ghosts consumed, with a point cap at 6400 per ghost.*

*FN-SYS-11: The system should reset the ghost’s points to 200 upon Paku Paku exiting super mode.*

*FN-SYS-12: The system should remove Paku Paku from super mode upon clearing a level.*

*FN-SYS-13: The system should not make the ghosts in jail consumable when a super pellet is consumed.*

*FN-SYS-14: The system should award 10 points to the user when a regular pellet is consumed.*

*FN-SYS-15: The system should award 100 points to the user when cherries are consumed.*

*FN-SYS-16: The system should award 300 points to the user when a strawberry is consumed.*

*FN-SYS-17: The system should award 500 points to the user when an orange is consumed.*

*FN-SYS-18: The system should award 700 points to the user when a bell is consumed.*

*FN-SYS-19: The system should award 1000 points to the user when an apple is consumed.*

*FN-SYS-20: The system should award 2000 points to the user when a melon is consumed.*

*FN-SYS-21: The system should award 3000 points to the user when a Galaxian is consumed.*

*FN-SYS-22: The system should award 5000 points to the user when a key is consumed.*

*FN-SYS-23: The system should award 50 points to the user when a super pellet is consumed.*

*FN-SYS-24: The system should kill Paku Paku if it collides with a non-consumable ghost.*

*FN-SYS-25: The system should decrement the lives counter when Paku Paku dies.*

*FN-SYS-26: The system should reload the stage and increment the level counter after the level clear animation is complete.*

*FN-SYS-27: The system should play a tune upon the start of the first level, and only the first level.*

*FN-SYS-28: The system should continue a game until the application is closed or Paku Paku dies with 0 lives remaining.*

*FN-SYS-29: The system should only store a total of five high scores.*

*FN-SYS-30: The system should remove the lowest high score when a new high score is entered to store the newest high score.*

**Non-Functional**

**Input**

*NF-IN-01: The system should support input from a keyboard connected to the computer.*

**Output**

*NF-OUT-01: The system should output sound using the MIDI sound format.*

*NF-OUT-02: The system should detect if the computer running the system cannot support sound output.*

*NF-OUT-03: The system should produce no sounds if the computer running the system cannot support the sound type.*

*NF-OUT-04: The system should support VGA video output type using the BIOS scanline set.*

*NF-OUT-05: The system should support the EGA video output type.*

**System**

*NF-SYS-01: The system should run with a maximum RAM of 128k*

*NF-SYS-02: The system should run on an Intel 8088 processer that at least runs at 4.77 mhz.*

*NF-SYS-03: The system should run on Windows DOS 2.11 or higher.*