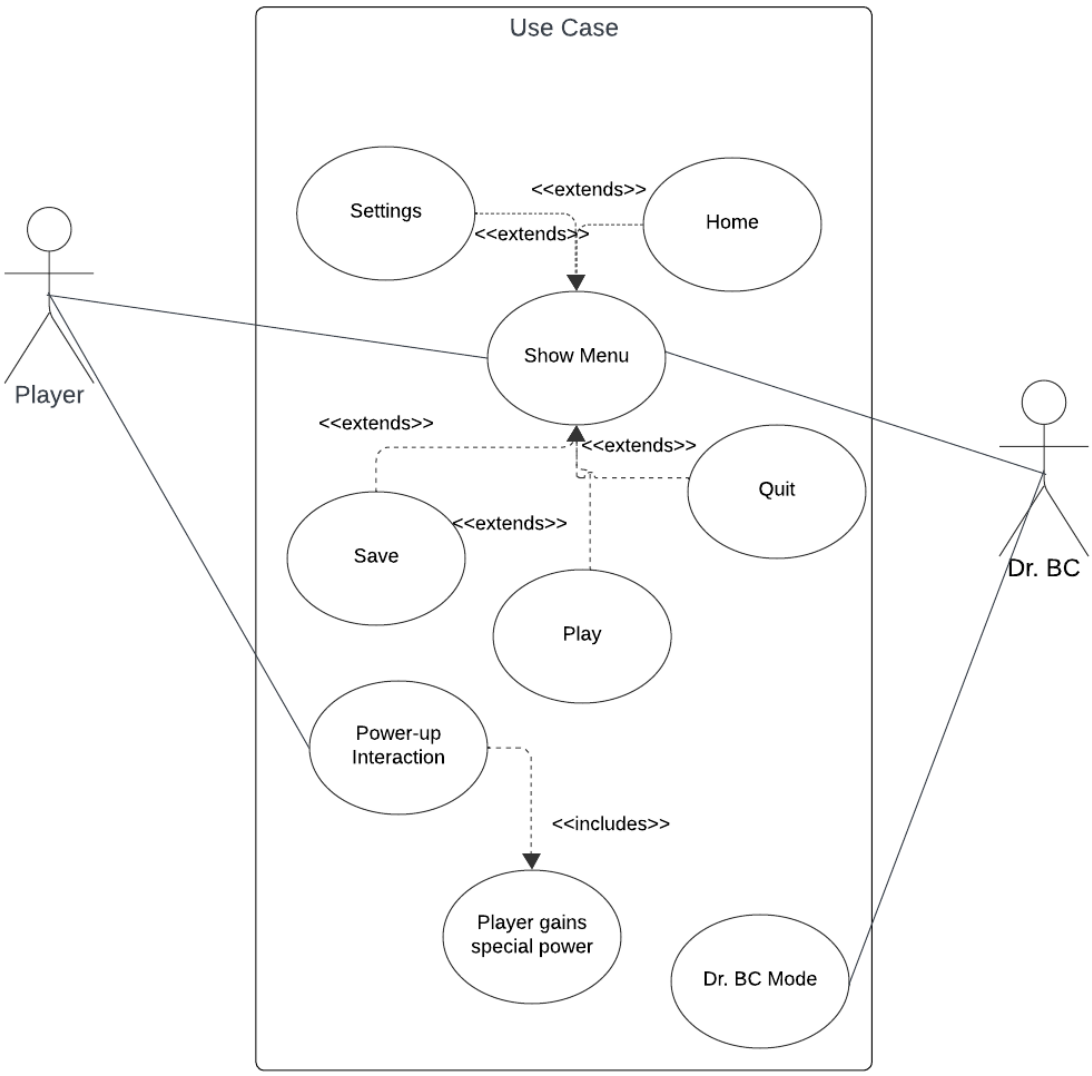
Name: Jon Watkins Mark: /50

1. Brief introduction _/3

My feature will be the user interface menus, including the pause, game over menus and the Dr. BC play option. The menus will be crucial to the game as they will provide critical UI.

2. Use case diagram with scenario _14

Use Case Diagrams



Scenarios

Name: Show Menu
Summary: The game pauses action and displays options
Actors: All
Preconditions: Playing game or just logged into the game.
Basic sequence:

Step 1: User is actively playing or has just logged into the game.
Step 2: The user is shown multiple options.

Exceptions:

Step 1: User chooses play.
Step 2: User chooses quit.
Step 3: User chooses settings.
Step 4: User chooses home.

Post conditions: The user is able to choose options
Priority: 1*

Name: Dr. BC play mode
Summary: The game enters Dr. BC play mode, dumbing down the abilities of the enemies so Dr. BC may play through the level without dying.
Actors: Dr. BC
Preconditions: Dr. BC is the user.
Basic sequence:

Step 1: Dr. BC initiates the Dr. BC mode
Step 2: The enemies damage is dumbed down.

Post conditions: The game is in Dr. BC mode.
Priority: 1*

Name: Powerup interaction
Summary: The player runs into a powerup.
Actors: All
Preconditions: Player must be active, in-game.
Basic sequence:

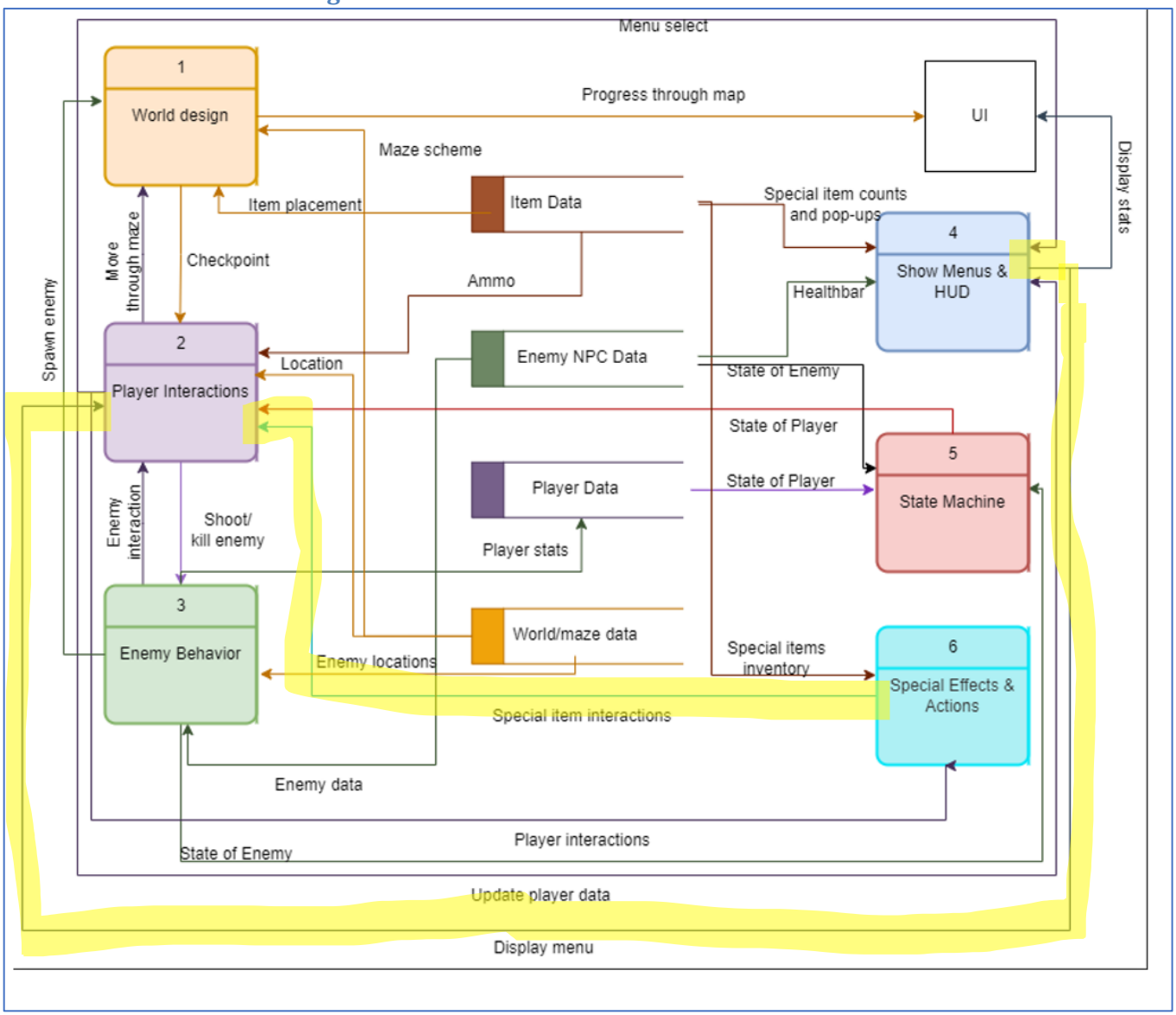
Step 1: Player runs into a powerup
Step 2: The player gains special powers

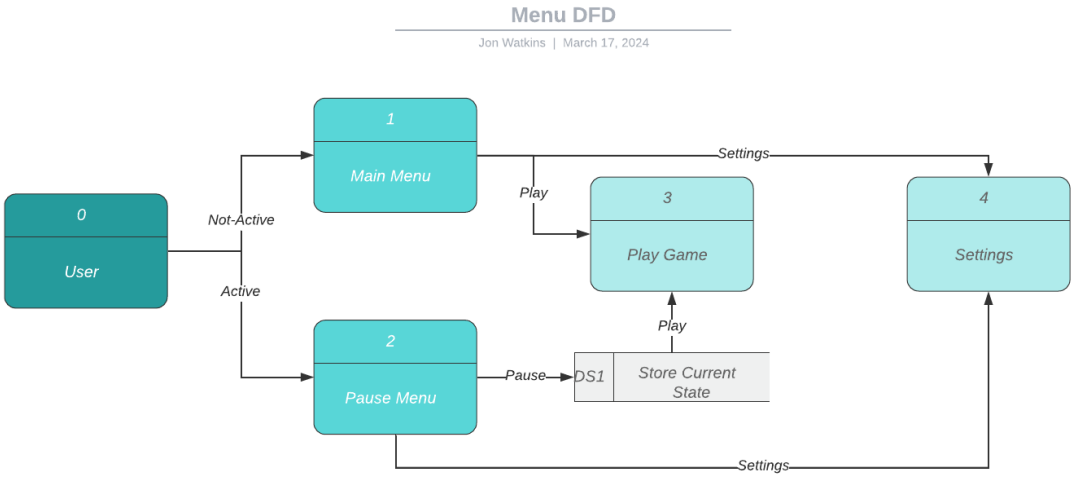
Post conditions: The player has the special power.
Priority: 2*
*The priorities are 1 = must have, 2 = essential, 3 = nice to have.

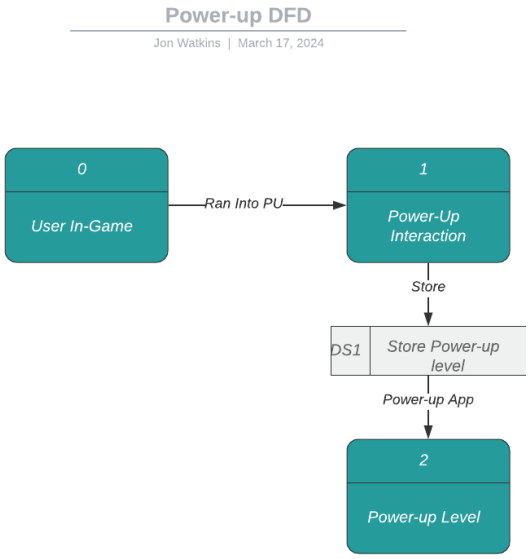
3. Data Flow diagram(s) from Level 0 to process description for your feature _____14

Example:

Data Flow Diagrams







Process Descriptions:

Show menus and & HUD:
WHILE in play mode
    IF user initiates pause
        Display pause menu options

    IF user dies
        Display game over options
    END WHILE

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WHILE Dr BC is playing
        Allow Dr. BC play mode option

        IF DR. BC initiates Dr BC mode
                no damage dealt by enemies
        END WHILE


WHILE in play mode
        IF User collides with power-up
                IF power-up level < 9
                        Gain power
END WHILE
```

Acceptance Tests _____9

Pause Feature

Tests for the pause feature will be simple, they will include pausing the game at any point in time, and resuming after a random amount of time in order to:

- Test functionality of the pause feature.
- Test consistency of the game pausing (nothing in the background running).
- Test the use of the pause menu features.

Specific tests

- Boundary: The game will navigate to the correct screen, correct users-choice of option only one time, will not take more than one click, or won't randomly go choose an option.

Game Over Feature

Tests for the game over feature will include multiple ways of entering into the game over menu, such as dying in multiple ways, in multiple levels. Tests run will also include multiple run throughs of the game to check for:

- The game only entering the game over when in fact the game is over.
- The game displaying the correct options.
- Functionality of the game over menu options.

Specific tests

- Boundary: The game will navigate to the correct screen, correct users-choice of option only one time, will not take more than one click, or won't randomly go choose an option.

Dr. BC mode

Tests for the Dr. BC mode will take place separately from the other UI features. As Not only will there be tests for the availability of the Dr. BC mode, there must be tests for:

- The functionality of Dr. BC mode
- The consistency of the Dr. BC mode, i.e. not hopping in and out of Dr. BC mode during level switches, elapsed time, etc.
- The ability to leave Dr. BC mode.

Power-Up Interaction

Tests for the power-up interaction will include the best test cases for my game. I will be able to test boundary and stress fairly easily. The stress tests will set up great boundary tests.

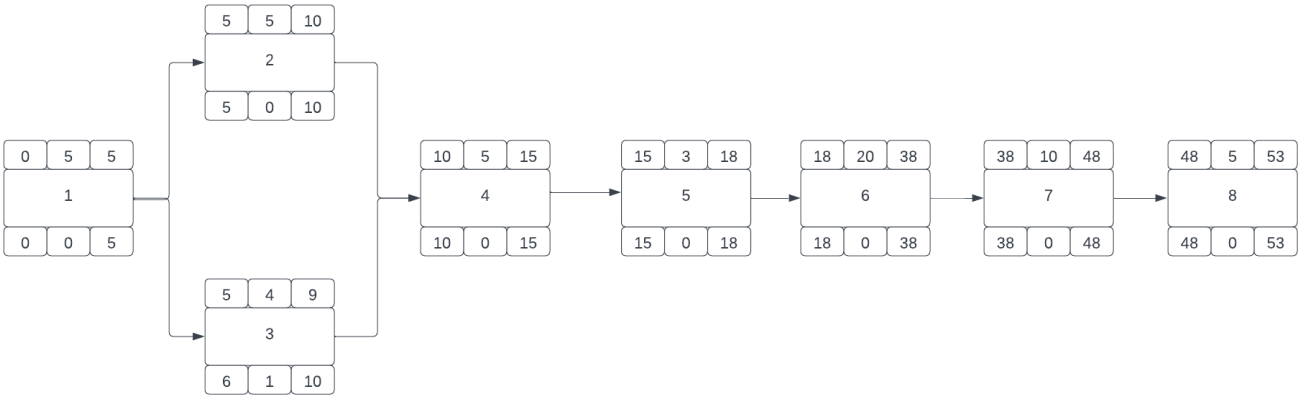
- Stress: See how powerful the character must be before the user can get through the game too fast. This test will take getting through levels over a certain time that is determined by getting through the level with no power-ups.
- Boundary: Once we get a good number from the stress test, we will set up boundary tests that will test what happens when the power-up reaches the max amount, or when the power-up number declines to 0. What happens when both happen? Will it go past, or negative?

4. Timeline _____/10

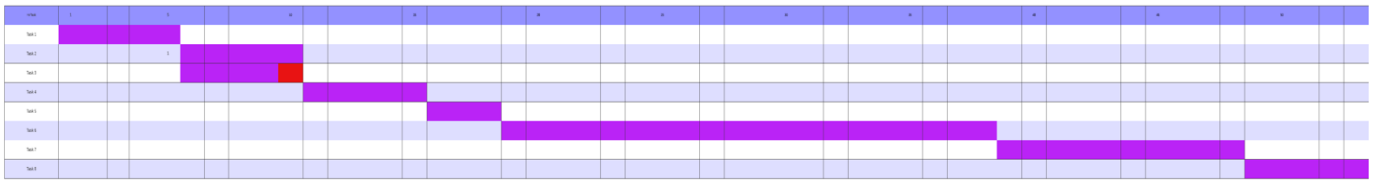
Work items

Task	Duration (Hrs)	Predecessor Task(s)
1. Requirement Specifications	5	-
2. Button design	5	1
3. Group collaboration for specifications	4	1
4. Menu layout design	5	2
5. Group collaboration for implementation	3	4
6. Initial implementation/coding	20	5
7. Testing/Trial & Error	10	6
8. Finalization	5	7

Pert diagram



Gantt Chart



Sorry its so small!