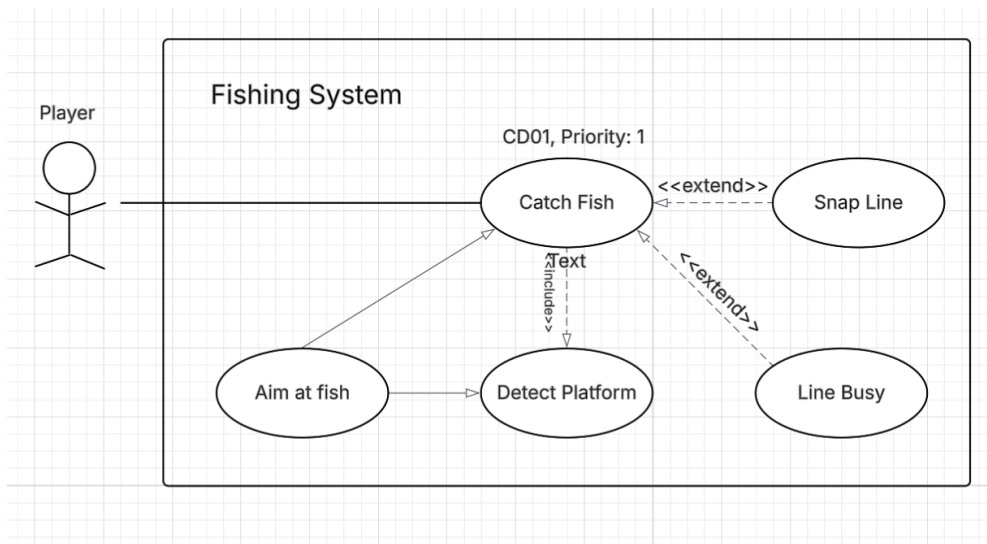# 1. Brief introduction __/3

My feature is the Fishing Mechanism for our game. This is the main part of the game where the player stands on the boat and casts their line into the water. It includes the logic for throwing the hook, moving the lure left and right under the water to find fish, and reeling the fish back in. I am also responsible for making sure the fish pulls back against the player to make it challenging. Because I am the Version Control Manager, I am making sure these controls work on PC, Mobile, and VR.

# 2. Use case diagram with scenario  __14

## Use Case Diagrams



## Scenarios

**[You will need a scenario for each use case]**

**Name:** Catch Fish

**Summary:** The player controls a hook to catch a fish and bring it back to the boat to earn money.

**Actors:** Player

**Preconditions:** The game is running on a day level and the player is on the boat.

**Basic sequence:**

    **Step 1:** The player holds the action button to set the power of the cast.

    **Step 2:** The player releases the button to drop the hook into the water.

    **Step 3:** As the hook sinks, the player moves it left or right to hit a fish.

    **Step 4:** Once the hook touches a fish, the fish attaches and starts pulling back.

    **Step 5:** The player reels the fish up to the boat while balancing the tension.

    **Step 6:** The fish is added to the inventory to be sold later at the shop.

**Exceptions:**

        **Step 2:** If the player is already reeling in a fish, they cannot cast again until the hook is empty. (Extend: Line Busy).

        **Step 5:** If the fish is too strong and the tension bar fills up, the line snaps and the fish swims away.
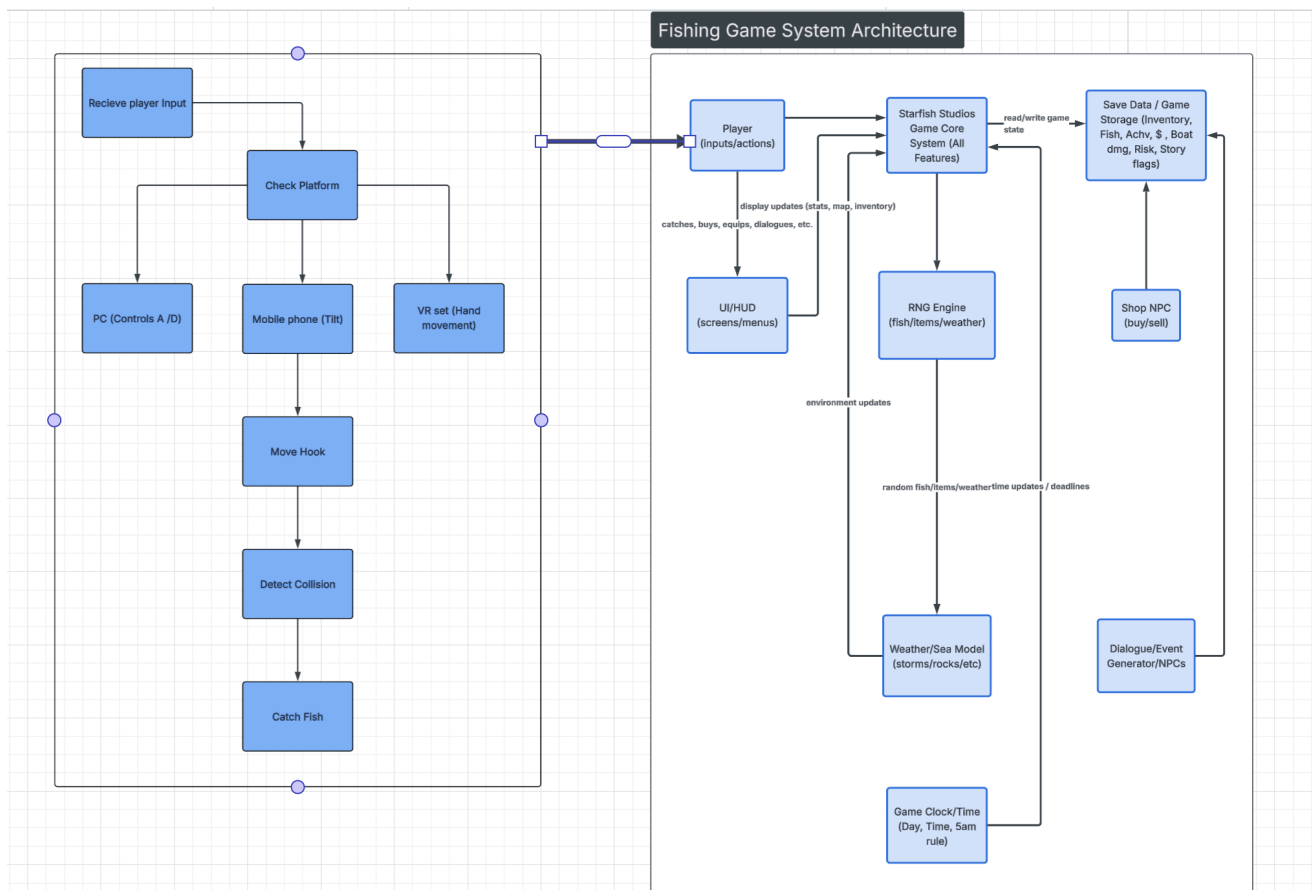
**Post conditions:** The fish is saved in the player's inventory.

**Priority:** 1 (Must have)

**ID:** C01

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

## Data Flow Diagrams



## Process Descriptions

WHILE the hook is sinking:

        IF platform is PC: Use A and D keys to slide hook left/right.

        IF platform is Mobile: Use Phone Tilt to slide hook left/right.

        IF platform is VR: Use Hand Controller to slide hook left/right.

IF the hook touches a fish: Attach fish to the hook.

      WHILE reeling in:

            Move fish up towards the boat.

            Increase tension based on how big the fish is.

            IF tension is too high:

                  Break the line and reset.

            END IF

      END WHILE
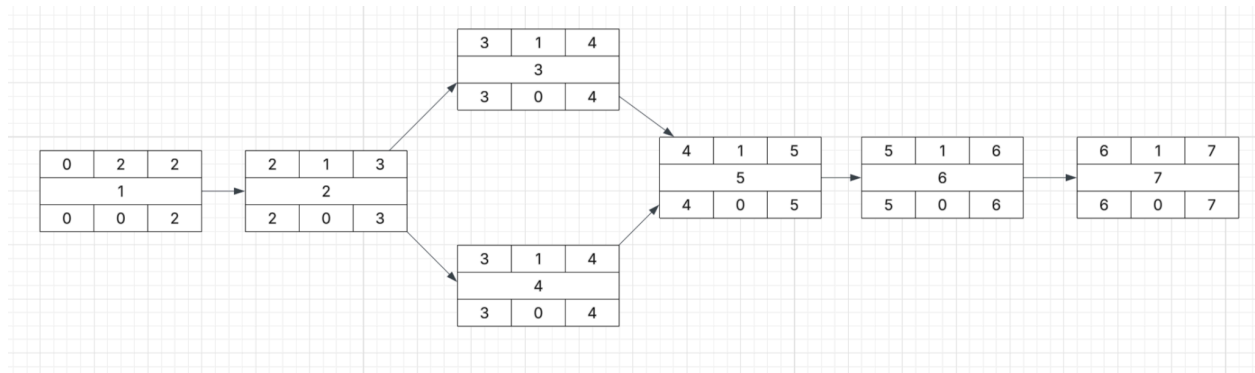
   END IF

END WHILE

## 4. Acceptance Tests _____9

| Input Action | Expected Results | Notes |
| --- | --- | --- |
| Press A or D keys | Hook slides left and right in the water | Testing PC Movement |
| Tilt Phone left or right | Hook slides left and right in the water | Testing Mobile Movement |
| Hook touches a fish | Fish gets stuck to the hook | Testing the catch |
| Hook a large shark | The tension bar fills up very fast | Testing difficulty |
| Reel fish to the boat | Fish shows up in the inventory list | Testing Storage |
| Try to cast while reeling | The game ignores the button press | Testing the exception |

## 5. Timeline _____/10

### Work items

| Task | Duration (PWks) | Predecessor Task(s) |
|------|-----------------|---------------------|
| 1. Code the basic Fishing logic (Casting and Reeling) | 2 | None |
| 2. Code the underwater hook movement (Left/Right) | 1 | 1 |
| 3. Create mobile branch and add tilt controls | 1 | 2 |
| 4. Create VR branch and add hand motion controls | 1 | 2 |
| 5. Test all platforms to make sure fish save to inventory | 1 | 3, 4 |
| 6.  Fix any bugs found during testing | 1 | 5 |
| 7.  Write the User Manual and Readme instructions | 1 | 6 |

### Pert diagram

## Gantt timeline

| Tasks | Weeks | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Basic Fishing Logic | | | | | | | |
| PC A/D Movement | | | 1 | | | | |
| Mobile Tilt Controls | | | | | | | |
| VR Motion Controls | | | 2,3 | | | | |
| System Settings | | | | | 4 | | |
| Bug Fixing | | | | | | 5 | |
| Documentation | | | | | | | 6 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |