# IT 140 Design Document Template

Jen Nadeau

## Storyboard (Description and Map)

It’s Saturday morning, and it’s time for CrossFit! You’re running late and you’ve left your equipment from the night before scattered throughout the gym. You remember leaving your water bottle in the bathroom, your sneakers in the break room, your logbook in the office, your barbell in the weight room, your jump rope in the cardio room, and your lifting belt in the equipment room. If you don’t find all your equipment before seeing your Coach to workout, you’ll have to do 50 burpees!

East

North

West

East

South

West

East

South

North

West

East

North

South

West

**Lobby**

**Office**

Item: Logbook

**Break Room**

Item: Sneakers

**Cardio Room**

Item: Jump rope

**Bathroom**

Item: Water bottle

**Workout Room**

Coach!

**Weight Room**

Item: Barbell

**Equipment Room**

Item: Lifting belt

## DEFINE instructions

PRINT a main menu and the commands

DEFINE player status

PRINT the player’s current status

PRINT the current inventory

PRINT an item if there is one

DEFINE main game function

## DEFINE an inventory, which is initially empty

SET a dictionary linking a room to other rooms

START player in the ‘Lobby’

PRINT game instructions

## Pseudocode or Flowchart for Code to “Move Between Rooms”

WHILE True

IF item in room is ‘Coach!’ THEN

PRINT losing message, “You see your Coach! 50 burpees! GAME OVER!”

IF player collects all items THEN

PRINT winning message, “You’ve collected all your equipment before encountering your

Coach! Congratulations! You win!”

PRINT player status

INPUT command to move to next room ‘Enter your move: ‘

IF input go command THEN

IF input command in room dictionary THEN

PRINT player status with updated room

INPUT to get item or move to next room ‘Enter move: ‘

ELSE IF input invalid direction THEN

PRINT ‘Invalid input!’

PRINT player status

INPUT command to move to next room ‘Enter your move: ‘

ELSE direction not in room dictionary

PRINT “Can’t go that way!”

PRINT player status

INPUT command to move to next room ‘Enter your move: ‘

ENDIF

ELSE input get command

FOLLOW below pseudocode for get item

ENDIF

ENDWHILE

## Pseudocode or Flowchart for Code to “Get an Item”

WHILE main game loop

IF item in current room not in inventory THEN

INPUT command to collect item, ‘Enter your move:’

IF input correct item in room THEN

ADD item to item inventory

PRINT “’Item’ retrieved!”

PRINT player status

INPUT command to move to next room

ELSE IF input incorrect command THEN

PRINT ‘Invalid input!’

PRINT player status

INPUT command to collect item or move to next room

ELSE input invalid item

PRINT “Can’t get ‘item’”

PRINT player status

INPUT command to collect item or move to next room

ENDIF

ELSE item in current room already in inventory

PRINT player status

INPUT command to move to next room

ENDIF

ENDWHILE