# IT 140 Design Document Template

## Instructions

Fill out the sections below. Be sure to remove the bracketed text before submitting your Design Document.

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## Storyboard (Description and Map)

You are in the Den of your mansion having your English Muffin and watching the news, when suddenly your alarm system activates alerting you that someone has broken in. You are not sure where they are, only that they have entered the building. You must search every room and collect the items necessary to deter the intruder before confronting them.

West

East

 Study

Item: Pepper spray

 Bedroom

Robber

Pantry

Item: Vase

 Kitchen

Item: Knife

 Cellar

Item: Wine bottle

 Patio

Item: Brick

 Dining Room

Item: Candlestick

 Den

START

North

North

North

South

South

South

East

East

East

West

West

West

**Pseudocode for “Main” function**

Declare an empty list called *inventory*

Declare a dictionary called *rooms* containing all the rooms which are themselves dictionaries with cardinal directions for movement and items or a villain

Def main():

Room = ‘Den’

WHILE room does not contain “robber”:

Current Room = room

Print(“You are in *current room.”)*

IF theres an item in the room:

Print(“You see a *item*”)

Print(“Enter your move: ”)

Next\_move = GET input from user

IF user enters a string that does NOT start with “go” or “get” or “inventory”:

re-prompt and print(“not a valid command”)

IF user enters “inventory”.strip().lower():

Print(*inventory list*)

ELSE IF next\_move == “go \*”:

Move(\*)

ELSE IF next\_move == “get \*”:

Pickup\_item(\*)

IF item in *room* is “robber” and the user has all the items:

Print(“You win!”)

ELSE IF item in room is “robber” and the user does not have all the items:

Print(“Game Over! Better luck next time!”)

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

Def move(direction):

IF direction in *room:*

Access the dictionary (aka move to the room) with the value of user inputs’ key

Room = rooms[room][direction]

ELSE IF direction NOT in *room*:

Print(“Can’t go that way”) (Return room)

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

Def pickup\_item(item):

IF item in *room:*

Add *item* to inventory list

Print(inventory)

ELSE:

Print(“Can’t get *item*”)