

## CS-224: Object Oriented Programming & Design Methodologies

### Assignment 02

Duration: 1 Week

For this assignment, you will be creating a text based adventure game. The scenario is that a young man Rastan was on his way to Persia from Delhi before he got separated from his caravan. Armed only with a dagger, Rastan has nowhere to go except to move forward. But his path is laden with awards and mischief. He does not know what he will encounter across the next corner. After a good night's rest, he chooses to move forward and brace himself for the things to come.

The rules of this game are as following:

Every turn, Rastan will either choose to move forward or give up.

If he gives up, then he will die of any one of these causes:

1. Death by starvation
2. Death by disease
3. Death by dehydration
4. Death by getting hit by lightening
5. Death by eating poisonous berries
6. Death by malaria
7. Death by avada kadavera
8. Death by snake bite

If he chooses to move forward, then any one of these things can happen

1. He comes across food and water and replenishes his supplies for 5 more turns
2. He comes across a hidden chest that contains a weapon or arrows
3. He comes across a random number of bandits
4. He comes across a healer who heals him.
5. He comes across caravan tracks

If he comes across a chest and gets a bow or arrows, he cannot use one without the other

The number of arrows can range from 5 to 10

He can only use bow and arrow if the arrows remain more than 0

If he has no new weapon, he will use a dagger by default; otherwise a new weapon will replace the dagger unless it is bow or arrow.

The hit chance of the dagger is 40% only, otherwise he will miss

The hit chance of a ranged weapon (throwing knives and bow and arrow) is 80%

The hit chance of any other weapon is 75%

The enemies have a hit chance of 35%

Whenever an enemy hits Rastan, he loses 1 health

Every enemy gets killed if Rastan hits him once

Rastan will die if his health becomes 0 or less. His total health is 20.

If Rastan finds a healer, the healer will make his health 20 again.

If Rastan finds bandits, he will do his turn once for every enemy and then all the bandits will do their turns once against Rastan. Keep in mind that the number of generated enemies will be from 1 to 4.

For this you will declare a dynamic array of variable length where initially value of every index will be 1. As soon as one bandit dies, its value will change to 0. Once the value of all the indices becomes 0, the entire array will be de-allocated or freed.

If Rastan find the tracks 5 times, he will reach Persia and the game will end

Rastan will begin with food supplies for 10 days. If the food supplies run out, he will die.

You should create a separate function that should play out the combat whenever Rastan encounters enemies

Sample code is given with this file to help you get started.