**Algorithm for Turn-Based Combat System**

Idea:

Create a module called tbc. This module will contain character attributes, character creation, value limitations, print statistics, and a fight mechanism. The tbc module will contain a Character class defining the character attributes such as; name, hit points, hit chance, max damage, and armor. These will all have a default value to begin with and have a setter to allow us to change the hidden attribute. We will create properties allowing us to change all of the hidden attributes.

**Pseudocode:**

**TBC**

Create a class called Character, type object

Create method for the initializer, parameter (self)

Initialized gets default super().\_\_init\_\_()

Create attribute for name, given “Anonymous”

Create attribute for hit points, given 10

Create attribute for hit chance, given 20

Create attribute for max dmg, given 5

Create attribute for armor, given 0

Create properties and setters for

character

name

hitPoints

setter will validate int

hitChance

setter will validate int and ensure int is 0-100

maxDamage

setter will validate positive int

armor

setter will validate positive int

Create method for hit chance

Roll a die

For loop

If number is equal to hitchance of character

Generate random number between 1-maxDmg

Else

Print out “character attacked and missed”

Return damage dealt

Create method for printing stats

Gather stats of each Character and print

Create a function for fight mechanism, parameter (self)

Call hit chance method

Character hitpoints + armor – damage dealt

While loop

If character hitpoints is equal to 0

Print other character wins

Else

keepGoing

**Combat**

Import TBC module

Create main function

Assign hero to tbc method character

Assign hero new name “hero”

Assign hero hitpoints “20”

Assign hero hitchance of “35”

Assign hero maxdamage of “8”

Assign hero armor of “3”

Assign monster to tbc method character

Assign monster new name “monster”

Assign monster hitpoints “40”

Assign monster hitchance of “18”

Assign monster maxdamage of “12”

Assign monster armor of “1”

Print stats of hero

Print stats of monster

Give monster and hero to tbc fight method

If name is main

Call main