**Final Project – COMP 1030**

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**April 13, 2021**

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*I understand that plagiarised answers will receive a grade of zero and an academic misconduct.*

*I understand that an academic misconduct will result in an automatic zero in the assignment in the event that this is my first offense and an automatic grade of zero in the course if this is my second offense.*

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*I have read and clearly understand each one of these statements, and accept the responsibility and penalty for any actions that I take which may contravene any one of these statements.*

*Name (type) Lionel Pineda*

*Student Number: 200390096*

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Description automatically generated*

**BioTekGame.java**

/\*\* Project: BioTek Game

\* Author: Lionel Pineda

\* Date: April 13, 2021

\* Time: 2:38 PM

\*/

import java.util.Scanner;

public class BioTekGame {

public static void main(String[] args) {

//Instantiating a new game object

BioTekHolder newGame = new BioTekHolder();

//Game start welcome

System.out.println("Welcome to BioTek!");

System.out.println("Where dreams are only a DNA-splice away!");

//Asterisk line

for(int i=0; i < 25; i++){

System.out.print("\*");

}

//Game details

System.out.println();

System.out.printf("You have been hired on as a contracted scientist with a military background. " +

"%nThe mission given to you was to find out what sort of work was being done at BioTek and " +

"to investigate the disappearance of Darwin Slater. %nYou are given a white lab coat " +

"and BioTek brand satchel. %nUpon entering the building, you are taken to a bright room that " +

"smells of bleach and antiseptic. It is quiet here, with no one present aside from a single terminal");

System.out.println();

//Asterisk line

for(int i=0; i < 25; i++){

System.out.print("\*");

}

//Game phase one - Name input

System.out.println();

System.out.println("Walking up to the terminal you can read: " +

"\"Welcome to BioTek! We have been expecting your arrival \_\_ERROR\_\_. Please input your name for an ID card.\" ");

System.out.println("Type your character name:");

//Scanner input

Scanner in = new Scanner(System.in);

//Player answer

String gameReplyOne = in.nextLine();

//Setting character name

newGame.setPlayerName(gameReplyOne);

newGame.setPlayerHp(3);

//Game Phase One Complete

System.out.println("Once you hit return, a name tag is printed out on an ID card. " +

"Your name is now: " + newGame.getPlayerName() + " for your ID");

//Setting default weapon to fists

newGame.setPlayerWeapon("fists");

//adding item as ID card

BioTekHolder.itemsCollected++;

System.out.println("You have " + newGame.getPlayerHp() + " HP");

System.out.println("The terminal let out a beep and printed another automated message: \"Please proceed through the main doors.\"");

//Game Phase two - Starting room

while(true) {

System.out.println("You are presented with two choices - 1: Enter through the double doors. or 2: Stay and meddle with the terminal.");

System.out.println("Please select your choice. (1 or 2)");

//Player answer Two

try {

int gameReplyTwo = in.nextInt();

if (gameReplyTwo == 1) {

System.out.println("You enter through the large double doors, leading into a dim-light hallway.");

break;

} else if (gameReplyTwo == 2) {

System.out.println("You decide to try your luck and begin fiddling with the computer terminal's systems.");

System.out.println("The terminal returns your name in an odd fashion.");

newGame.wordJumble();

System.out.println();

System.out.println("After disabling out the terminal security, you decide it best to continue through the double doors that lead into a dim-light hallway.");

System.out.println();

break;

} else {

System.out.println("Invalid Selection");

}

} catch (Exception e){

System.out.println("Invalid response, closing application.");

System.exit(0);

break;

}

}

//Asterisk line

for(int i=0; i < 25; i++){

System.out.print("\*");

}

//Game phase 3 - Hallway

System.out.println();

System.out.println("The hallway leads towards another pair of large double doors with cracked windows. There is a" +

" a flickering yellow light on the other side but no other movement. To your left there is a single door marked" +

" \"Utility Closet\".");

while(true) {

System.out.println("What would you like to do? 1: Go through the double doors and investigate where everyone else is." +

" or 2: Check the utility closet. (Choose 1 or 2)");

try {

int gameReplyThree = in.nextInt();

if (gameReplyThree == 1) {

System.out.println("The double doors are heavy and locked. There is a keypad with a scanner at the to the side of the door." +

" You apply your BioTek ID to the scanner and the machines whirl and click.");

//Checking for easter egg or cheat code

System.out.println(newGame.idScanner(newGame.getPlayerName()));

System.out.println("The doors unlock and you make your way into the next area.");

break;

}

else if (gameReplyThree == 2) {

System.out.println("The closet is unlocked. You begin searching through messy closet for anything of use.");

newGame.closetItem();

System.out.println("After collecting your item, you return to the hallway and meet with the double doors. There is a keypad with a scanner beside the door." +

" You apply your BioTek ID to the scanner and the machines whirl and click.");

//Checking for easter egg or cheat code

System.out.println(newGame.idScanner(newGame.getPlayerName()));

System.out.println("The doors unlock and you make your way into the next area.");

break;

}

else {

System.out.println("Please select a proper answer.");

}

}

catch(Exception e){

System.out.println("Invalid response, closing application.");

System.exit(0);

break;

}

}

//Game phase 4 - The Fight

for(int i=0; i < 25; i++){

System.out.print("\*");

}

System.out.println();

System.out.printf("The double doors shut behind you with a metallic slam. The flickering light above was revealed to be a yellow warning light with a rotating holographic screen reading:" +

" \"ASSET OUT OF CONTAINMENT\". %nThere were no scientists to be found or signs of life anywhere. %nThe cubicles and lab stations were all torn apart with broken glass and chemicals" +

" left strewn about chaotically. Danger was nearby and a sharp jolt would shoot up your spine in fear. %nA large leathery figure would rise from a pile" +

" of gathered prey. Its eyes were black and hungry as its head would crane forward much like a bird. It leapt up onto a lab table with powerful hind-legs and let" +

" out a monstrous screech. %nThere was no other option than to fight as the monster flared its nostrils and bared its rows of sharp teeth caked in toxic saliva.%n");

//Player turn one

while(true) {

System.out.println("Your instincts allow you to act first! What would you like to do? 1: Use whatever item you found against the dinosaur and attempt to knock it on the ground!" +

" or 2: Try to take cover behind a cubicle and search for an item.");

System.out.println("Please select your choice. (1 or 2)");

//Player Answer Four

try {

int gameReplyFour = in.nextInt();

if (gameReplyFour == 1) {

System.out.println("You use your " + newGame.getPlayerWeapon() + " against the dinosaur!");

newGame.playerAttack();

break;

} else if (gameReplyFour == 2) {

System.out.println("You run into the nearest cubicle for cover, taking the short time to quickly search for something of use");

System.out.println("You find a health pack! (+1 HP)");

newGame.setPlayerHp(4);

System.out.println("You feel stronger and more confident, but the monstrous creature continues to pursue you.");

break;

} else {

System.out.println("Invalid Selection");

}

} catch (Exception e){

System.out.println("Invalid response, closing application.");

System.exit(0);

break;

}

}

//Dinosaur Turn

for(int i=0; i < 25; i++){

System.out.print("\*");

}

System.out.println();

if(BioTekHolder.lastHit){

System.out.println("The dinosaur flails in pain and falls off of the table with a crash into the ground, taking some of the lab equipment on the counter with it.");

newGame.dinosaurStatus();

System.out.println("It then claws back up, its talons screeching across the tiled floor as it finally stood back up." +

" Once it caught your scent, the dinosaur tries to viciously bite you!");

newGame.dinosaurAttack();

}else if(!BioTekHolder.lastHit){

newGame.dinosaurStatus();

System.out.println("The dinosaur locked onto you and soon leapt through the air, trying attack you with gouging claws and razor sharp teeth!");

newGame.dinosaurAttack();

}

System.out.println();

//Player turn two

while(true) {

System.out.println(newGame.getPlayerName() + " status: " + newGame.getPlayerHp());

System.out.println("The dinosaur was relentless and looked as if it was about to pounce again. The creature's mouth was open wide in a menacing manner.");

//Player Answer Five

try {

System.out.println("What would you like to do? 1: Attack the dinosaur or 2: Try to escape the cubicle and evade the dinosaur's attack.");

System.out.println("Please select your choice. (Choose 1 or 2)");

int gameReplyFive = in.nextInt();

if (gameReplyFive == 1) {

System.out.println("Once more you use your " + newGame.getPlayerWeapon() + " against the dinosaur!");

newGame.playerAttack();

break;

} else if (gameReplyFive == 2) {

System.out.println("You attempt to escape the cubicle with the dinosaur hot on your trail");

System.out.println("Before you gain any leverage to pull yourself up and over, the dinosaur attacks you!");

BioTekHolder.lastHit = false;

newGame.dinosaurAttack();

break;

} else {

System.out.println("Invalid Selection");

}

} catch (Exception e){

System.out.println("Invalid response, closing application.");

System.exit(0);

break;

}

}

//Dinosaur Turn Two

for(int i=0; i < 25; i++){

System.out.print("\*");

}

System.out.println();

if(BioTekHolder.lastHit){

System.out.println("The dinosaur falters backwards and recoils, grabbing at its snout with clawed hands as it let out a cawing cry.");

newGame.dinosaurStatus();

System.out.println("Once it had a moment to recover, it leapt up into the air using its large hooked talons to try to latch onto you and claw you!");

newGame.dinosaurAttack();

}else if(!BioTekHolder.lastHit){

newGame.dinosaurStatus();

System.out.println("Without hesitation, the dinosaur attacked you again! It took large bites at you and swung its claws in a frenzy to land any strike.");

newGame.dinosaurAttack();

}

System.out.println();

//Win/lose Check

if(newGame.getPlayerHp() == 0 || BioTekHolder.turnCount == 0){

System.out.println(BioTekHolder.loseGame());

BioTekHolder.totalItemsCollected();

System.exit(0);

}else if(newGame.getDinosaurHp() <= 0){

System.out.println(BioTekHolder.winGame());

BioTekHolder.totalItemsCollected();

System.exit(0);

}

//Player turn three

while(true) {

System.out.println(newGame.getPlayerName() + " status: " + newGame.getPlayerHp());

System.out.printf("The dinosaur let out a hooting cry in frustration. Its hot and rancid breath filling the room as it stood on its hind-legs, its eyes filled with primal anger." +

" %nYou meet its gaze with a determined look of your own, this time taking the initiative to move first.%n");

//Player Answer Six

try {

System.out.println("What would you like to do? 1: Attack the dinosaur. or 2: Try to escape the room by making a run for the door!");

System.out.println("Please select your choice. (Choose 1 or 2)");

int gameReplySix = in.nextInt();

if (gameReplySix == 1) {

System.out.println("You use your " + newGame.getPlayerWeapon() + " against the dinosaur!");

newGame.playerAttack();

break;

} else if (gameReplySix == 2) {

System.out.println("Your boots hit the ground in a frenzy as you sprint towards the double doors.");

System.out.println("The dinosaur looks puzzled at first but soon lets out a ear-piercing screech and begins chasing after you.");

System.out.println("It lunges at you from the short distance and tries to latch onto your back with sharp talons.");

BioTekHolder.lastHit = false;

newGame.dinosaurAttack();

break;

} else {

System.out.println("Invalid Selection");

}

} catch (Exception e){

System.out.println("Invalid response, closing application.");

System.exit(0);

break;

}

}

//Win/lose Check

if(newGame.getPlayerHp() == 0 || BioTekHolder.turnCount == 0){

System.out.println(BioTekHolder.loseGame());

BioTekHolder.totalItemsCollected();

System.exit(0);

}else if(newGame.getDinosaurHp() <= 0){

System.out.println(BioTekHolder.winGame());

BioTekHolder.totalItemsCollected();

System.exit(0);

}

//Dinosaur Turn Three

for(int i=0; i < 25; i++){

System.out.print("\*");

}

System.out.println();

if(BioTekHolder.lastHit){

System.out.println("Doubles over in pain, nearly collapsing but manages to stand with a dazed expression.");

newGame.dinosaurStatus();

}else if(!BioTekHolder.lastHit){

newGame.dinosaurStatus();

System.out.println("The primal creature gave no mercy and it continued lashing towards you with tooth and claw!");

newGame.dinosaurAttack();

}

System.out.println();

//Win/lose Check

if(newGame.getPlayerHp() == 0 || BioTekHolder.turnCount == 0){

System.out.println(BioTekHolder.loseGame());

BioTekHolder.totalItemsCollected();

System.exit(0);

}else if(newGame.getDinosaurHp() <= 0){

System.out.println(BioTekHolder.winGame());

BioTekHolder.totalItemsCollected();

System.exit(0);

}

//Player turn four

while(true) {

System.out.println(newGame.getPlayerName() + " status: " + newGame.getPlayerHp());

System.out.printf("The monstrous figure weaved across the lab counters in the room, trying to find a way to flank you." +

" %nIts loud snarls and chirps could be heard as it dashed about the area.%n");

//Player Answer Seven

try {

System.out.println("What would you like to do? 1: Chase and attack the dinosaur. or 2: Make another attempt to escape the room by using your ID card on the keypad.");

System.out.println("Please select your choice. (Choose 1 or 2)");

int gameReplySix = in.nextInt();

if (gameReplySix == 1) {

System.out.println("You counter the creature with your own pattern across the lab counters until you are close enough to use your " + newGame.getPlayerWeapon() + " against the dinosaur!");

newGame.playerAttack();

break;

} else if (gameReplySix == 2) {

System.out.println("Using what spare time you have, you turn around and head for the door with ID card in hand.");

System.out.println("The monstrous figure bobs in from the side, low to the ground in a stalking fashion. It was poised to attack one more.");

newGame.labDoorUnlock();

break;

} else {

System.out.println("Invalid Selection");

}

} catch (Exception e){

System.out.println("Invalid response, closing application.");

System.exit(0);

break;

}

}

//Win/lose Check

if(newGame.getPlayerHp() == 0 || BioTekHolder.turnCount == 0){

System.out.println(BioTekHolder.loseGame());

BioTekHolder.totalItemsCollected();

System.exit(0);

}else if(newGame.getDinosaurHp() <= 0){

System.out.println(BioTekHolder.winGame());

BioTekHolder.totalItemsCollected();

System.exit(0);

}

}

}

**BioTekHolder.java**

/\*\* Project: BioTek Game - Class 2

\* Author: Lionel Pineda

\* Date: April 13, 2021

\* Time: 2:39 PM

\*/

import java.util.Random;

public class BioTekHolder {

//Instance Variables

private String playerName;

private int playerHp;

private String playerWeapon;

private int dinosaurHp = 2;

public static int turnCount = 4;

public static int itemsCollected;

public static boolean lastHit = false;

int[] diceRoll = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20};

String[] itemArray = {"Rusty Combat Knife", "Mop", "Pistol", "Can of Pepper Spray"};

//Random Item

Random ranNum = new Random();

//Default constructor

public BioTekHolder(){

}

//Setters and getters

public void setPlayerName(String playerName) {

this.playerName = playerName;

}

public String getPlayerName() {

return playerName;

}

public void setDinosaurHp(int dinosaurHp) {

this.dinosaurHp = dinosaurHp;

}

public int getDinosaurHp() {

return dinosaurHp;

}

public void setPlayerHp(int playerHp) {

this.playerHp = playerHp;

}

public int getPlayerHp() {

return playerHp;

}

public void setPlayerWeapon(String playerWeapon) {

this.playerWeapon = playerWeapon;

}

public String getPlayerWeapon() {

return playerWeapon;

}

//Methods

//Method to print out player name backwards to user

public void wordJumble(){

for(int cycle = playerName.length()-1; cycle >= 0; cycle --){

System.out.printf("%c ", playerName.charAt(cycle));

}

}

//Closet item method

public void closetItem(){

itemsCollected++;

playerWeapon = itemArray[ranNum.nextInt(4)];

System.out.println("You have gained a: ");

System.out.print(playerWeapon);

System.out.println();

}

//Total item tally STATIC method

public static void totalItemsCollected(){

System.out.println("Total items collected: " + itemsCollected);

}

//Cheat code and easter egg method

public String idScanner(String scanName){

String scanAnswer;

String nameScan = scanName.toLowerCase();

switch (nameScan){

case "darwin slater":

scanAnswer = "\*\*\*WELCOME BACK, DR. SLATER. COMMENCING ASSET CONTAINMENT AND ELIMINATION.\*\*\*";

dinosaurHp = 1;

break;

case "lionel pineda":

scanAnswer = "\*\*\*Hello Creator. This game was created by you in the year 2021!\*\*\*";

break;

default:

scanAnswer = "Keypad: \"ID validated. Please proceed.\"";

break;

}

return scanAnswer;

}

//Alternate ending

public void labDoorUnlock(){

turnCount--;

int skillRoll = diceRoll[ranNum.nextInt(20)];

if(skillRoll > 8){

System.out.printf("Before the dinosaur could lunge, you manage to open the door in time and escape through. " +

" %nLetting it shut behind you instantly with a loud thud.");

System.out.printf("You decide it best to leave the creature in the confines of the laboratory." +

" %nThe disappearance of Darwin Slater was made quite clear that it was the result of an experiment gone wrong." +

" %nIt was time to head back to base and inform your company of the devastation that took place in BioTek.%n");

System.out.println(winGame());

System.exit(0);

}else{

System.out.println("In a panic, you drop your ID card and fail to open the doors in time.");

System.out.println("The dinosaur instantly leapt up from close proximity and attacked you with tooth and claw!");

System.out.println(loseGame());

System.exit(0);

}

}

//Method to print the status of the dinosaur as a number -

// however will not be calling it to return the actual number to the player

public void dinosaurStatus(){

switch (dinosaurHp){

case 1:

System.out.println("The dinosaur is hobbling and breathing heavily, nearing exhaustion as if on death's door.");

break;

case 0:

System.out.println("The dinosaur has been slain!");

System.out.println(winGame());

System.exit(0);

break;

default:

System.out.println("The dinosaur has a lot of fight left in it and appears to be fiercely healthy.");

break;

}

}

//Player attack roll method

public void playerAttack(){

turnCount--;

int hitRoll = diceRoll[ranNum.nextInt(20)];

if(hitRoll > 5) {

System.out.println("The attack hits!");

dinosaurHp--;

lastHit = true;

}

else{

System.out.println("The attack missed!");

lastHit = false;

}

}

//Dinosaur attack roll method

public void dinosaurAttack(){

int hitRoll = diceRoll[ranNum.nextInt(20)];

if(hitRoll > 4) {

System.out.println("The dinosaur's attack hits you!");

playerHp--;

}else{

System.out.println("The dinosaur's attack misses!");

}

}

//Lose game static method

public static String loseGame() {

return "The dinosaur ended up eating you! You have lost the game! Try again!";

}

//Win game static method

public static String winGame(){

return "Congratulations! You have won the game!";

}

}