Project 1

Squire of Zir

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CSC5 Intro to C++

46024

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**Introduction:** This program is like a game described to me by my step-dad when computers games were only text based and very simple. This game is very self-explanatory and lays out what it wants in the text. The program lays out a scenario for the user and allows a little immersion into it by using the users name in the story. The user follows the onscreen prompts from the program and goes on a quest. There is a fight sequence in the game that the user terminates when they want and also a trap along the way. There are 5 win/lose conditions in the game.

**Notes:** There are many things that would have made this game smoother with more knowledge of C++. I would like to revisit this project later on during my C++ education. I want to make this game better and develop more options to it and make the UI even better, but as it stands I don’t know enough about C++ and must forgo my unhappiness with it for now. I had a bit of trouble with ending my code at the trap sequence, so instead I added a damage modifier.

**Rules:** The rules are very simple and strait forward. Follow the onscreen prompts as they appear and follow the story. There are no tricks in the program. Just choose what you would like to do in the game and watch the story develop.

**Approach:** My approach to this program was to think back to how my step-dad described the old text-based rpg games he would play when computers were first being developed for home usage. I thought about what I’ve learned already in C++ and thought about how I would use everything I’d learned already. I then focused on developing the story and plugging in what I’ve learned in areas that seemed right to use them.

**Variable List:** const int - TOWER = 1 – this is used to hold the choice by the user for what quest they want to complete.

Const int - CAVE = 2 – this is used to hold the choice by the user for what quest they want to complete.

Int - choice , endFight – these are used to determine the users choice during the quest choosing sequence, and if the user wants to end the fight.

Short - hp = 100, mp = 30 – these hold the amount of health points and mana points the user still has left.

Float - dragonHp = 150, ogreHp = 150 – these hold the amount of health points the dragon and ogre have.

Char - chest, fight, door – these hold the results of the trap sequences and the fight sequence .

String – name – this hold the users name for use in the game.

Int - sword = rand() % 10 + 1, spell = rand() % 25 + 15 – these hold the amount of damage you do in the fight sequence.

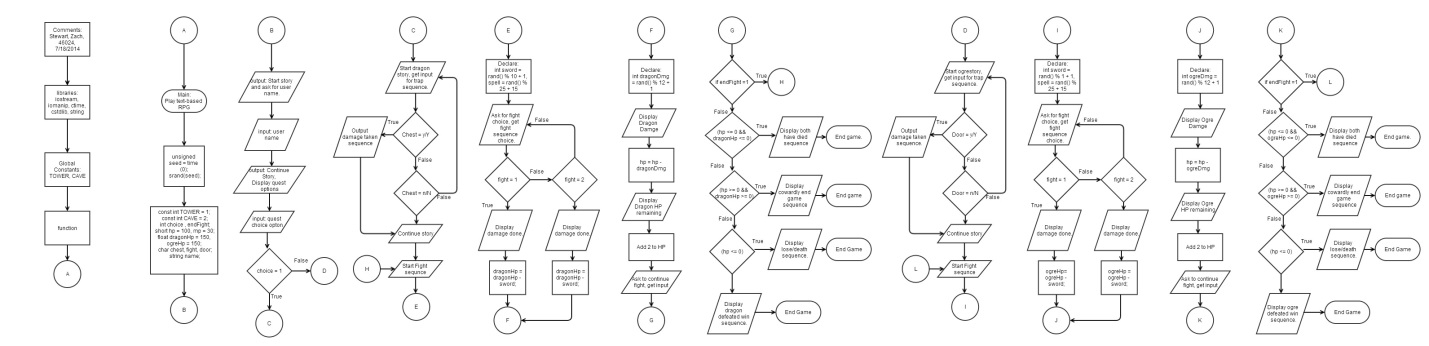
Int - sword = rand() % 12 + 1, spell = rand() % 25 + 15 – these hold the amount of damage you do in the fight sequence.

Int - dragonDmg = rand() % 12 + 1 – this holds the amount of damage the dragon does in the fight sequence.

Int - ogreDmg = rand() % 13 + 1 – this holds the amount of damage the ogre does in the fight sequence.

**Topics Covered:** do while loop (line 90/223), if else (55/103/127/173), if else if (158/), switch (63/98/197/209), char (31/63/182), float (30/101/221), short (29/94/213), int (28/55/140/257), iostream/iomanip/cstdlib/ctime/string (9-13), unsigned (22), == (55), <= (103/127/159/173/238/262/294/308), != (157/291), >= (166/301), ++ (153/287), menu (50/51/95/229), && (159/166/294/301)

**Flowchart:**



**Code:**

/\*

\* File: main.cpp

\* Author: Stewart, Zach

\* Class: 46024

\*

\* Created on July 14, 2014, 7:00 PM

\*/

#include <iostream>

#include <cstdlib>

#include <ctime>

#include <string>

#include <iomanip>

using namespace std;

/\*

\*

\*/

int main() {

//seed random function here

unsigned seed = time (0);

srand(seed);

//set variables

const int TOWER = 1;

const int CAVE = 2;

int choice , endFight;

short hp = 100, mp = 30;

float dragonHp = 150, ogreHp = 150;

char chest, fight, door;

string name;

//Explaining what's happening in the game and making a story

cout << "You are a squire in the kingdom of Zir.\n";

cout << "Enter your name.\n";

getline(cin, name);

cout << name << ", you are going on a quest to become a knight set by ";

cout << "King Mark\n";

cout << "You also have a special ability that allows you to ";

cout << "regen 2 HP per round you fight.\n";

cout << "Before going Sir Brian give you a sword and shield.\n";

cout << name << ", your mission is to slay either the dragon or the ogre\n";

cout << name << ", you are in the forest and find the ogre's cave and the";

cout << "dragon's tower.\n";

cout << name << ", do you choose to enter the cave or the tower.\n";

//Display quest options

cout << "1. Tower\n";

cout << "2. Cave\n";

cin >> choice;

//Make choice where to go

if (choice == TOWER)

{

cout << name << " has chosen to enter the tower and fight the dragon.\n";

cout << "As you ascend the tower you come across a chest do you open it?\n";

cout << "Y/N\n";

cin >> chest;

//Run trap sequence

switch (chest)

{

case 'y':

case 'Y': cout << "You triggered a trap and have died. GAME OVER\n";

break;

case 'n':

case 'N': cout << "You ignore the booby trapped chest and move on.\n";

break;

default: cout << "That is not a valid option. Enter you choice ";

cout << "again. \n";

cin >> chest;

switch (chest)

{

case 'y':

case 'Y': cout << "You triggered a trap and have died. ";

cout <<"GAME OVER" << name << "\n";

break;

case 'n':

case 'N': cout << "You ignore the booby trapped chest and";

cout <<" move on.\n\n";

}

}

cout << "You finally arrive at the lair of the dragon. \n";

cout << "Prepare yourself for battle.\n\n";

//Run fight sequence

do

{

int sword = rand() % 10 + 1, spell = rand() % 25 + 15;

cout << "You have " << hp << " HP and " << mp << " Mana remaining.\n";

cout << left << "1. Fight\t\t2. Magic (Fireball/10 MP)\n";

cin >> fight;

//Decide how to fight

switch (fight)

{

case '1': cout << "You do " << sword << " damage.\n";

dragonHp = dragonHp - sword;

break;

case '2': if (mp <=1)

{

cout << "You do not have enough Mana.\n";

cout << "You must fight with your sword.\n";

cout << "You do " << sword << " damage.";

cout << "\n\n";

}

else

{

cout << "You do " << spell << " damage.\n\n";

dragonHp = dragonHp - spell;

mp = mp - 10;

}

break;

default: cout << "That's not a valid option. Please enter your ";

cout << "choice again.\n";

cin >> fight;

switch (fight)

{

case '1': cout << "You do " << sword << "";

cout << "damage.\n\n";

dragonHp = dragonHp - sword;

break;

case '2': if (mp <=1)

{

cout << "You do not have enough";

cout << " Mana.\n";

cout << "You must fight with your";

cout << " sword.\n";

cout << "You do " << sword << " ";

cout << "damage.";

cout << "\n\n";

}

else

{

cout << "You do " << spell << " ";

cout << "damage.\n\n";

dragonHp = dragonHp - spell;

mp = mp - 10;

}

}

}

int dragonDmg = rand() % 12 + 1;

cout << "The dragon does " << dragonDmg << " damage to you.\n";

hp = hp - dragonDmg;

cout << "The dragon still has " << dragonHp << " HP left.\n\n";

hp++;

cout << "Do you want to keep fighting? 1. Yes or 2. No.\n\n";

cin >> endFight;

} while (endFight != 2);

//Run end of game sequence

if (hp <= 0 && dragonHp <= 0)

{

cout << name << " and the dragon both have died.\n";

cout << "Although you died, you slain the dragon.\n";

cout << name << " is posthumously knighted and celebrated throughout ";

cout << "the kingdom. GAMEOVER.\n";

}

else if (hp >= 0 && dragonHp >= 0)

{

cout << name << " has fled from the battle with the dragon.\n";

cout << "You are banished from the kingdom and must live the ";

cout << "rest of your life in disgrace.\n";

cout << "GAME OVER " << name << " Coward of the Kingdom.\n";

}

else if (hp <= 0)

{

cout << name << " has died on your quest.\n";

cout << "The kingdom mourns your death.\n";

cout << "GAME OVER";

}

else

{

cout << name << " has slain the dragon.\n";

cout << "You return victoriously to the kingdom with the dragon's ";

cout << "head as proof of your victory.\n";

cout << "King Mark knights you and the kingdoms cheers.\n";

cout << "CONGRADULATIONS SIR " << name << " YOU WIN!\n";

}

}

else

{

cout << name << " has chosen to enter the cave and fight the ogre.\n";

cout << "As you enter the cave you come across a door marked with Treasure";

cout << "Room do you open it?\n";

cout << "Y/N\n";

cin >> door;

//Run trap sequence

switch (door)

{

case 'y':

case 'Y': cout << "You triggered a trap and have died. GAME OVER\n";

break;

case 'n':

case 'N': cout << "You ignore the booby trapped room and move on.\n";

break;

default: cout << "That is not a valid option. Enter you choice ";

cout << "again. \n";

cin >> door;

switch (door)

{

case 'y':

case 'Y': cout << "You triggered a trap and have died. ";

cout <<"GAME OVER" << name << "\n";

break;

case 'n':

case 'N': cout << "You ignore the booby trapped door and";

cout <<" move on.\n\n";

}

}

cout << "You finally arrive at the den of the ogre. \n";

cout << "Prepare yourself for battle.\n\n";

//Start fight sequence

do

{

int sword = rand() % 12 + 1, spell = rand() % 25 + 15;

cout << "You have " << hp << " HP and " << mp << " Mana remaining.\n";

cout << left << "1. Fight\t\t2. Magic (Iceball/10 MP)\n";

cin >> fight;

//Decide how to fight

switch (fight)

{

case '1': cout << "You do " << sword << " damage.\n";

ogreHp = ogreHp - sword;

break;

case '2': if (mp <=1)

{

cout << "You do not have enough Mana.\n";

cout << "You must fight with your sword.\n";

cout << "You do " << sword << " damage.\n\n";

ogreHp = ogreHp - sword;

}

else

{

cout << "You do " << spell << " damage.\n\n";

ogreHp = ogreHp - spell;

mp = mp - 10;

}

break;

default: cout << "That's not a valid option. Please enter your ";

cout << "choice again.\n";

cin >> fight;

switch (fight)

{

case '1': cout << "You do " << sword << " ";

cout << "damage.\n\n";

ogreHp = ogreHp - sword;

break;

case '2': if (mp <=1)

{

cout << "You do not have enough";

cout << "Mana.\n";

cout << "You must fight with your";

cout << "sword.\n";

cout << "You do " << sword << " ";

cout << "damage.\n\n";

ogreHp = ogreHp - sword;

}

else

{

cout << "You do " << spell << " ";

cout << "damage.\n\n";

ogreHp = ogreHp - spell;

mp = mp - 10;

}

}

}

int ogreDmg = rand() % 13 + 1;

cout << "The ogre does " << ogreDmg << " damage to you.\n";

hp = hp - ogreDmg;

cout << "The ogre still has " << ogreHp << " HP left.\n\n";

hp++;

cout << "Do you want to keep fighting? 1. Yes or 2. No.\n\n";

cin >> endFight;

} while (endFight != 2);

//Run end of game sequence

if (hp <= 0 && ogreHp <= 0)

{

cout << name << " and the dragon both have died.\n";

cout << "Although you died, you slaid the dragon.\n";

cout << name << " is posthumously knighted and celebrated throughout ";

cout << "the kingdom. GAMEOVER.\n";

}

else if (hp >= 0 && ogreHp >= 0)

{

cout << name << " has fled from the battle with the ogre.\n";

cout << "You are banished from the kingdom and must live the ";

cout << "rest of your life in disgrace.\n";

cout << "GAME OVER " << name << " Coward of the Kingdom.\n";

}

if (hp <= 0)

{

cout << name << " has died on your quest.\n";

cout << "The kingdom mourns your death.\n";

cout << "GAME OVER";

}

else

{

cout << name << " has slain the ogre.\n";

cout << "You return victoriously to the kingdom with the dragon's ";

cout << "head as proof of your victory.\n";

cout << "King Mark knights you and the kingdoms cheers.\n";

cout << "CONGRADULATIONS SIR " << name << " YOU WIN!";

}

}

return 0;

}