The Oregon Trail Lite

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Intro

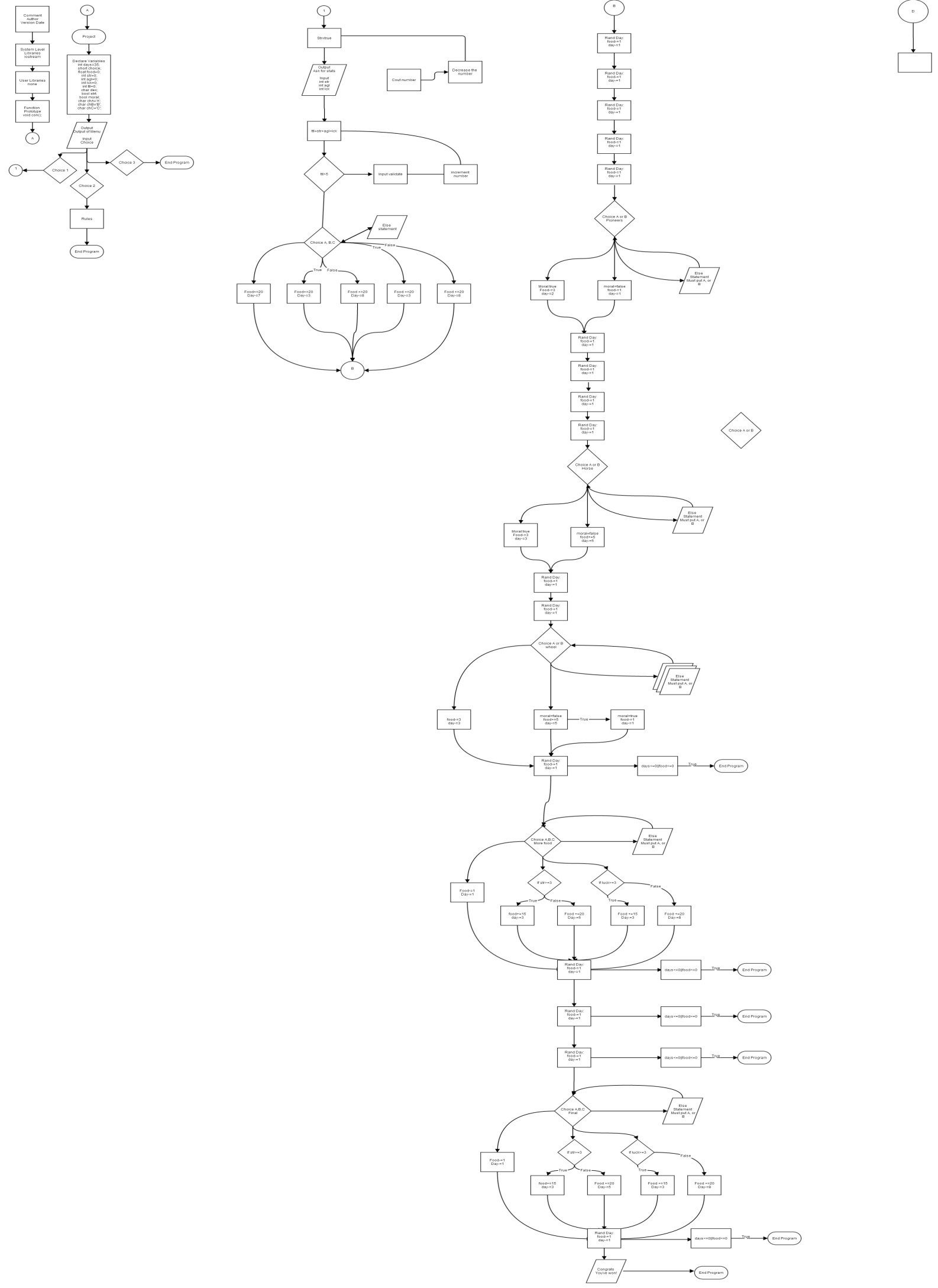
This program is modeled by the rpg game Oregon Trail but in a text based adventure with a few modifications. The main modification is the inclusion of stats to better portray an RPG. The game follows the theme of the original game by utilizing a countdown system before the game expires. What I have added are my original ideas and text as well as the different quests and complications that arise. In addition, I also added the stats system to influence the outcome of player’s decisions in the game.

Rules

The rules are simple, the objective is to finish The Oregon Trail before running out of food or time. You have the ability to add statistics to your group such as strength, Agility, and Luck which are required to successfully accomplish a task. These abilities reflect the options and choices the player may choose. There are quests along the way which may influence your outcomes. The main goal is to finish the trail with the most food and the quickest that you can. Good Luck!

Design

The design is where I had trouble especially with only the skills that I knew. Perhaps with more understanding I could of shortened the amount of code and made the program cleaner, however the design of the program still works and provides functionality. Since this is a Text-Based RPG, the most important factor was keeping it readable and clear. The complications started when I used loops especially since the loops had to conform to the many if and else statements, therefore to ensure functionality of the program I utilized if/else if statements to make sure that all functions in the game operated successfully. I only wish I knew more and was more comfortable in my knowledge of arrays and functions to which I could of used them to a greater degree.



Variables:

int days=35; Number of days in game: The sum of the countdown

short choice; menu choice

float food=0; food countdown

int str=0; strength one of the rpg stats

int agl=0; agility, another of the rpg stats

int lck=0; luck, another rpg stat

int ttl=0; Total: Sum of stats, ensures stats do not go above 5

char dec; decision, used for quests and decision making in game

bool strt; Start: true activates the menu, false quits the game

bool moral; Moral: In game factor which influences a quest

char chA='A'; Character A: Decision A

char chB='B'; Character B: Decision B

char chC='C'; Character C: Decision C

Research:

Researching included many things ranging from historical data to other programming solutions. For example, some of the research was dedicated to find the estimated time it would take to complete the Oregon Trail. For the matter of not boring the user to death instead of utilizing 154 days and spending countless lines of code I believed 35 days would be a good estimate. Days were easier to utilize in the program rather than having months or weeks which wouldn’t make sense utilizing the quest system. Other research focused on how The Oregon Trails game worked and operated. This allowed me to adapt the food and day economy while realizing that my knowledge did not allow me to utilize the financial system just yet.

Topics Covered:

Some of the Topics include utilizing primitive data types , loops, statements, operators, system libraries, conditionals, and menus. Some of these include shorts, floats, integers, bools, and chars. I utilized do whiles, for loops, and while loops, each for different purposes. I also utilized many conditionals such as if, else, and else if statements. And finally Menus and switch statements were also used throughout my program. Operators as well made a significant part of my code since I used both conditional operators and logic operators.

/\*

\* File: main.cpp

\* Author: Kevin Rivas

\*

\* Created on July 14, 2014, 5:09 PM

\*/

#include <iostream>

using namespace std;

//Global Constants

//Function Prototypes

void con();

//Execution Starts here

int main(int argc, char\*\* argv) {

//Declare Variables

int days=35;

short choice;

float food=0;

int str=0;

int agl=0;

int lck=0;

int ttl=0;

char dec;

bool strt;

bool moral;

char chA='A';

char chB='B';

char chC='C';

//Simple output of text for Menu

cout<<"Welcome to Oregon Trail Lite Version"<<endl;

cout<<"===========Main Menu================"<<endl;

cout<<"1. Play game"<<endl;

cout<<"2. Rules"<<endl;

cout<<"3. Quit (But why would you?)"<<endl;

//Input for menu

cin>>choice;

//Do-while menu including switch

do{

switch(choice)

{

case 1:

strt=true;

con();

cin.ignore();

break;

case 2:

cout<<"Rules"<<endl;

cout<<"The rules are simple, the objective is to finish the Oregon";

cout<<" Trail before running out of food or time."<<endl;

cout<<"You have the ability to add statistics to your group such";

cout<<" such as strength, Agility, and Luck which are required to";

cout<<" successfully accomplish a task. There are quests along the";

cout<<" way which may influence your outcomes. Good Luck!"<<endl;

cout<<"Exiting out of Program..."<<endl;

con();

cin.ignore();

break;

case 3:

strt=false;

cout<<"Quitting game"<<endl;

con();

cin.ignore();

return 0;

default:

if (choice!=1||2||3)

cout<<"Not a valid option, please enter 1,2, or 3. ";

cin>>choice;

break;

}

}while (choice<1||choice>3);

//Uses Bool to activate the Game

if (strt==true){

cout<<"Well hello there, Traveler! Welcome to the Oregon Trail!"<<endl;

cout<<"Before we begin, please enter your Statistics."<<endl;

cout<<"This may help you on your journey!"<<endl;

cout<<"You only have 5 points to give so please use them wisely";

cout<<" (It is recommended to at least dedicate 3 ";

cout<<" points to at least one stat)."<<endl;

cout<<"For more information, consult rules"<<endl;

//Input of Stats

cout<<"Strength: "<<endl;

cin>>str;

cin.ignore();

cout<<"Agility: "<<endl;

cin>>agl;

cin.ignore();

cout<<"Luck: "<<endl;

cin>>lck;

con();

cin.ignore();

//Input validation statement for the input of Stats

for (ttl=str+agl+lck;ttl>5;ttl)

{

str=0,agl=0,lck=0;

cout<<"Error!"<<endl;

cout<<"Please correctly divide 5 integers amongst the statistics";

cout<<endl;

cout<<"Strength: "<<endl;

cin>>str;

cin.ignore();

cout<<"Agility: "<<endl;

cin>>agl;

cin.ignore();

cout<<"Luck: "<<endl;

cin>>lck;

cin.ignore();

con();

cout<<endl;

}

//Brief simple output of text for some rules

cout<<"Remember there is a time limit!"<<endl;

cout<<"Due to the trip taking about 4-6 Months, the time limit has";

cout<<" been reduced to 35 days. ";

cout<<"If you have not reached the end by 35 days, you fail."<<endl;

cout<<"Maybe not at life...but certainly at this game."<<endl;

cout<<"Now to begin."<<endl;

con();

//Beginning of Game

//Day 1

cout<<"Day 1: You must aquire food for this epic journey."<<endl;

cout<<"Do you.."<<endl;

cout<<"[A] Gather supplies?(Sure way to aquire food although";

cout<<" lengthy)"<<endl;

cout<<"[B] Hunt?"<<endl;

cout<<"[C] Fish?"<<endl;

cin>>dec;

//Choice A

if(dec=='A'){

food+=20;

cout<<"Food Acquired: "<<endl;

cout<<food<<endl;

days-=7;

cout<<"Days left: "<<days<<endl;

}

//Choice B

else if (dec=='B'){

//If strength is successful

if(str>=3){

cout<<"Success!";

food+=20;

cout<<"Food Acquired:"<<endl;

cout<<food<<endl;

days-=3;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

}

//If strength stat is unsuccessful

else{

cout<<"Failure: Strength too low"<<endl;

cout<<"Since you failed at hunting you resupply"<<endl;

food+=20;

cout<<"Food Acquired: "<<endl;

cout<<food<<endl;

days-=8;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

}

}

//Choice C

else if (dec=='C'){

//If luck stat is successful

if(lck>=3){

cout<<"Success!";

food+=20;

cout<<"Food Acquired: "<<endl;

cout<<food<<endl;

days-=3;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

}

//If luck stat is unsuccessful

else{

food+=20;

days-=8;

cout<<"Failure: Luck too low";

cout<<"Since you failed at fishing. You resupply";

cout<<"Food Acquired: "<<food<<endl;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

}

}

//Requests for another attempt if failure to input correct character

else{

cout<<"Invalid Answer: Please Select the A,B,or C"<<endl;

cin>>dec;

}

//in-game random day

cout<<"New Day... Uneventful"<<endl;

food-=1;

days-=1;

cout<<"Food left: "<<food<<endl;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

//in-game random day

cout<<"New Day... You pass by a creek"<<endl;

food-=1;

days-=1;

cout<<"Food left: "<<food<<endl;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

//in-game random day

cout<<"New Day... What's so great about Oregon?"<<endl;

food-=1;

days-=1;

cout<<"Food left: "<<food<<endl;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

//Second Challenge

cout<<"New Day....You come across stranded pioneers."<<endl;

cout<<"Do you.."<<endl;

cout<<"[A] Invite them to come join you."<<endl;

cout<<"[B] Leave them."<<endl;

cin>>dec;

//Choice A

if(dec=='A'){

cout<<"You have a kind heart,but unfortunately that comes with a";

cout<<" price. You spent more time and food by settling extra";

cout<<" mouths to feed. Good luck."<<endl;

food-=3;

cout<<"Food Acquired: "<<endl;

cout<<food<<endl;

days-=2;

cout<<"Days left: "<<days<<endl;

moral=true;

con();

cin.ignore();

}

//Choice B

else if (dec=='B'){

cout<<"That was messed up... but at least you still have food.";

cout<<endl;

food-=1;

days-=1;

cout<<"Food left: "<<food<<endl;

cout<<"Days left: "<<days<<endl;

moral=false;

con();

cin.ignore();

}

//Asks user for another attempt to input correct char

else{

cout<<"Invalid Answer: Please Select the A,or B"<<endl;

cin>>dec;

}

//in-game random day

cout<<"New Day... Oh look, a tree!"<<endl;

food-=1; //subtracts 1 food

days-=1; //subtracts 1 day

cout<<"Food left: "<<food<<endl;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

//in-game random day

cout<<"New Day... Oregon is the one with the gold right?"<<endl;

food-=1;

days-=1;

cout<<"Food left: "<<food<<endl;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

//in-game random day

cout<<"New Day... I miss indoor plumbing!"<<endl;

food-=1;

days-=1;

cout<<"Food left: "<<food<<endl;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

//in-game random day

cout<<"New Day... did we forget someone? Where's Kevin?!"<<endl;

food-=1;

days-=1;

cout<<"Food left: "<<food<<endl;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

//Third Challenge

cout<<"New Day....Your horse is slowing down."<<endl;

cout<<"Do you.."<<endl;

cout<<"[A] Stop and Rest"<<endl;

cout<<"[B] Eh, the horse is fine."<<endl;

cin>>dec;

//Choice A

if(dec=='A'){

cout<<"Yeah we should take a rest for a while...";

cout<<"I mean why would we risk our only form of transportation, ";

cout<<"right? Silly thing to do."<<endl;

food-=3;

cout<<"Food Acquired: "<<endl;

cout<<food<<endl;

days-=3;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

}

//Choice B

else if (dec=='B'){

cout<<"So Good news and Bad news..."<<endl;

cout<<"Your horse finally collapsed with a broken ankle..."<<endl;

cout<<"Good news: You have more food now! Yum!"<<endl;

cout<<"You must wait until another caravan passes by to buy a";

cout<<" new horse"<<endl;

cout<<endl;

food+=5;

days-=5;

cout<<"Food left: "<<food<<endl;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

}

//Asks user for another attempt to input correct char

else{

cout<<"Invalid Answer: Please Select the A,or B"<<endl;

cin>>dec;

}

//In-game Random day

cout<<"New Day... Ah the clean air, away from the city"<<endl;

food-=1;

days-=1;

cout<<"Food left: "<<food<<endl;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

//In-game Random day

cout<<"New Day... WHY DID WE LEAVE THE CITY!?"<<endl;

food-=1;

days-=1;

cout<<"Food left: "<<food<<endl;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

//In-game Random day

cout<<"Your wagon's wheel looks funny..."<<endl;

cout<<"Do you.."<<endl;

cout<<"[A] Stop and inspect it?"<<endl;

cout<<"[B] Psh no! We have to hurry up!"<<endl;

cin>>dec;

if(dec=='A'){

cout<<"So it turned out to be nothing...";

cout<<"You wasted time stopping...";

cout<<"Look at you trying to be responsible."<<endl;

food-=3;

cout<<"Food Acquired: "<<endl;

cout<<food<<endl;

days-=3;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

}

else if (dec=='B'){

cout<<"Well, it broke."<<endl;

cout<<"Yeah you should of stopped..."<<endl;

if(moral=true){

cout<<"Hey remember those pioneers that you helped out?"<<endl;

cout<<"Well, turns out they have a spare!"<<endl;

cout<<"Good thing you helped them!"<<endl;

food-=1;

days-=1;

cout<<"Food left: "<<food<<endl;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

}

if(moral=false){

cout<<"Well now you have to wait for another caravan to pass by";

cout<<" so they can help you out"<<endl;

cout<<"Hmm i wonder if those stranded pioneers could of helped?";

cout<<endl;

food+=5;

days-=5;

cout<<"Food left: "<<food<<endl;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

}

}

else{

cout<<"Invalid Answer: Please Select the A,or B"<<endl;

cin>>dec;

}

if (days<=0)

cout<<"Game Over: You Starved!";

if(food<=0)

cout<<"Game Over: You starved!";

cout<<"New Day... Oh abandoned Wagon? That's not ominous..."<<endl;

food-=1;

days-=1;

cout<<"Food left: "<<food<<endl;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

{if (days<=0||food<=0){

cout<<"Game Over: Ran out of food or time... or both."<<endl;

con();

cin.ignore();

return 0;}

}

cout<<"Maybe it's a good idea to stop to get food? "<<endl;

cout<<"Do you.."<<endl;

cout<<"[A] Nah, We need to hurry, we're running out of time!"<<endl;

cout<<" lengthy)"<<endl;

cout<<"[B] Hunt?"<<endl;

cout<<"[C] Gather Barries?"<<endl;

cin>>dec;

if(dec=='A'){

cout<<"Sure. Ignore food, you're trying to keep your figure";

cout<<" anyways..."<<endl;

food-=1;

cout<<"Food Acquired: "<<endl;

cout<<food<<endl;

days-=1;

cout<<"Days left: "<<days<<endl;

}

else if (dec=='B'){

if(str>=3){

cout<<"Success!";

food+=15;

cout<<"Food Acquired:"<<endl;

cout<<food<<endl;

days-=3;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

}

else{

cout<<"Failure: Strength too low"<<endl;

cout<<"Took you a while to finally catch Bambi..."<<endl;

food+=15;

cout<<"Food Acquired: "<<endl;

cout<<food<<endl;

days-=5;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

}

}

else if (dec=='C'){

if(lck>=3){

cout<<"Success!";

food+=15;

cout<<"Food Acquired: "<<endl;

cout<<food<<endl;

days-=3;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

}

else{

food+=10;

days-=8;

cout<<"Failure: Luck too low";

cout<<"THOSE WERE POISONOUS BERRYS! You must wait a while to";

cout<<" recover!"<<endl;

cout<<"Food Acquired: "<<food<<endl;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

}

}

else{

cout<<"Invalid Answer: Please Select the A,B,or C"<<endl;

cin>>dec;

}

{if (days<=0||food<=0){

cout<<"Game Over: Ran out of food or time... or both."<<endl;

con();

cin.ignore();

return 0;}

}

cout<<"New Day... Boring day"<<endl;

food-=1;

days-=1;

cout<<"Food left: "<<food<<endl;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

{if (days<=0||food<=0){

cout<<"Game Over: Ran out of food or time... or both."<<endl;

con();

cin.ignore();

return 0;}

}

cout<<"New Day... Uneventful"<<endl;

food-=1;

days-=1;

cout<<"Food left: "<<food<<endl;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

{if (days<=0||food<=0){

cout<<"Game Over: Ran out of food or time... or both."<<endl;

con();

cin.ignore();

return 0;}

}

cout<<"New Day... Almost there!"<<endl;

food-=1;

days-=1;

cout<<"Food left: "<<food<<endl;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

{if (days<=0||food<=0){

cout<<"Game Over: Ran out of food or time... or both."<<endl;

con();

cin.ignore();

return 0;}

}

cout<<"You're near the border but you see a group of people up ahead";

cout<<". They look like unsavory characters..."<<endl;

cout<<"Do you.."<<endl;

cout<<"[A] Go talk to them... what's the worst that can happen?"<<endl;

cout<<"[B] Fight them! Why? Because Bear Grylls told me so!"<<endl;

cout<<"[C] Speed the Wagon Past them. I know I'm Faster!"<<endl;

cin>>dec;

if(dec=='A'){

if(lck>=3){

cout<<"Turns out they were government agents selling plots of";

cout<<" land";

cout<<". You buy one immediately for cheap."<<endl;

food-=1;

cout<<"Food left: "<<endl;

cout<<food<<endl;

days-=1;

cout<<"Days left: "<<days<<endl;

}

else {

cout<<"Well, they weren't friendly. They took your food";

cout<<" and kept you tied up for a while!"<<endl;

food-=1;

cout<<"Food left: "<<endl;

cout<<food<<endl;

days-=5;

cout<<"Days left: "<<days<<endl;

}

}

else if(dec=='B') {

if(str>=3){

cout<<"After going Bruce Lee on those bandits you go on your ";

cout<<"merry way with extra food!"<<endl;

food+=5;

cout<<"Food Acquired:"<<endl;

cout<<food<<endl;

days-=1;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

}

else{

cout<<"Failure: Strength too low"<<endl;

cout<<"As you heroically charged at them you ran into a tree ";

cout<<"branch... then they robbed you. the bandits not the ";

cout<<"tree..."<<endl;

food-=5;

cout<<"Food left: "<<endl;

cout<<food<<endl;

days-=5;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

}

}

else if (dec=='C'){

if(agl>=3){

cout<<"You knew someday those wagon races would pay off";

cout<<" eventually! You rode so hard you made up for";

cout<<" two days!"<<endl;

food-=1;

cout<<"Food left: "<<endl;

cout<<food<<endl;

days+=2;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

}

else{

food-=5;

days-=5;

cout<<"Failure: Agility too low"<<endl;

cout<<"Cut back on the snickers... you thought you were";

cout<<" racing past the bandits... but your wagon got";

cout<<" stuck in the mud!"<<endl;

cout<<"Food left: "<<food<<endl;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

}

}

else{

cout<<"Invalid Answer: Please Select the A,B,or C"<<endl;

cin>>dec;

}

{if (days<=0||food<=0){

cout<<"Game Over: Ran out of food or time... or both."<<endl;

con();

cin.ignore();

return 0;}

}

cout<<"New Day... You see the finish line!"<<endl;

food-=1;

days-=1;

cout<<"Food left: "<<food<<endl;

cout<<"Days left: "<<days<<endl;

con();

cin.ignore();

{if (days<=0||food<=0){

cout<<"You were so close! Almost there. Too bad..."<<endl;

cout<<"Game Over: Ran out of food or time... or both."<<endl;

con();

cin.ignore();

return 0;}

}

cout<<"Congrats! You finally made it to your new homestead!"<<endl;

cout<<"After tiresome journey you finally made it!"<<endl;

cout<<"Now build your homestead and avoid getting eaten by a bear"<<endl;

cout<<"WINNER: GAME OVER :WINNER"<<endl;

if(food>=10)

cout<<"Looks like you have a surplus off food!"<<endl;

if (food<10)

cout<<"Winter is coming. Good luck on the food"<<endl;

}

return 0;

}

void con(){

cout<<"Press enter to continue..."<<endl;

cin.ignore();

}