

Dungeon Survival Game

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CSC 5 – 48101

Fall 2016

Introduction:

Selecting a strong hero, running through fields infested with strong warriors, powering up/strengthening your attributes, and reaping great rewards is the dream layout of any fanatic's fantasy adventure. With this in mind, I tried to capture all of these elements in a simple Dungeon-style game, utilizing much of the C++ knowledge I gained this semester. The game includes a game menu that runs the actual game with 5 unique and interactive submenus.

How to play:

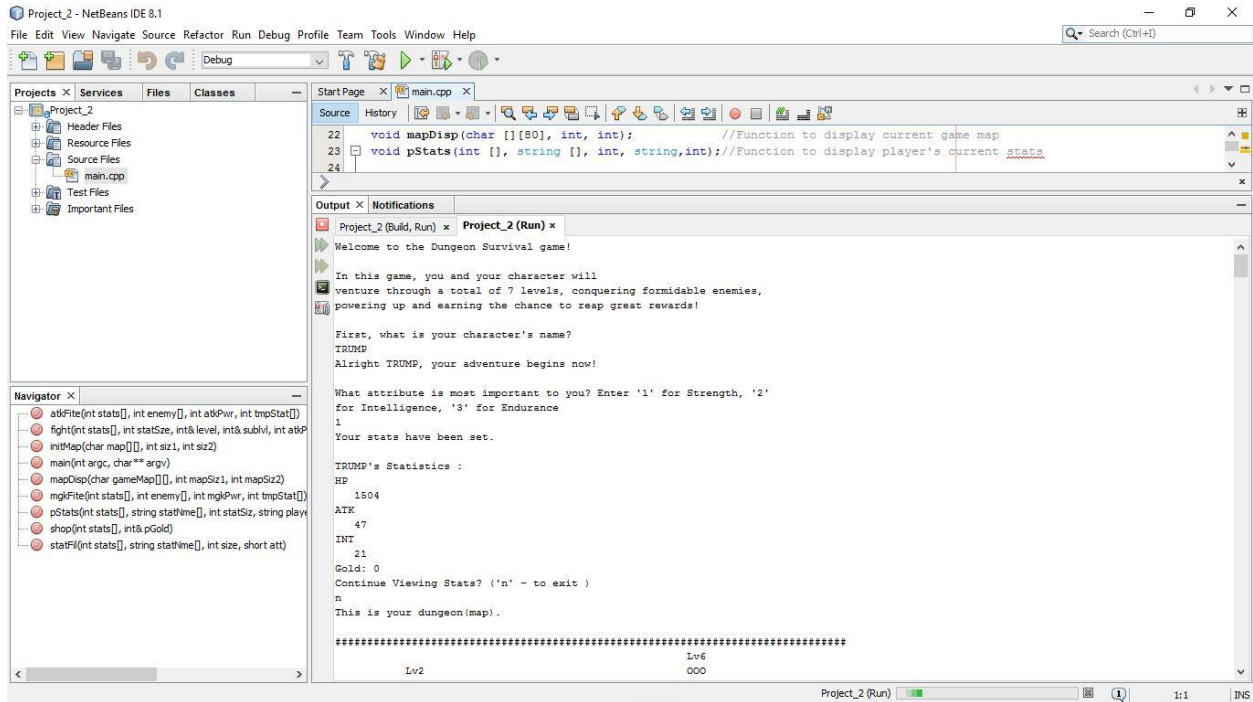
This game is extremely user friendly and easy to learn.

1. Enter your character's name for the entirety of the game.
2. Select 1 of 3 attributes:
 - Strength – Attack Power Based (Less risk; medium power range)
 - Intelligence – Magic Power Based (Higher risk; large power range)
 - Endurance – HP focused (Medium risk; varying power range)
3. The game will display your game map which shows all 7 levels of the dungeon, along with the sublevels right beneath, then it will display your character's randomly assigned statistics, which are based on the attribute you previously selected.
4. The game will then present you with the menu and 5 submenus.
 - Game Map – Display's Dungeon map and all completed sublevels (X's for complete and O's for incomplete).
 - Player's Stats – Display's Player's current statistics in HP, ATK and INT, and also displays the Player's total gold.
 - The Dungeon – Enters the player into the dungeon on whichever level and sublevel they are currently at (At the start the player will of course be at Level 1 Sublevel 1). Each sublevel has a unique enemy to fight and the next sublevel cannot be reached until the enemy is defeated. The player must take the enemy's HP down to 0 or less without their own HP falling to 0 or less to defeat the enemy. The player will choose how to attack each turn; either with attack power or magic power. If all levels and sublevels are complete, the game ends and the Victory screen is achieved.
 - The Shop – Enters player into the shop where 9 different power buffs can be purchased with gold, which is earned in the dungeon.
 - Quit Game – Allows the user to quit their current game; all data is lost and no victory screen is achieved.

Flowchart w/Pseudo-Code:

Constructs/Concepts:

See the Game:



Project_2 - NetBeans IDE 8.1

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Projects Services Files Classes

Project_2

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main.cpp

```
22 void mapDisp(char [][][80], int, int); //Function to display current game map
23 void pStats(int [], string [], int, string,int); //Function to display player's current stats
24
```

Output Notifications

Project_2 (Build, Run) x Project_2 (Run) x

Welcome to the Dungeon Survival game!

In this game, you and your character will venture through a total of 7 levels, conquering formidable enemies, powering up and earning the chance to reap great rewards!

First, what is your character's name?

TRUMP

Alright TRUMP, your adventure begins now!

What attribute is most important to you? Enter '1' for Strength, '2' for Intelligence, '3' for Endurance

1

Your stats have been set.

TRUMP's Statistics :

HP 1504

AIK 47

INT 21

Gold: 0

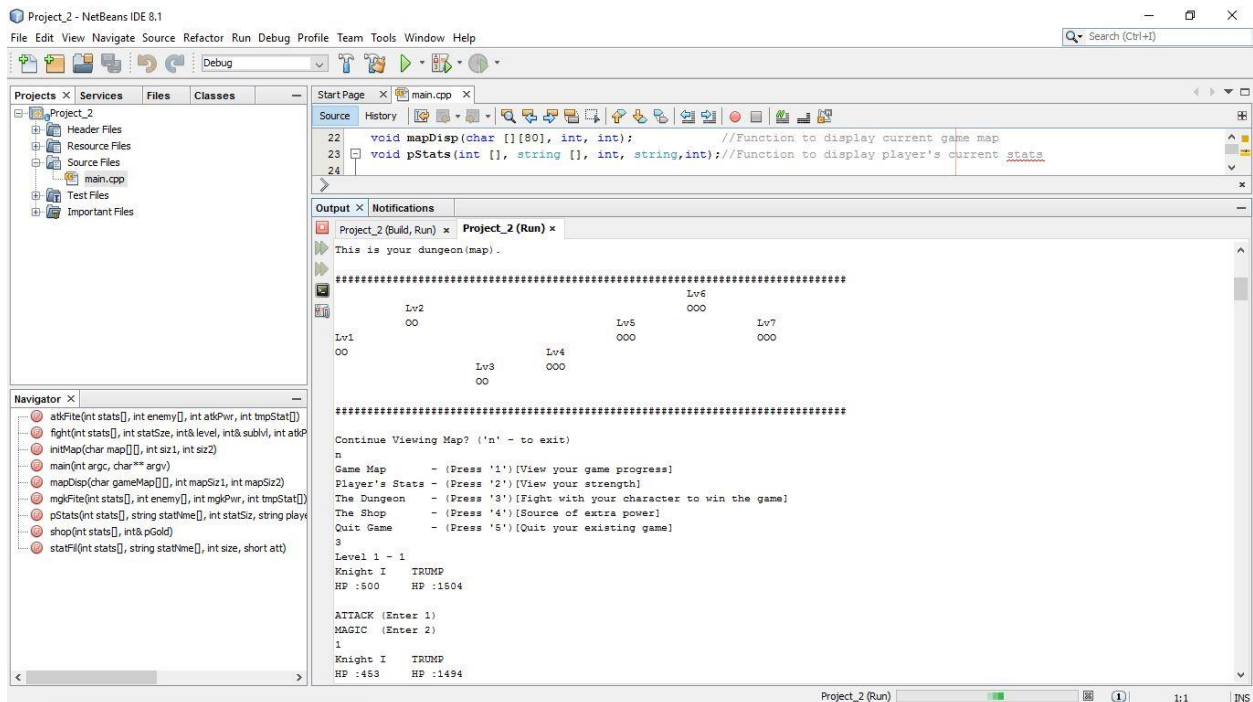
Continue Viewing Stats? ('n' - to exit)

n

This is your dungeon(map).

Lv2 Lv6

OO OOO



Project_2 - NetBeans IDE 8.1

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Output Notifications

Project_2 (Build, Run) x Project_2 (Run) x

This is your dungeon(map).

Lv1 Lv2 Lv3 Lv4 Lv5 Lv6 Lv7

OO OO OO OOO OOO OOO

Continue Viewing Map? ('n' - to exit)

n

Game Map - (Press '1') [View your game progress]

Player's Stats - (Press '2') [View your strength]

The Dungeon - (Press '3') [Fight with your character to win the game]

The Shop - (Press '4') [Source of extra power]

Quit Game - (Press '5') [Quit your existing game]

3

Level 1 - 1

Knight I TRUMP

HP :500 HP :1504

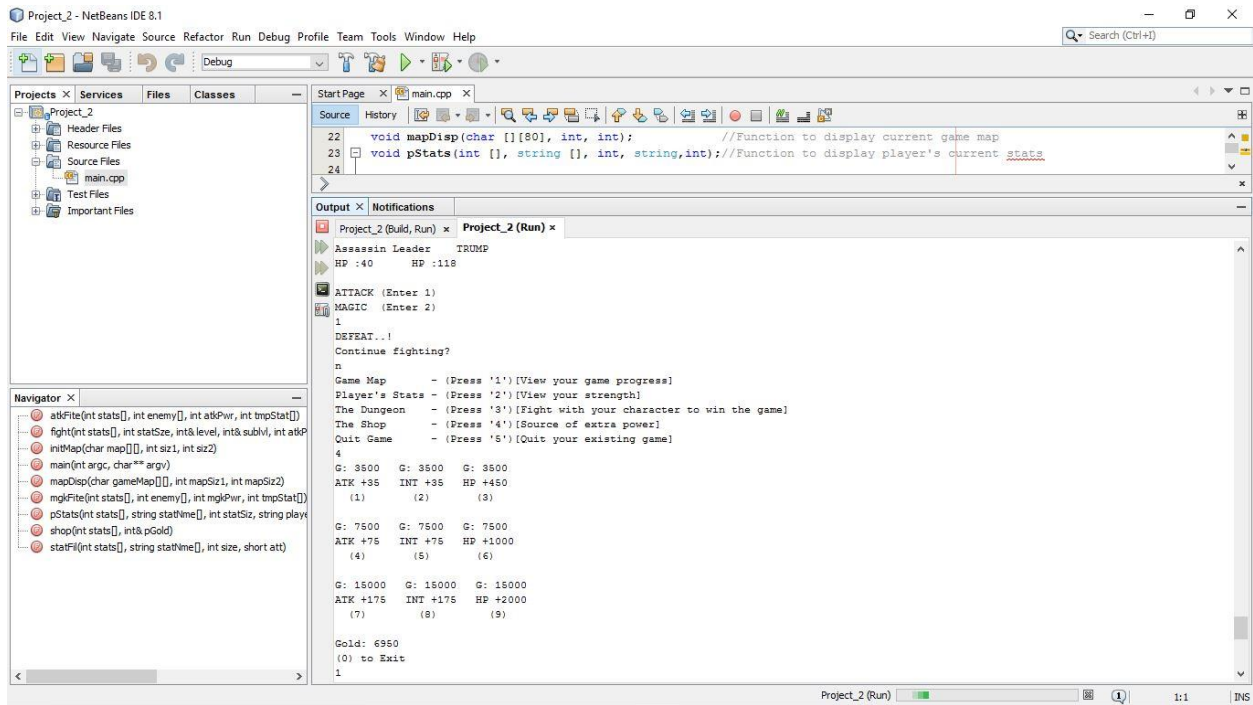
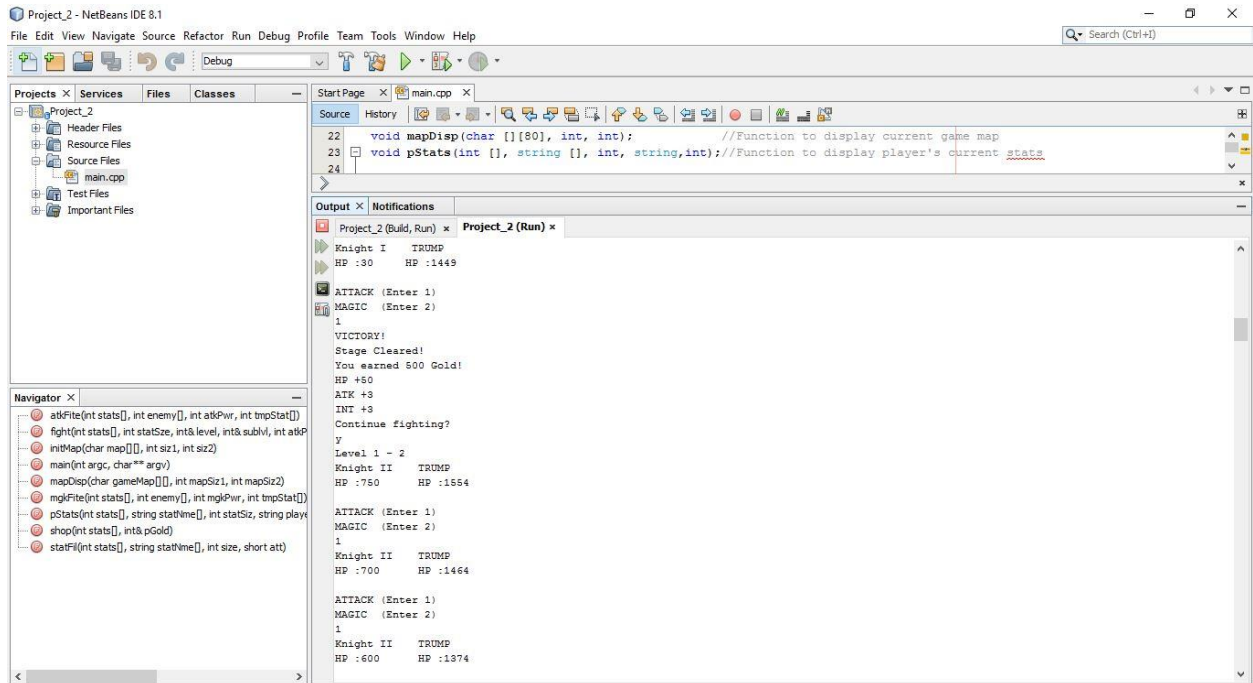
ATTACK (Enter 1)

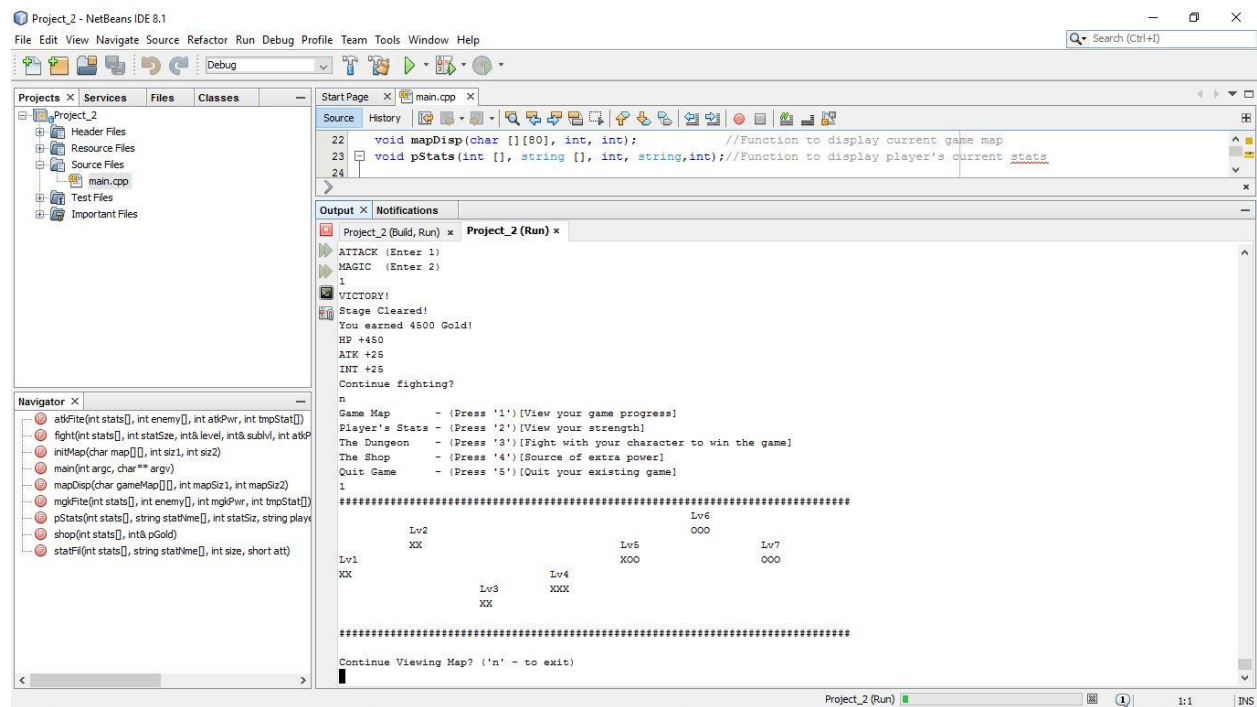
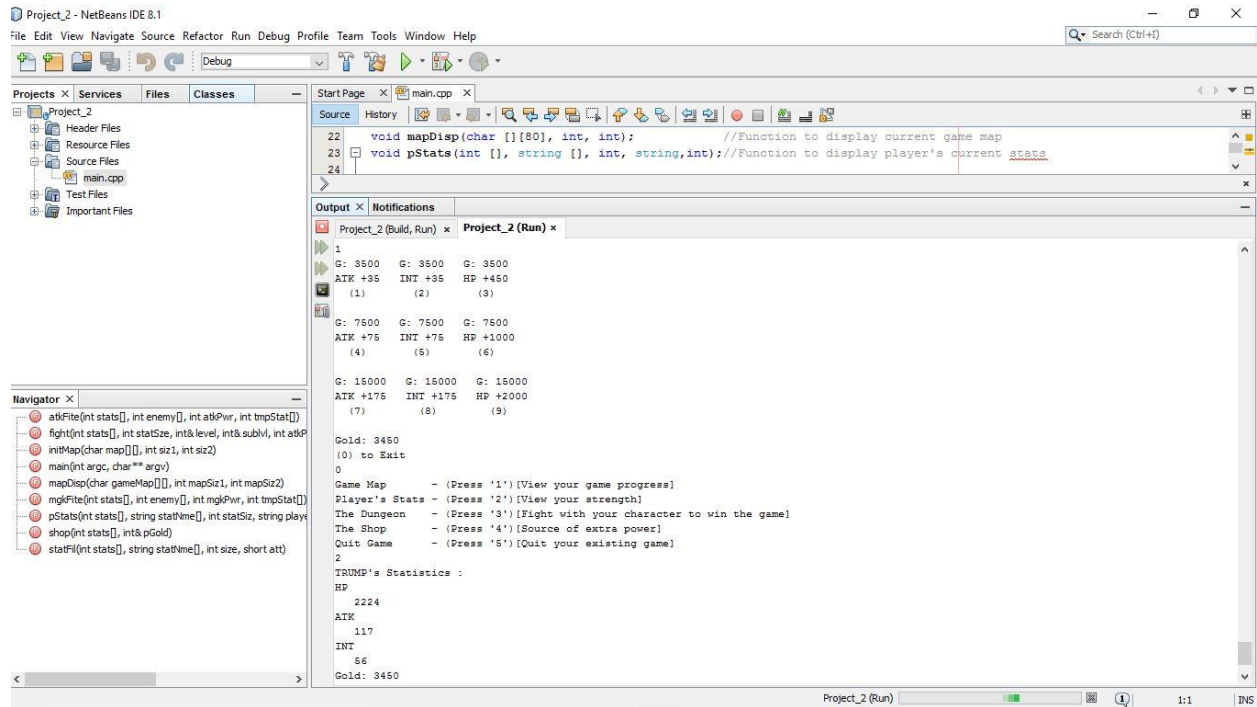
MAGIC (Enter 2)

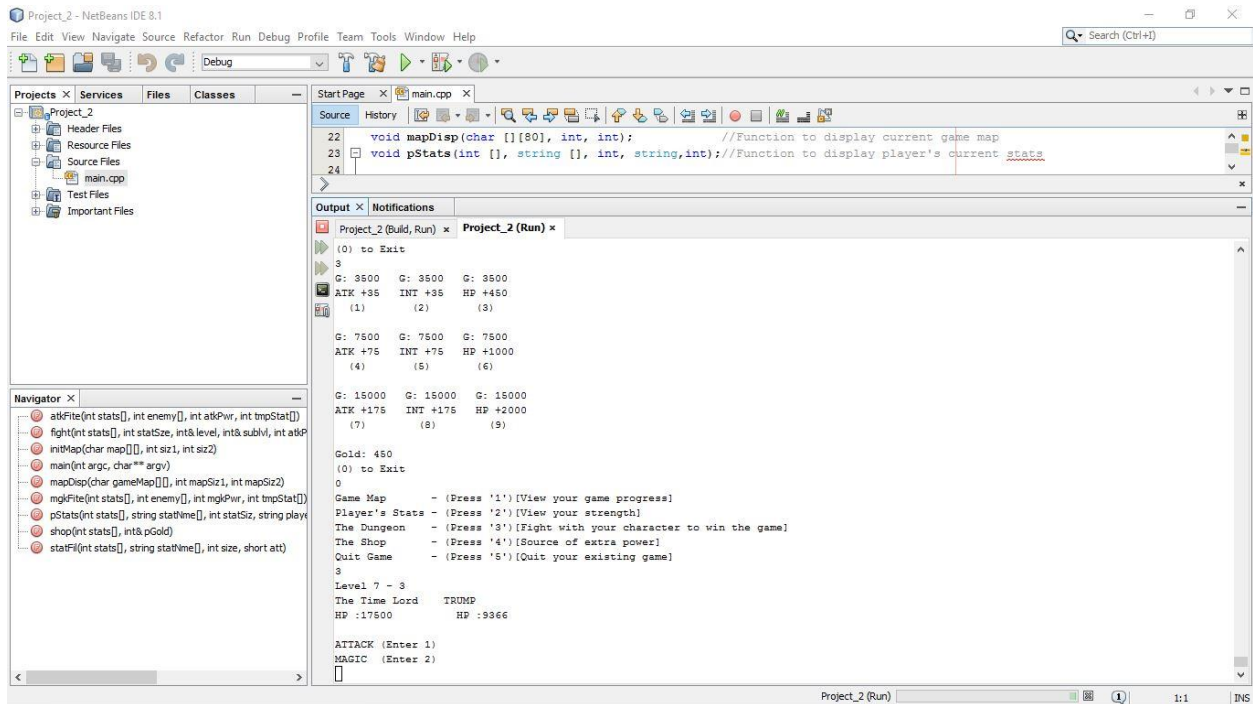
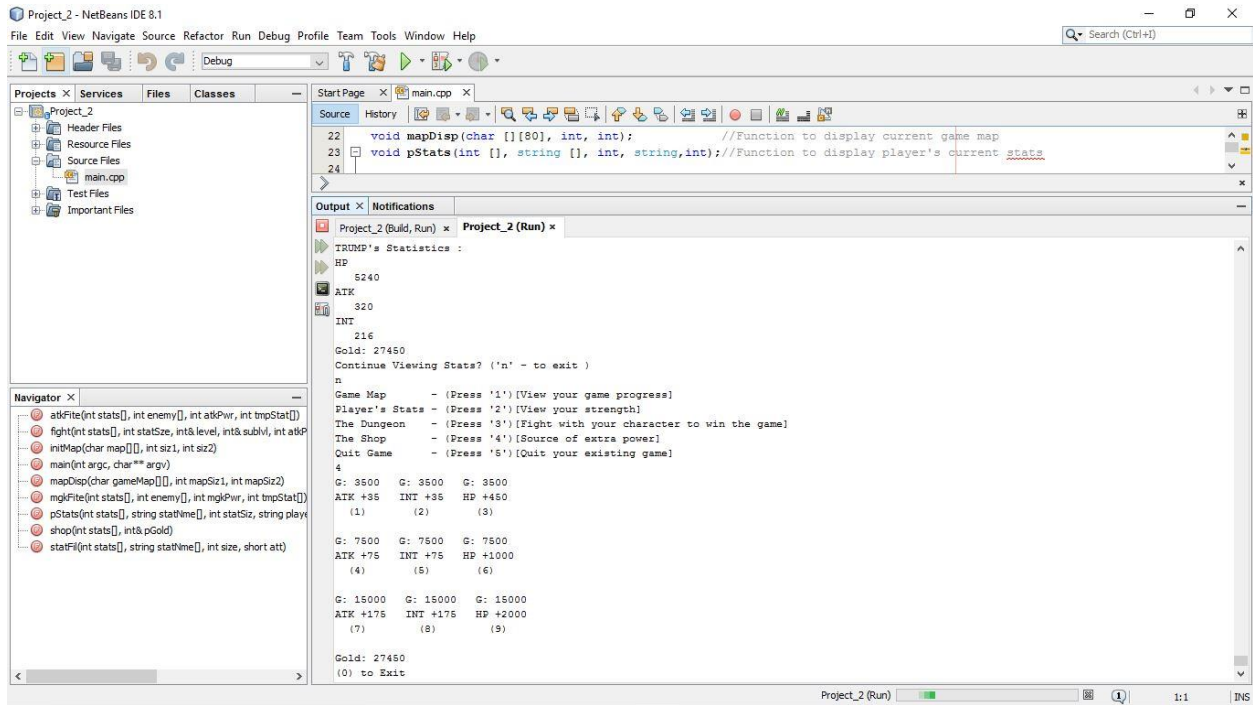
1

Knight I TRUMP

HP :453 HP :1494







Project_2 - NetBeans IDE 8.1

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Navigator

- atkFile(int stats[], int enemy[], int atkPwr, int tmpStat[])
- fight(int stats[], int statSize, int level, int& sublv, int atkP
- initMap(char map[], int sz1, int sz2)
- main(int argc, char** argv)
- mapDisp(char gameMap[], int mapSz1, int mapSz2)
- mgkFile(int stats[], int enemy[], int mgkPwr, int tmpStat[])
- pStats(int stats[], string statName[], int statSz, string play
- shop(int stats[], int& pGold)
- statFi(int stats[], string statName[], int size, short att)

StartPage main.cpp

```

22 void mapDisp(char [][80], int, int); //Function to display current game map
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24

```

Output Notifications

Project_2 (Build, Run) Project_2 (Run)

```

1
The Time Lord TRUMP
HP :2092 HP :2716

ATTACK (Enter 1)
MAGIC (Enter 2)
1
The Time Lord TRUMP
HP :1129 HP :1291

ATTACK (Enter 1)
MAGIC (Enter 2)
1
VICTORY!
Stage Cleared!
You earned 10000 Gold!
HP +1000
ATK +50
INT +50
DUNGEON COMPLETE!!!
You have been victorious in your Adventure!

You earned the title 'Master of the Universe!'

Credits:
Ryan Sorice - Concept/Engineering

Come play again!
RUN SUCCESSFUL (total time: 4m 23s)

```

1:1 INS

Project_2 - NetBeans IDE 8.1

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StartPage main.cpp

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```

Output Notifications

Project_2 (Build, Run) Project_2 (Run)

```

1
Knight I TRUMP
HP :110 HP :2023

ATTACK (Enter 1)
MAGIC (Enter 2)
1
Knight I TRUMP
HP :20 HP :2008

ATTACK (Enter 1)
MAGIC (Enter 2)
1
VICTORY!
Stage Cleared!
You earned 500 Gold!
HP +50
ATK +3
INT +3
Continue fighting?
n
Game Map - (Press '1') [View your game progress]
Player's Stats - (Press '2') [View your strength]
The Dungeon - (Press '3') [Fight with your character to win the game]
The Shop - (Press '4') [Source of extra power]
Quit Game - (Press '5') [Quit your existing game]
5
Come play again!
RUN SUCCESSFUL (total time: 33s)

```

1:1 INS

References:

- Lecture + Lab with Dr. Lehr
- “Problem Solving with C++ Seventh Edition” – Walter Savitch [Textbook]

The Code:

```
/*File:main

* Author: Ryan Sorice
* Created on 4 December 2016 11:23 AM
* Purpose: Dungeon Survival Game
*/

//System Libraries
#include <string> //Library for strings/string arrays
#include <iostream> //Library for inputs and outputs
#include <ctime> //Time library for random numbers
#include <cstdlib> //Library for random numbers
using namespace std; //Name-space in system libraries
//User Libraries
//Global Variables
//Function Prototypes
void statFil(int [], string[], int, short); //Function to fill player's initial statistics
void initMap(char[][80], int, int); //Function to create/fill initial game map
void mapDisp(char[][80], int, int); //Function to display current game map
void pStats(int [], string [], int, string,int); //Function to display player's current stats
//Function to play in the Dungeon (the mode to complete the game)
void fight(int [], int, int &, int &, int, int, char[][80], string, int &, bool &);
void shop(int[], int &); //Function to display/access game shop
void mgkFite(int [], int[], int, int[]); //Function to fight with magic power
void atkFite(int [], int[], int, int[]); //Function to fight with attack power
//Execution begins here
int main(int argc, char** argv) {
    //Random
    number
    seed

    srand(static_cast<unsigned int>(time(0)));

    //Declaration/Initiation of variables
    int const STATSZE=3,MAPSIZ1=10,MAPSIZ2=80; //Array sizes (map sizes, stat size)
    string player, //String for player's name
        statNam[STATSZE]; //String array for stat names
    int stats[STATSZE], //Int array for player's stats
        menuItm, //Int to control game menu
        gold=0, //Int for player's gold
        level=1,sublvl=1, //Ints for level/sublevel
        atkPwr=1.5,mgkPwr=5.0; //Ints for magic and attack powers
    short attrib; //Short for attribute value
    char map[MAPSIZ1][MAPSIZ2]; //Character array for game map
    bool victory=false,exit=false; //Booleans to control the game ending

    //Initial output/User initiates their character's name
    cout<<"Welcome to the Dungeon Survival game!\n"<<endl<<"In this game, you and your character will\n";
    cout<<"venture through a total of 7 levels, conquering formidable enemies,\n";
    cout<<"powering up and earning the chance to reap great rewards!\n"<<endl;
    cout<<"First, what is your character's name?\n";
    cin>>player;
    //Output; User initiates preferred attribute
    cout<<"Alright "<<player<<", your adventure begins now!\n"<<endl;
    cout<<"What attribute is most important to you? Enter '1' for Strength, '2'\n";
    cout<<"for Intelligence, '3' for Endurance\n";
    cin>>attrib;

    //Fill players stats/Display stats
    statFil(stats,statNam,STATSZE,attrib);
    cout<<"Your stats have been set.\n"<<endl;
    pStats(stats,statNam,STATSZE,player,gold);

    //Creates game map/Outputs to user
    initMap(map,MAPSIZ1,MAPSIZ2);
    cout<<"This is your dungeon(map).\n"<<endl;
    mapDisp(map,MAPSIZ1,MAPSIZ2);

    //Do-while loop to play agme
    do{
        //Which feature to access on the game menu
        cout<<"Game Map - (Press '1')[View your game progress]\n";
        cout<<"Player's Stats - (Press '2')[View your strength]\n";
        cout<<"The Dungeon - (Press '3')[Fight with your character to win the game]\n";
        cout<<"The Shop - (Press '4')[Source of extra power]\n";
        cout<<"Quit Game - (Press '5')[Quit your existing game]\n";
        cin>>menuItm;
        //Switch statement for selected game menu
        switch(menuItm){
            case 1:mapDisp(map,MAPSIZ1,MAPSIZ2);break;
            case 2:pStats(stats,statNam,STATSZE,player,gold);break;
            case 3:fight(stats,STATSZE,level,sublvl,atkPwr,mgkPwr,map,player,gold,victory);break;
            case 4:shop(stats,gold); break;
            case 5:exit=true;
        }
    }//End the Switch/Case
    }while(victory==false&&exit==false);//Ends the Do-While Loop

    //If player completed the game/dungeon
    if(victory==true){
        //Output victory title and game credits
    }
}
```



```

        cout<<"You have been victorious in your Adventure!\n"<<endl;
        cout<<"You earned the title 'Master of the Universe!'\n"<<endl;
        cout<<"Credits: \n"<<"Ryan Sorice - Concept/Engineering\n"<<endl;
    }
    cout<<"Come play again!";           //Final output

    //Exits program
    return 0;
}
//Function to perform attack(strength) based fight
void atkFite(int stats[], int enemy[], int atkPwr, int tmpStat[]){
    int bonus=rand()%3+1,eBonus=rand()%3+1;           //Variables to apply random damage bonus for
    enemy/user
    enemy[0]-=(stats[1]*(atkPwr*bonus));               //Enemy HP subtracted by player's damage multiplied
    by bonus
    tmpStat[0]-=(enemy[1]*eBonus);                     //User HP subtracted by enemy's damage multiplied by
    bonus
}
//Function to perform magic(intelligence) based fight
void mgkFite(int stats[], int enemy[], int mgkPwr, int tmpStat[]){
    int youGues,cpuGues=rand()%3+1,                   //Variables for enemy and player magic guess
    eBonus=rand()%3+1;                                 //Variable for enemy damage bonus
    //Output which element user wants to summon; User initiates 1, 2 or 3
    cout<<"Choose an element:\n"<<"Fire '1'\n"<<"Water '2'\n"<<"Earth '3'\n";
    cin>>youGues;
    if(youGues==cpuGues) enemy[0]-=(stats[2]*mgkPwr); //If player guesses right; Damage with magik pwr
    multiplied by INT
    else enemy[0]-=(stats[2]*1.25);                     //Else player guesses wrong; Damage with mgk mult. by
    1.25
    tmpStat[0]-=(enemy[1]*eBonus);                     //User damaged by enemy's attack mult. by bonus
}
//Function to display and utilize shop
void shop(int stats[], int &pGold){
    int item=1;                                         //Variable to control which buff is purchased
    //Do-while loop to access shop
    do{
        //Output all 9 item buffs with gold prices
        cout<<"G: 3500  "<<"G: 3500  "<<"G: 3500\n";
        cout<<"ATK +35  "<<"INT +35  "<<"HP +450\n";
        cout<<" (1)    "<<" (2)    "<<" (3)  \n"<<endl;
        cout<<"G: 7500  "<<"G: 7500  "<<"G: 7500\n";
        cout<<"ATK +75  "<<"INT +75  "<<"HP +1000\n";
        cout<<" (4)    "<<" (5)    "<<" (6)  \n"<<endl;
        cout<<"G: 15000 "<<"G: 15000 "<<"G: 15000\n";
        cout<<"ATK +175  "<<"INT +175  "<<"HP +2000\n";
        cout<<" (7)    "<<" (8)    "<<" (9)  \n"<<endl;
        cout<<"Gold: "<<pGold<<endl;                     //Output user's gold
        cout<<"(0) to Exit\n";                           //Output how to exit shop
        cin>>item;                                         //User initiates what item to buy
    }while(item);
    //Switch to purchase player's selected buff
    switch(item){
        case 1: if(pGold<3500) cout<<"Insufficient Funds!\n"; //If gold insufficient
        else {                                           //Else apply buff/subtract gold cost
            stats[1]+=35;
            pGold-=3500;
        }break;
        case 2: if(pGold<3500) cout<<"Insufficient Funds!\n"; //If gold insufficient
        else {                                           //Else apply buff/subtract gold cost
            stats[2]+=35;
            pGold-=3500;
        }break;
        case 3: if(pGold<3500) cout<<"Insufficient Funds!\n"; //If gold insufficient
        else {                                           //Else apply buff/subtract gold cost
            stats[0]+=450;
            pGold-=3500;
        }break;
        case 4: if(pGold<7500) cout<<"Insufficient Funds!\n"; //If gold insufficient
        else {                                           //Else apply buff/subtract gold cost
            stats[1]+=75;
            pGold-=7500;
        }break;
        case 5: if(pGold<7500) cout<<"Insufficient Funds!\n"; //If gold insufficient
        else {                                           //Else apply buff/subtract gold cost
            stats[2]+=75;
            pGold-=7500;
        }break;
        case 6: if(pGold<7500) cout<<"Insufficient Funds!\n"; //If gold insufficient
        else {                                           //Else apply buff/subtract gold cost
            stats[0]+=1000;
            pGold-=7500;
        }break;
        case 7: if(pGold<15000) cout<<"Insufficient Funds!\n"; //If gold insufficient
        else {                                           //Else apply buff/subtract gold cost
            stats[1]+=175;
            pGold-=15000;
        }break;
        case 8: if(pGold<15000) cout<<"Insufficient Funds!\n"; //If gold insufficient
        else {                                           //Else apply buff/subtract gold cost
            stats[2]+=175;
            pGold-=15000;
        }break;
        case 9: if(pGold<15000) cout<<"Insufficient Funds!\n"; //If gold insufficient
    }
}

```

```

        else {
            stats[0]+=2500;
            pGold-=15000;
        }
    }while(item>0&&item<10);
}
//Function to fight in the dungeon/complete the game
void fight(int stats[], int statSize, int &level, int &sublvl, int atkPwr, int mgkPwr, char map[][80],
string player, int &gold, bool &victory){
    int tmpStat[statSize],enemy[statSize], //Arrays for player stats and enemy stats
    attack; //Variable to control atk or mgk fighting
    char yesno='y'; //Variable to control dungeon loop
    while(yesno=='y' || yesno=='Y'){ //Loop to play dungeon
        bool sub=false, lvlwin=false; //Booleans to control sublevel/level completed
        tmpStat[0]=stats[0]; //Fill temporary stats with player's stats; HP
        tmpStat[1]=stats[1]; //Fill temporary stats with player's stats; ATK
        tmpStat[2]=stats[2]; //Fill temporary stats with player's stats; INT
        //If player on level 1
        if(level==1){
            //If player on sublevel 1
            if(sublvl==1){
                cout<<"Level 1 - 1\n"; //Output level and sublevel
                enemy[0]=500; enemy[1]=5; //Set enemy stats
                while(enemy[0]>0&&tmpStat[0]>0){ //Loop to fight
                    //Output enemy and player HP
                    cout<<"Knight I " <<player<<endl<<"HP : "<<enemy[0]<<" HP
:"<<tmpStat[0]<<endl<<endl;
                    cout<<"ATTACK (Enter 1)"<<endl<<"MAGIC (Enter 2)\n"; //Output atk or mgk
                    cin>>attack; //User initiates attack
                    if(attack==1) atkFite(stats,enemy,atkPwr,tmpStat); //If atk; damage function
                    else if(attack==2) mgkFite(stats,enemy,mgkPwr,tmpStat); //Else if mgk; damage function
                    else cout<<"Enter 1 or 2!\n"; //Else invalid entry
                }
                if(enemy[0]<=0&&tmpStat[0]>0){ //If sublevel complete
                    cout<<"VICTORY!\n"<<"Stage Cleared!\n"; //Output player wins
                    //Output rewards and buffs earned
                    cout<<"You earned 500 Gold!\n"<<"HP +50\n"<<"ATK +3\n"<<"INT +3\n";
                    gold+=500; stats[0]+=50; stats[1]+=3; stats[2]+=3; //Add rewards and buffs to totals
                    map[5][0]='X'; //Map position of sublevel 'X' for
complete
                }
                sub=true; //Sublevel boolean true
            }
            else cout<<"DEFEAT..!\n"; //Else sublevel incomplete
        }
        //Else if player on sublevel 2
        else if(sublvl==2){
            cout<<"Level 1 - 2\n"; //Output level and sublevel
            enemy[0]=750; enemy[1]=30; //Set enemy stats
            while(enemy[0]>0&&tmpStat[0]>0){ //Loop to fight
                //Output enemy and player HP
                cout<<"Knight II " <<player<<endl<<"HP : "<<enemy[0]<<" HP
:"<<tmpStat[0]<<endl<<endl;
                cout<<"ATTACK (Enter 1)"<<endl<<"MAGIC (Enter 2)\n"; //Output atk or mgk
                cin>>attack; //User initiates attack
                if(attack==1) atkFite(stats,enemy,atkPwr,tmpStat); //If atk; damage function
                else if(attack==2) mgkFite(stats,enemy,mgkPwr,tmpStat); //Else if mgk; damage function
                else cout<<"Enter 1 or 2!\n"; //Else invalid entry
            }
            if(enemy[0]<=0&&tmpStat[0]>0){ //If sublevel/level complete
                cout<<"VICTORY!\n"<<"Stage Cleared!\n"; //Output player wins
                //Output rewards and buffs earned
                cout<<"You earned 1000 Gold!\n"<<"HP +100\n"<<"ATK +5\n"<<"INT +5\n";
                gold+=1000; stats[0]+=100; stats[1]+=5; stats[2]+=5; //Add rewards and buffs to totals
                map[5][1]='X'; //Map position of sublevel 'X' for
complete
            }
            lvlwin=true; //Level win boolean true
        }
        else cout<<"DEFEAT..!\n"; //Else sublevel/level incomplete
    }
}
//Else if player on level 2
else if(level==2){
    //If player on sublevel 1
    if(sublvl==1){
        cout<<"Level 2 - 1\n"; //Output level and sublevel
        enemy[0]=1000; enemy[1]=55; //Set enemy stats
        while(enemy[0]>0&&tmpStat[0]>0){ //Loop to fight
            //Output enemy and user HP
            cout<<"Knight III " <<player<<endl<<"HP : "<<enemy[0]<<" HP
:"<<tmpStat[0]<<endl<<endl;
            cout<<"ATTACK (Enter 1)"<<endl<<"MAGIC (Enter 2)\n"; //Output atk or mgk
            cin>>attack; //User initiates attack
            if(attack==1) atkFite(stats,enemy,atkPwr,tmpStat); //If atk; damage function
            else if(attack==2) mgkFite(stats,enemy,mgkPwr,tmpStat); //Else if mgk; damage function
            else cout<<"Enter 1 or 2!\n"; //Else invalid entry
        }
        if(enemy[0]<=0&&tmpStat[0]>0){ //If sublevel complete
            cout<<"VICTORY!\n"<<"Stage Cleared!\n"; //Output player wins
            //Output rewards and buffs earned
            cout<<"You earned 1200 Gold!\n"<<"HP +120\n"<<"ATK +6\n"<<"INT +6\n";
            gold+=1200; stats[0]+=120; stats[1]+=6; stats[2]+=6; //Add rewards and buffs to totals

```

```

        map[3][11]='X'; //Map position of sublevel 'X' for
complete
        sub=true; //Sublevel boolean true
    }
    else cout<<"DEFEAT..!\n"; //Else sublevel incomplete
}
//Else if player on sublevel 2
else if(sublvl==2){
    cout<<"Level 2 - 2\n"; //Output level and sublevel
    enemy[0]=1200; enemy[1]=65; //Initiate enemy stats
    while(enemy[0]>0&&tmpStat[0]>0){ //Loop to fight
        //Output enemy and player HP
        cout<<"The Dark Knight " <<player<<endl<<"HP : "<<enemy[0]<<" HP
: "<<tmpStat[0]<<endl<<endl;
        cout<<"ATTACK (Enter 1)"<<endl<<"MAGIC (Enter 2)\n"; //Output atk or mgk
        cin>>attack; //User initiates attack
        if(attack==1) atkFite(stats,enemy,atkPwr,tmpStat); //If atk; damage function
        else if(attack==2) mgkFite(stats,enemy,mgkPwr,tmpStat); //Else if mgk; damage function
        else cout<<"Enter 1 or 2!\n"; //Else invalid entry
    }
    if(enemy[0]<=0&&tmpStat[0]>0){ //If sublevel/level complete
        cout<<"VICTORY!\n"<<"Stage Cleared!\n"; //Output player wins
        //Output rewards and buffs earned
        cout<<"You earned 2000 Gold!\n"<<"HP +200\n"<<"ATK +9\n"<<"INT +9\n";
        gold+=2000; stats[0]+=200; stats[1]+=9; stats[2]+=9; //Add buffs and rewards to totals
        map[3][12]='X'; //Map position of sublevel 'X' for
complete
        lvlwin=true; //Level win boolean true
    }
    else cout<<"DEFEAT..!\n"; //Else sublevel/level incomplete
}
}
//Else if player on level 3
else if(level==3){
    //If player on sublevel 1
    if(sublvl==1){
        cout<<"Level 3 - 1\n"; //Output level and sublevel
        enemy[0]=1400; enemy[1]=70; //Enemy stats set
        while(enemy[0]>0&&tmpStat[0]>0){ //Loop to fight
            //Output enemy and user HP
            cout<<"Assassin 1 " <<player<<endl<<"HP : "<<enemy[0]<<" HP
: "<<tmpStat[0]<<endl<<endl;
            cout<<"ATTACK (Enter 1)"<<endl<<"MAGIC (Enter 2)\n"; //Outputs atk or mgk
            cin>>attack; //User initiates attack
            if(attack==1) atkFite(stats,enemy,atkPwr,tmpStat); //If atk; damage function
            else if(attack==2) mgkFite(stats,enemy,mgkPwr,tmpStat); //Else if mgk; damage function
            else cout<<"Enter 1 or 2!\n"; //Else invalid entry
        }
        if(enemy[0]<=0&&tmpStat[0]>0){ //If sublevel complete
            cout<<"VICTORY!\n"<<"Stage Cleared!\n"; //Output user wins
            //Output buffs and rewards earned
            cout<<"You earned 2250 Gold!\n"<<"HP +250\n"<<"ATK +12\n"<<"INT +12\n";
            gold+=2250; stats[0]+=250; stats[1]+=12; stats[2]+=12; //Add buffs and rewards to totals
            map[7][22]='X'; //Map position of sublevel 'X'
for complete
            sub=true; //Sublevel boolean true
        }
        else cout<<"DEFEAT..!\n"; //Else sublevel incomplete
    }
    //Else if player on sublevel 2
    else if(sublvl==2){
        cout<<"Level 3 - 2\n"; //Output level and sublevel
        enemy[0]=2500; enemy[1]=78; //Set enemy stats
        while(enemy[0]>0&&tmpStat[0]>0){ //Loop to fight
            //Output enemy and user HP
            cout<<"Assassin Leader " <<player<<endl<<"HP : "<<enemy[0]<<" HP
: "<<tmpStat[0]<<endl<<endl;
            cout<<"ATTACK (Enter 1)"<<endl<<"MAGIC (Enter 2)\n"; //Output atk or mgk
            cin>>attack; //User initiates attack
            if(attack==1) atkFite(stats,enemy,atkPwr,tmpStat); //If atk; damage function
            else if(attack==2) mgkFite(stats,enemy,mgkPwr,tmpStat); //Else if mgk; damage function
            else cout<<"Enter 1 or 2!\n"; //Else invalid entry
        }
        if(enemy[0]<=0&&tmpStat[0]>0){ //If sublevel/level complete
            cout<<"VICTORY!\n"<<"Stage Cleared!\n"; //Output player wins
            //Output rewards and buffs earned
            cout<<"You earned 3000 Gold!\n"<<"HP +320\n"<<"ATK +16\n"<<"INT +16\n";
            gold+=3000; stats[0]+=320; stats[1]+=16; stats[2]+=16; //Add buffs and rewards to totals
            map[7][23]='X'; //Map position of sublevel 'X'
for complete
            lvlwin=true; //Level win boolean true
        }
        else cout<<"DEFEAT..!\n"; //Else sublevel/level incomplete
    }
}
}
//Else if player on level 4
else if(level==4){
    //If player on sublevel 1
    if(sublvl==1){
        cout<<"Level 4 - 1\n"; //Output level and sublevel
        enemy[0]=3000; enemy[1]=90; //Set enemy stats
        while(enemy[0]>0&&tmpStat[0]>0){ //Loop to fight

```

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//Output enemy and player HP
cout<<"Bandit 1  "<<player<<endl<<"HP :"<<enemy[0]<<"  HP
:"<<tmpStat[0]<<endl<<endl;
cout<<"ATTACK (Enter 1)"<<endl<<"MAGIC (Enter 2)\n"; //Output atk or mgk
cin>>attack; //User initiates attack
if(attack==1) atkFite(stats,enemy,atkPwr,tmpStat); //If atk; damage function
else if(attack==2) mgkFite(stats,enemy,mgkPwr,tmpStat); //Else if mgk; damage function
else cout<<"Enter 1 or 2!\n"; //Else invalid entry
}
if(enemy[0]<=0&&tmpStat[0]>0){ //If sublevel complete
cout<<"VICTORY!\n"<<"Stage Cleared!\n"; //Ouput player wins
//Output rewards and buffs earned
cout<<"You earned 3250 Gold!\n"<<"HP +350\n"<<"ATK +18\n"<<"INT +18\n";
gold+=3250; stats[0]+=350; stats[1]+=18; stats[2]+=18; //Add buffs and rewards to totals
map[6][33]='X'; //Map position of sublevel 'X'
for complete
sub=true; //Sublevel boolean true
}
else cout<<"DEFEAT..!\n"; //Else sublevel incomplete
}
//Else if player on sublevel 2
else if(sublvl==2){
cout<<"Level 4 - 2\n"; //Output level and sub
enemy[0]=3500; enemy[1]=100; //Enemy stats set
while(enemy[0]>0&&tmpStat[0]>0){ //Loop to fight
//Output enemy and player HP
cout<<"Bandit II  "<<player<<endl<<"HP :"<<enemy[0]<<"  HP
:"<<tmpStat[0]<<endl<<endl;
cout<<"ATTACK (Enter 1)"<<endl<<"MAGIC (Enter 2)\n"; //Output atk or mgk
cin>>attack; //User initiates attack
if(attack==1) atkFite(stats,enemy,atkPwr,tmpStat); //If atk; damage function
else if(attack==2) mgkFite(stats,enemy,mgkPwr,tmpStat); //Else if mgk; damage function
else cout<<"Enter 1 or 2!\n"; //Else invalid entry
}
if(enemy[0]<=0&&tmpStat[0]>0){ //If sublevel complete
cout<<"VICTORY!\n"<<"Stage Cleared!\n"; //Output player wins
//Output rewards and buffs earned
cout<<"You earned 3500 Gold!\n"<<"HP +400\n"<<"ATK +21\n"<<"INT +21\n";
gold+=3500; stats[0]+=400; stats[1]+=21; stats[2]+=21; //Add buffs and rewards to totals
map[6][34]='X'; //Map position of sublevel 'X'
for complete
sub=true; //Sublevel boolean true
}
else cout<<"DEFEAT..!\n"; //Else sublevel incomplete
}
//Else if player on sublevel 3
else if(sublvl==3){
cout<<"Level 4 - 3\n"; //Output level and sublevel
enemy[0]=4000; enemy[1]=118; //Set enemy stat array
while(enemy[0]>0&&tmpStat[0]>0){ //Loop to fight
//Output enemy and player HP
cout<<"Bandit King  "<<player<<endl<<"HP :"<<enemy[0]<<"  HP
:"<<tmpStat[0]<<endl<<endl;
cout<<"ATTACK (Enter 1)"<<endl<<"MAGIC (Enter 2)\n"; //Output mgk or atk
cin>>attack; //User initiates attack
if(attack==1) atkFite(stats,enemy,atkPwr,tmpStat); //If atk; damage with function
else if(attack==2) mgkFite(stats,enemy,mgkPwr,tmpStat); //Else if mgk; damage with
function
else cout<<"Enter 1 or 2!\n"; //Else invalid entry
}
if(enemy[0]<=0&&tmpStat[0]>0){ //If sublevel/level complete
cout<<"VICTORY!\n"<<"Stage Cleared!\n"; //Output player wins
//Output buffs and rewards earned
cout<<"You earned 4250 Gold!\n"<<"HP +450\n"<<"ATK +25\n"<<"INT +25\n";
gold+=4250; stats[0]+=450; stats[1]+=25; stats[2]+=25; //Add buffs and rewards to totals
map[6][35]='X'; //Map position of sublevel 'X'
for complete
lvlwin=true; //Level win boolean true
}
else cout<<"DEFEAT..!\n"; //Else sublevel/level incomplete
}
}
//Else if player on level 5
else if(level==5){
//If player on sublevel 1
if(sublvl==1){
cout<<"Level 5 - 1\n"; //Output level and sublevel
enemy[0]=4600; enemy[1]=135; //Set enemy stat array
while(enemy[0]>0&&tmpStat[0]>0){ //Loop to fight enemy
//Output enemy and user HP
cout<<"Demi-God 1  "<<player<<endl<<"HP :"<<enemy[0]<<"  HP
:"<<tmpStat[0]<<endl<<endl;
cout<<"ATTACK (Enter 1)"<<endl<<"MAGIC (Enter 2)\n"; //Output atk or mgk
cin>>attack; //User initiates attack
if(attack==1) atkFite(stats,enemy,atkPwr,tmpStat); //If atk; damage enemy with
function
else if(attack==2) mgkFite(stats,enemy,mgkPwr,tmpStat); //Else if mgk; damage enemy with
function
else cout<<"Enter 1 or 2!\n"; //Else invalid entry
}
if(enemy[0]<=0&&tmpStat[0]>0){ //If sublevel complete
cout<<"VICTORY!\n"<<"Stage Cleared!\n"; //Output player wins

```

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//Output rewards and buffs earned
cout<<"You earned 4500 Gold!\n"<<"HP +450\n"<<"ATK +25\n"<<"INT +25\n";
gold+=4500; stats[0]+=450; stats[1]+=25; stats[2]+=25; //Add buffs and rewards to totals
map[4][44]='X'; //Map position of sublevel 'X'

for complete
    sub=true; //Sublevel boolean true
}
else cout<<"DEFEAT...\n"; //Else sublevel incomplete
}
//Else if player on sublevel 2
else if(sublvl==2){
    cout<<"Level 5 - 2\n"; //Output level and sublevel
    enemy[0]=5100; enemy[1]=150; //Set enemy stat array
    while(enemy[0]>0&&tmpStat[0]>0){ //Loop to fight enemy
        //Output enemy and player HP
        cout<<"Demi-God II " <<player<<endl<<"HP : "<<enemy[0]<<" HP
:"<<tmpStat[0]<<endl<<endl;
        cout<<"ATTACK (Enter 1)"<<endl<<"MAGIC (Enter 2)\n"; //Output atk or mgk
        cin>>attack; //User initiates attack
        if(attack==1) atkFite(stats,enemy,atkPwr,tmpStat); //If atk; damage enemy with

function
        else if(attack==2) mgkFite(stats,enemy,mgkPwr,tmpStat); //Else if mgk; damage enemy with

function
        else cout<<"Enter 1 or 2!\n"; //Else invalid entry
    }
    if(enemy[0]<=0&&tmpStat[0]>0){ //If sublevel complete
        cout<<"VICTORY!\n"<<"Stage Cleared!\n"; //Output player wins
        //Output buffs and rewards earned
        cout<<"You earned 4500 Gold!\n"<<"HP +450\n"<<"ATK +25\n"<<"INT +25\n";
        gold+=4500; stats[0]+=450; stats[1]+=25; stats[2]+=25; //Add buffs and rewards to totals
        map[4][45]='X'; //Map position of sublevel 'X'

for complete
        sub=true; //sublevel boolean true
    }
    else cout<<"DEFEAT...\n"; //Else sublevel incomplete
}
//Else if player on sublevel 3
else if(sublvl==3){
    cout<<"Level 5 - 3\n"; //Output level and sublevel
    enemy[0]=6000; enemy[1]=180; //Set enemy array stats
    while(enemy[0]>0&&tmpStat[0]>0){ //Loop to fight enemy
        //Output enemy and player HP
        cout<<"Fierce Diety " <<player<<endl<<"HP : "<<enemy[0]<<" HP
:"<<tmpStat[0]<<endl<<endl;
        cout<<"ATTACK (Enter 1)"<<endl<<"MAGIC (Enter 2)\n"; //Output atk or mgk
        cin>>attack; //User initiates attack
        if(attack==1) atkFite(stats,enemy,atkPwr,tmpStat); //If atk; damage enemy from

function
        else if(attack==2) mgkFite(stats,enemy,mgkPwr,tmpStat); //Else if mgk; damage enemy from

function
        else cout<<"Enter 1 or 2!\n"; //Else invalid entry
    }
    if(enemy[0]<=0&&tmpStat[0]>0){ //Output player wins
        cout<<"VICTORY!\n"<<"Stage Cleared!\n"; //Output player wins
        //Output buffs and rewards earned
        cout<<"You earned 5000 Gold!\n"<<"HP +525\n"<<"ATK +30\n"<<"INT +30\n";
        gold+=5000; stats[0]+=525; stats[1]+=30; stats[2]+=30; //Add buffs and rewards to totals
        map[4][46]='X'; //Map position of sublevel 'X'

for complete
        lvlwin=true; //Level win boolean true
    }
    else cout<<"DEFEAT...\n"; //Else sublevel/level incomplete
}
}
//Else if player on level 6
else if(level==6){
    //If player on sublevel 1
    if(sublvl==1){
        cout<<"Level 6 - 1\n"; //Output level and sublevel
        enemy[0]=7000; enemy[1]=218; //Set enemy stat array
        while(enemy[0]>0&&tmpStat[0]>0){ //Loop to fight enemy
            //Output enemy and player HP
            cout<<"Guardian 1 " <<player<<endl<<"HP : "<<enemy[0]<<" HP
:"<<tmpStat[0]<<endl<<endl;
            cout<<"ATTACK (Enter 1)"<<endl<<"MAGIC (Enter 2)\n"; //Output atk or mgk
            cin>>attack; //User initiates attack
            if(attack==1) atkFite(stats,enemy,atkPwr,tmpStat); //If atk; damage enemy from

function
            else if(attack==2) mgkFite(stats,enemy,mgkPwr,tmpStat); //Else if mgk; damage enemy from

function
            else cout<<"Enter 1 or 2!\n"; //Else invalid entry
        }
        if(enemy[0]<=0&&tmpStat[0]>0){ //If sublevel complete
            cout<<"VICTORY!\n"<<"Stage Cleared!\n"; //Output player wins
            //Output buffs and rewards
            cout<<"You earned 5000 Gold!\n"<<"HP +500\n"<<"ATK +28\n"<<"INT +28\n";
            gold+=5000; stats[0]+=500; stats[1]+=28; stats[2]+=28; //Add buffs and rewards to totals
            map[2][55]='X'; //Map position of sublevel 'X'

for complete
            sub=true; //Sublevel boolean true
        }
        else cout<<"DEFEAT...\n"; //Else sublevel incomplete
    }
}

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    }
    //Else if player on sublevel 2
    else if(sublvl==2){
        cout<<"Level 6 - 2\n";
        enemy[0]=8200; enemy[1]=260; //Output level and sublevel
        while(enemy[0]>0&&tmpStat[0]>0){ //Set enemy stat array
            //Output enemy and player HP
            cout<<"Guardian II " <<player<<endl<<"HP : "<<enemy[0]<<" HP
:"<<tmpStat[0]<<endl<<endl; //Loop to fight enemy
            cout<<"ATTACK (Enter 1)"<<endl<<"MAGIC (Enter 2)\n"; //Output atk or mgk
            cin>>attack; //User initiates attack
            if(attack==1) atkFite(stats,enemy,atkPwr,tmpStat); //If atk; damage enemy from
function
            else if(attack==2) mgkFite(stats,enemy,mgkPwr,tmpStat); //Else if mgk; damage enemy from
function
        }
        else cout<<"Enter 1 or 2!\n"; //Else invalid entry
    }
    if(enemy[0]<=0&&tmpStat[0]>0){ //If sublevel complete
        cout<<"VICTORY!\n"<<"Stage Cleared!\n"; //Output player wins
        //Output rewards and buffs
        cout<<"You earned 5000 Gold!\n"<<"HP +500\n"<<"ATK +28\n"<<"INT +28\n";
        gold+=5000; stats[0]+=500; stats[1]+=28; stats[2]+=28; //Add buffs and rewards to totals
        map[2][56]='X'; //Map position of sublevel 'X'
for complete
        sub=true; //Set sublevel boolean to true
    }
    else cout<<"DEFEAT..!\n"; //Else sublevel incomplete
}
//Else if player on sublevel 3
else if(sublvl==3){
    cout<<"Level 6 - 3\n";
    enemy[0]=9500; enemy[1]=295; //Output level and sublevel
    while(enemy[0]>0&&tmpStat[0]>0){ //Set enemy stat array
        //Output enemy and player HP
        cout<<"The Gate Keeper " <<player<<endl<<"HP : "<<enemy[0]<<" HP
:"<<tmpStat[0]<<endl<<endl; //Loop to fight enemy
        cout<<"ATTACK (Enter 1)"<<endl<<"MAGIC (Enter 2)\n"; //Output atk or mgk
        cin>>attack; //User initiate attack
        if(attack==1) atkFite(stats,enemy,atkPwr,tmpStat); //If atk; damage enemy with
function
        else if(attack==2) mgkFite(stats,enemy,mgkPwr,tmpStat); //Else if mgk; damage enemy with
function
    }
    else cout<<"Enter 1 or 2!\n"; //Else invalid entry
}
    if(enemy[0]<=0&&tmpStat[0]>0){ //If sublevel and level complete
        cout<<"VICTORY!\n"<<"Stage Cleared!\n"; //Output player wins
        //Output rewards and buffs
        cout<<"You earned 6000 Gold!\n"<<"HP +600\n"<<"ATK +35\n"<<"INT +35\n";
        gold+=6000; stats[0]+=600; stats[1]+=35; stats[2]+=35; //Add rewards and buffs to totals
        map[2][57]='X'; //Map position of sublevel 'X'
for complete
        lvlwin=true; //Level win boolean set to true
    }
    else cout<<"DEFEAT..!\n"; //Else level incomplete
}
}
//Else if player on level 7
else if(level==7){
    //If player on sublevel 1
    if(sublvl==1){
        cout<<"Level 7 - 1\n";
        enemy[0]=11500; enemy[1]=332; //Output level & sublevel
        while(enemy[0]>0&&tmpStat[0]>0){ //Set enemy stats array
            //Output enemy's & player's HP
            cout<<"Star Warrior " <<player<<endl<<"HP : "<<enemy[0]<<" HP
:"<<tmpStat[0]<<endl<<endl; //While-Loop to fight
            cout<<"ATTACK (Enter 1)"<<endl<<"MAGIC (Enter 2)\n"; //Output atk or mgk
            cin>>attack; //User initiates atk or mgk
            if(attack==1) atkFite(stats,enemy,atkPwr,tmpStat); //If attack; attack enemy from
function
            else if(attack==2) mgkFite(stats,enemy,mgkPwr,tmpStat); //Else if magic; attack enemy
from function
        }
        else cout<<"Enter 1 or 2!\n"; //Else if invalid entry
    }
    if(enemy[0]<=0&&tmpStat[0]>0){ //If sublevel complete
        cout<<"VICTORY!\n"<<"Stage Cleared!\n"; //Output user wins
        //Output rewards and buffs
        cout<<"You earned 6250 Gold!\n"<<"HP +575\n"<<"ATK +33\n"<<"INT +33\n";
        gold+=6250; stats[0]+=575; stats[1]+=33; stats[2]+=33; //Add buffs and gold to totals
        map[4][66]='X'; //Map position of sublevel 'X'
for complete
        sub=true; //Sublevel boolean set to true
    }
    else cout<<"DEFEAT..!\n"; //Else sublevel incomplete
}
}
//Else If player on sublevel 2
else if(sublvl==2){
    cout<<"Level 7 - 2\n";
    enemy[0]=13500; enemy[1]=390; //Output level and sublevel
    while(enemy[0]>0&&tmpStat[0]>0){ //Set enemy array stats
        //Output enemy and player HP
        cout<<"The Space Bender " <<player<<endl<<"HP : "<<enemy[0]<<" HP

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: "<<tmpStat[0]<<endl<<endl;
        cout<<"ATTACK (Enter 1)"<<endl<<"MAGIC (Enter 2)\n"; //Output atk or mgk
        cin>>attack; //User initiates attack
        if(attack==1) atkFite(stats,enemy,atkPwr,tmpStat); //If atk; damage enemy from
function
        else if(attack==2) mgkFite(stats,enemy,mgkPwr,tmpStat); //Else if mgk; damage enemy from
function
        else cout<<"Enter 1 or 2!\n"; //Else invalid entry
    }
    if(enemy[0]<=0&&tmpStat[0]>0){ //If sublevel completed
        cout<<"VICTORY!\n"<<"Stage Cleared!\n"; //Output user wins
        //Output rewards and buffs
        cout<<"You earned 6250 Gold!\n"<<"HP +575\n"<<"ATK +33\n"<<"INT +33\n";
        gold+=6250; stats[0]+=575; stats[1]+=33; stats[2]+=33; //Add buffs and gold to totals
        map[4][67]='X'; //Map position of sublevel 'X'
for complete
        sub=true; //Sublevel boolean set to true
    }
    else cout<<"DEFEAT..!\n"; //Else sublevel incomplete
}
//Else If player on sublevel 3
else if(sublvl==3){
    cout<<"Level 7 - 3\n"; //Output level and sublevel
    enemy[0]=17500; enemy[1]=475; //Set enemy stats array
    while(enemy[0]>0&&tmpStat[0]>0){ //Loop to fight enemy
        //Output enemy and player HP
        cout<<"The Time Lord " <<player<<endl<<"HP : "<<enemy[0]<<" HP
: "<<tmpStat[0]<<endl<<endl;
        cout<<"ATTACK (Enter 1)"<<endl<<"MAGIC (Enter 2)\n"; //Output atk or mgk
        cin>>attack; //User initiates attack
        if(attack==1) atkFite(stats,enemy,atkPwr,tmpStat); //If atk; damage enemy with
function
        else if(attack==2) mgkFite(stats,enemy,mgkPwr,tmpStat); //Else if mgk; damage enemy with
function
        else cout<<"Enter 1 or 2!\n"; //Else invalid entry
    }
    if(enemy[0]<=0&&tmpStat[0]>0){ //If sublevel and level completed
        cout<<"VICTORY!\n"<<"Stage Cleared!\n"; //Output user wins
        //Output rewards and buffs
        cout<<"You earned 10000 Gold!\n"<<"HP +1000\n"<<"ATK +50\n"<<"INT +50\n";
        gold+=10000; stats[0]+=1000; stats[1]+=50; stats[2]+=50; //Add buffs and gold to totals
        map[4][68]='X'; //Map position of sublevel 'X'
for complete
        lvlwin=true; //Level win boolean set to true
    }
    else cout<<"DEFEAT..!\n"; //Else sublevel and level
incomplete
}
}
    if(sub==true) sublvl++; //If sublevel complete, add 1 to sublevel
    if(lvlwin==true){ //If level complete
        level++; //Add 1 to level
        sublvl=1; //Reset sublevel to 1
    }
    if(level==8) { //If game/dungeon has been won
        cout<<"DUNGEON COMPLETE!!!\n"; //Output victory to user
        victory=true; //Victory boolean set to true to end game loop
        yesno='n'; //Character set to 'n' to end dungeon function
    }
    else{ //Else game/dungeon incomplete
        cout<<"Continue fighting?\n"; //Output to user
        cin>>yesno; //User initiates to continue or stop dungeon fighting
    }
}
}
//Function to Display Player's stats
void pStats(int stats[], string statNme[], int statSiz, string player, int gold){
    char yesno='y'; //Character to control while-loop
    cout<<player<<"'s Statistics :\n"; //Output player's name
    for(int n=0;n<statSiz;n++){ //For-loop to display player's stats
        cout<<statNme[n]<<" " <<stats[n]<<endl; //Output stat name and stat value
    }
    cout<<"Gold: " <<gold<<endl; //Output player's gold
    while(yesno=='y' || yesno=='Y'){ //While-loop to view or not view statistics
        //Output; User initiates to keep viewing
        cout<<"Continue Viewing Stats? ('n' - to exit )\n";
        cin>>yesno;
    }
}
//Function to Display game map
void mapDisp(char gameMap[][80], int mapSiz1, int mapSiz2){
    char yesno='y'; //Character for while-loop
    for(int n=0;n<mapSiz1;n++){ //Loop to display each row of map array
        for(int m=0;m<mapSiz2;m++){ //Nested-Loop to display each column of map array
            cout<<gameMap[n][m]; //Output each character in array
            if(m==mapSiz2-1) cout<<endl; //If map reaches row length, go to next line
        }
    }
    cout<<endl; //Output line space between game map and text
    while(yesno=='y' || yesno=='Y'){ //While-Loop to view or not view game map
        //Output; User initializes to keep viewing or exit
        cout<<"Continue Viewing Map? ('n' - to exit)\n";
    }
}

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        cin>>yesno;
    }
}
//Function to initialize/create the game map
void initMap(char map[][80], int siz1, int siz2){
    for(int n=0;n<siz1;n++){
        for(int m=0;m<siz2;m++){
            if(n==0) map[n][m]='#';
            else if(n==2&&m==11) map[n][m]='L';
            else if(n==2&&m==12) map[n][m]='v';
            else if(n==2&&m==13) map[n][m]='2';
            else if(n==3&&(m>10&&m<13)) map[n][m]='O';
            else if(n==4&&m==0) map[n][m]='L';
            else if(n==4&&m==1) map[n][m]='v';
            else if(n==4&&m==2) map[n][m]='1';
            else if(n==5&&(m>-1&&m<2)) map[n][m]='O';
            else if(n==6&&m==22) map[n][m]='L';
            else if(n==6&&m==23) map[n][m]='v';
            else if(n==6&&m==24) map[n][m]='3';
            else if(n==7&&(m>21&&m<24)) map[n][m]='O';
            else if(n==5&&m==33) map[n][m]='L';
            else if(n==5&&m==34) map[n][m]='v';
            else if(n==5&&m==35) map[n][m]='4';
            else if(n==6&&(m>32&&m<36)) map[n][m]='O';
            else if(n==3&&m==44) map[n][m]='L';
            else if(n==3&&m==45) map[n][m]='v';
            else if(n==3&&m==46) map[n][m]='5';
            else if(n==4&&(m>43&&m<47)) map[n][m]='O';
            else if(n==1&&m==55) map[n][m]='L';
            else if(n==1&&m==56) map[n][m]='v';
            else if(n==1&&m==57) map[n][m]='6';
            else if(n==2&&(m>54&&m<58)) map[n][m]='O';
            else if(n==3&&m==66) map[n][m]='L';
            else if(n==3&&m==67) map[n][m]='v';
            else if(n==3&&m==68) map[n][m]='7';
            else if(n==4&&(m>65&&m<69)) map[n][m]='O';
            else if(n==siz1-1) map[n][m]='#';
            else map[n][m]=' ';
        }
    }
}
//Function to fill player's stats based off of selected Attribute
void statFil(int stats[], string statNme[], int size, short att){
    //If attribute is strength
    if(att==1){
        for(int n=0;n<size;n++){
            if(n==0) {
                stats[n]=rand()%101+1500;
                statNme[n]="HP\n";
            }
            else if(n==1) {
                stats[n]=rand()%16+40;
                statNme[n]="ATK\n";
            }
            else if(n==2){
                stats[n]=rand()%11+20;
                statNme[n]="INT\n";
            }
        }
    }
    //Else if attribute is Intelligence
    else if(att==2){
        for(int n=0;n<size;n++){
            if(n==0) {
                stats[n]=rand()%101+1500;
                statNme[n]="HP\n";
            }
            else if(n==1){
                stats[n]=rand()%11+20;
                statNme[n]="ATK\n";
            }
            else if(n==2) {
                stats[n]=rand()%16+40;
                statNme[n]="INT\n";
            }
        }
    }
    //Else if attribute is endurance
    else if(att==3){
        for(int n=0;n<size;n++){
            if(n==0) {
                stats[n]=rand()%151+2000;
                statNme[n]="HP\n";
            }
            else if(n==1) {
                stats[n]=rand()%11+20;
                statNme[n]="ATK\n";
            }
            else if(n==2) {
                stats[n]=rand()%11+20;
                statNme[n]="INT\n";
            }
        }
    }
}

```

