

Project 1

<Text Based RPG>

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Introduction

Title: Text Based RPG

This is a text based rpg that has a basic introduction to the situation and deals with a battle against a creature. Kill the creature before the creature kills you!!

Summary

Project size: 215 lines

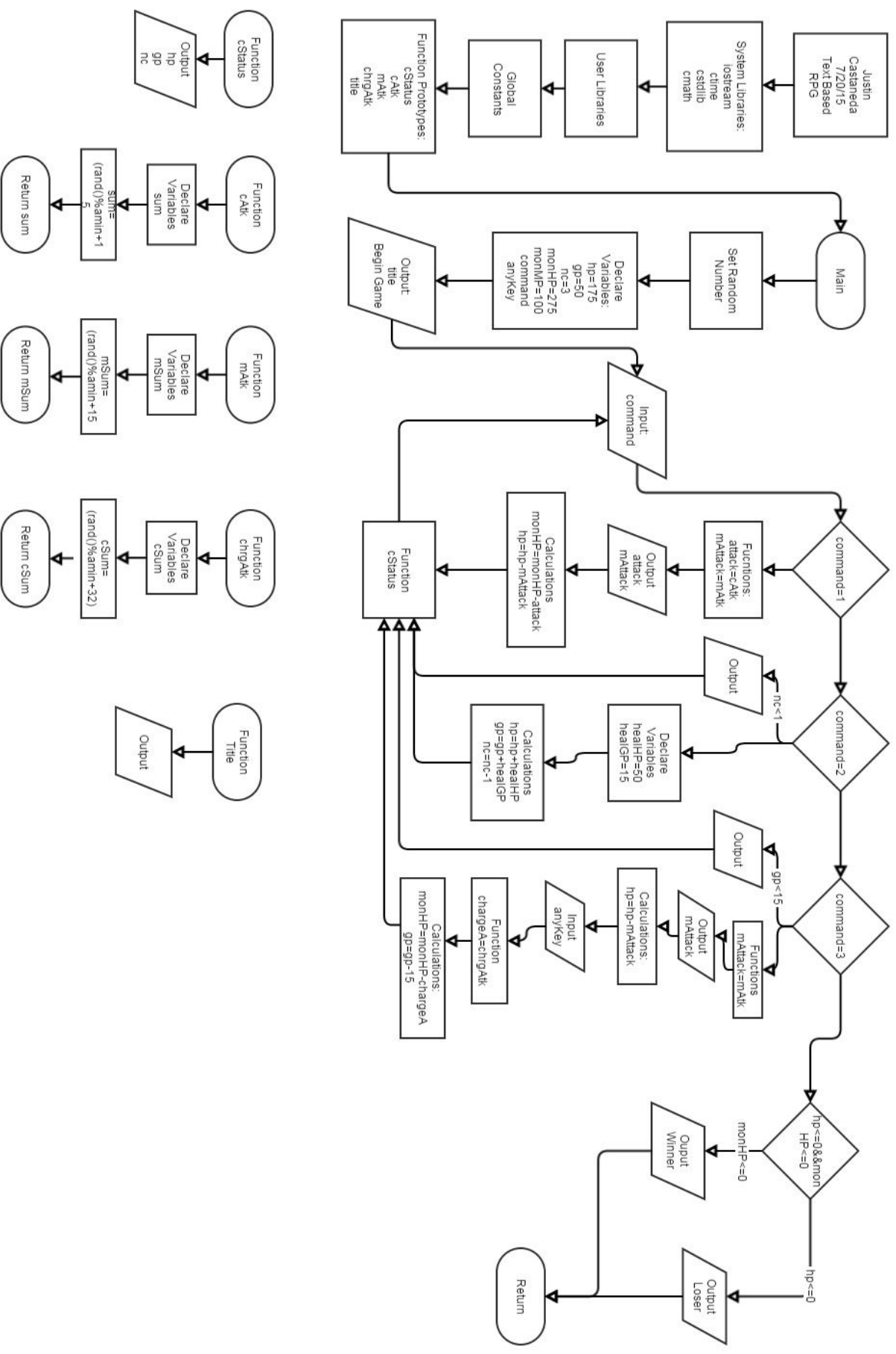
Number of Variables: 14 variables

Number of functions: 5

This project contains couple of lessons from the chapters. It starts off with basic cout statements and basic int variables. I decided to initialize a do while loop that keeps the battle commands going until either the creature or player's health power hits zero. They are function that controls the player and monster's health power as well as calculation the attack points and keeps track of their status.

Description

The main reason I programmed this project was to test my knowledge with a game that I've always found entertaining since I was a child.



Pseudo Code

Initialize

Title Screen

Player Starts Game

Input Command

do

If 1 is pressed

 Player Attacks Monster

 Monster Attacks Player

 Display status

Else if 2 is pressed

 Player recovers health and energy

 Displays Status

If no more recovering chances

 Doesn't recover

Else if 3 is pressed

 Player charges weapon-takes up 1 turn

 Monster Attacks

 Player uses weapon-Higher Damage

 Monster attacks

 Displays Status

If no more energy

 Doesn't fire.

While monster HP is ≤ 0 and Player's HP ≤ 0

If player's HP ≤ 0

 Display Game Over Screen

Else if Monster's HP ≤ 0

 Display Thank you for playing screen.

Type	Variable Name	Description	Location	
<i>Integer</i>	hp	Player's Health power	Main	
	gp	Player's gun energy	Main	
	nc	Number of recovery	Main	
	monHP	Monster's Health power	Main	
	monMP	Monster's Magic Power	Main	
	command	Enter Command option	Main	
	anyKey	to continue	Main	
	attack	random attack points	if (command ==1)	
	mAttack	monster attack points	if (command ==1) and (if command==3)	
	healHP	heals player	if(command==2)	
	healGP	recovers GP	if(command==2)	
	chargeA	Attack from charge gun	if(command==3)	
	sum	sum of player attack	cAtk function	
<i>Functions</i>	mSum	sum of monster attack	mAtk function	
	cSum	sum of charged attack	chrgAtk function	
	cStatus	Displays player current stats		
	cAtk	Calculates player attack points		
	mAtk	Calculates monster attack points		
	chrgAtk	Calculate charge attack points		
	title	displays title screen		

Program

```
//System Libraries
#include <iostream>
#include <cstdlib>
#include <cmath>
using namespace std;

//User Libraries

//Global Constant

//Function Prototypes
int cStatus(int,int,int);
int cAtk(int,int);
int mAtk(int,int);
int chrgAtk(int,int);
void title();

//Engage!
int main(int argc, char** argv) {
    //Set Random Number
    srand(static_cast<unsigned int>(time(0)));

    //Declare and Initialize Variables
    int hp=175;           //User's Starting Health Power
    int gp=50;           //User's Starting Gun Power
    int nc=3;            //Number of Nova Crystal Shards
    int monHP=275;        //Monster's Starting Health Points
    int monMP=100;        //Monster's Starting Dark Matter Points
    int command;         //Inputting command
    int anyKey;          //To continue

    //Output Game Intro
    title();
    cin.get();

    //Begin Game
    cout<<"\t\t\t*****Space Voyager*****"<<endl;
    cout<<"You received a distress signal from a ground station on Planet Bree "<<endl;
```

```

    cout<<"from the Alpha Centauri star system. When arriving you find that the ground
station "<<endl;
    cout<<"was under attacked. Upon further searching you find a survivor on their last
breath. "<<endl<<endl;
    cout<<"Survivor:A CREATURE DID THIS!! It came from the valley and attacked
us."<<endl;
    cout<<"It must of came for our resources for energy. It thrives from the Nova Crystals
"<<endl;
    cout<<"that we mine here."<<endl<<endl;
    cout<<"Filled with rage, you head out into the valley for revenge and encounter the
creature."<<endl<<endl;
    cout<<"All you have is your Galactic Gun and 3 Nova Crystal Shards(recovers 50 HP
and 15 GP)"<<endl;

```

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//Battle Sequence
do{
    //Selecting a command
    cout<<endl;
    cout<<"Select 1 to Attack, Select 2 to use Nova Crystal Shard, Select 3 to use
Charged Cannon"<<endl;
    cout<<"Input command...";
    cin>>command;
    cout<<endl;
    //Command 1 Attack
    if (command==1){
        int attack=cAtk(10,1);    //Initiates Player's Attack
        cout<<"You did "<<attack<<" damage to the creature."<<endl;
        monHP=monHP-attack;    //Subtracts from monster
        int mAttack=mAtk(15,1);    //Initiates Monster's Attack
        cout<<"The Creature did "<<mAttack<<" damage to you."<<endl;
        hp=hp-mAttack;    //Subtracts from player
        cStatus(hp,gp,nc);    //Displays current Status

        //Command 2 Healing
    }else if(command==2){
        if(nc<1){    //When nc<1 the player can't recover no more
            cout<<"You have no more Nova Crystals"<<endl;
        }else{

```

```

        int healHP=50;    //Recovers HP
        int healGP=15;    //Recovers GP
        hp=hp+healHP;
        gp=gp+15;
        nc=nc-1;
        cStatus(hp,gp,nc);
    }

//Command 3 Charge Shot Takes two turns
}else if(command==3){
    if(gp<15){           //When GP is less then 15 Charge Attack cant be used
        cout<<"You have no more GP to execute a charged attack!"<<endl<<endl;
    }else{
        //Charging Weapon Turn 1
        cout<<"You charge your gun to do a powerful attack"<<endl;
        int mAttack=mAtk(15,1);
        cout<<"The Creature did "<<mAttack<<" damage to you."<<endl<<endl;
        hp=hp-mAttack;
        cStatus(hp,gp,nc);

        //Turn 2 Fire Charge Shot
        cout<<"Press any number to unleash charged attack! ";
        cin>>anyKey;      //Continues Attack
        int chargeA=chrgAtk(20,1); //Initiates Player's Charge Attack
        cout<<"Your charge shot did "<<chargeA<<" damage to the creature."<<endl;
        monHP=monHP-chargeA;
        int mAttck=mAtk(15,1);
        cout<<"The Creature did "<<mAttck<<" damage to you."<<endl<<endl;
        hp=hp-mAttck;
        gp=gp-15;         //Charge Attack uses 15 GP
        cStatus(hp,gp,nc);
    }
}else{
    cout<<"Wow you put in a number I didn't ask for! Way to go!"<<endl;
    cout<<"Break the game! FINE! JEEZ!!!"<<endl;
}
}

```

```

//Until Character or Monster's HP reaches 0
}while (hp>=0 && monHP>=0);{

```



```

    }
    if (hp<=0){
        //Lost the game
        cout<<"The creature has defeated you!"<<endl;
        cout<<"-----GAME OVER-----"<<endl;

        }else if (monHP<=0){
            //Won the game
            cout<<"The creature falls and is defeated!!"<<endl;
            cout<<"---Thank you for playing!---"<<endl;
        }
    return 0;
}

/*****
***** CHARACTER STATUS *****/
*           h=hp           health power
*           g=gp           gun power
*           n=nc           nova crystals
*****/

int cStatus(int h,int g, int n){
    cout<<"_____ "<<endl;
    cout<<"*****Your HP is "<<h<<"/175*****"<<endl;
    cout<<"*****Your GP is "<<g<<"/50*****"<<endl;
    cout<<"*****You have "<<n<<" NCS left.*****"<<endl<<endl;
}

/*****
*           Attack
* *****/
* Input
*   amin=sides
*   amax=rolls
* Output
*   Return Sum
*****/

int cAtk(int amin,int amax){
    int sum;

```

```

        for (int atk=1;atk<=amax;atk++){
            sum=(rand()%amin+15);

            return sum;

        }

    }

    /******
    *
    *           Monster Attack
    * *****/
    * Input
    *   amin=sides
    *   amax=rolls
    * Output
    *   Return mSum
    *****/
int mAtk(int amin1,int amax1){
    int mSum;

    for (int atk=1;atk<=amax1;atk++){
        mSum=(rand()%amin1+15);

        return mSum;
    }

}

/******
*
*           Charged Shot
* *****/
* Input
*   amin=sides
*   amax=rolls
* Output
*   Return cSum
*****/
int chrgAtk(int amin,int amax){
    int cSum;

```

```

    for (int atk=1;atk<=amax;atk++){
        cSum=(rand()%amin+32);

        return cSum;
    }
}

```

```

/*****
*
*                               Title Screen                               *
*
*****/

```

```

void title(){

```

```

    cout<<"_____
    _____"<<endl;
    cout<<"                                "<<endl;
    cout<<" *          o      *          +          +          * "<<endl;
    cout<<"          *          o          o          "<<endl;
    cout<<"          +          *      Space      *      *          *      + "<<endl;
    cout<<"          *          o      Voyager      *          *      + "<<endl;
    cout<<"          o +          +          *          "<<endl;
    cout<<"          *      Press Enter to Start      *          o "<<endl;
    cout<<"o  +*      o          *          *          *o          "<<endl;

```

```

    cout<<"_____
    _____"<<endl<<endl<<endl<<endl;
}

```