Project Two:

The Dakota Trail 2.0

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**Introduction:**

Title: The Dakota Trail: Modern Edition

This is a text based game that has randomly generated events. There are a total of 15 events that can randomly occur during the game and of those 15, they each have choices that have randomly generated results.

The Goal of the game is surviving the events that occur during the travel to Dakota, the promised land of jobs. You have a limited amount of HP.

**Summary:**

Project Size: 3750 Lines

Number of Variables: About 12

Number of methods: 9

This project relies heavily on the use of loops and if-then statements and function to achieve the complex random event driven game. The uses chooses what level they would like to try and a function is allocated for each different type of event. It also uses arrays to create ascii art that is located in a text file and uses a loop to write it. I used the professors menu which uses functions as a template because it made things easier.

**Description**

The main point of this program is to show how loops, if-then statements and functions can be used to create very complex programs with many different possible outputs. It also shows how text files can be read by the program and printed. It shows how functions can be utilized as independent sections of the code or they could also be used with arrays to read text files and be called by other functions.

**Flow Chart:**

**Pseudo Code:**

Declare all function prototypes

Main Function begins. Define intN and dummy.

Set up for reading the ascii art from the text file

Print the ascii art that says “The Dakota Trail”by calling the function printArray

Intro information is displayed

User inputs vehicle and weapon

Based on input you will be relocated to a different function

Game status information

Asccii art is displayed of the vehicle they purchased by calling the function printArray

Asks user for how much health they would like to purchase using switch statement

Displays users health and amount of money that they have

Game begins. Program randomly chooses a number and based on that number, an ‘if’ statement is chosen.

The user is asked for an action. The action is synthesized in an if’ statement.

Computer generates a random number and based on that number

The choice is beneficiary or not.

If you are unlucky you lose health.

If you are lucky you will gain rewards.

Game loops for the number of turns that the user chose.

If the users HP goes under 0HP the user loses the game

The game asks the user if they would like to try again.  
If HP is more than 0 HP by the end of the loops then the user is victorious.

**Checklist:** while loop, if else, if else if, switch, char, float, short, for, int, iostream/iomanip/cstdlib/ctime/string/fstream/cmath/, ==, <=, != , >=, ++, menu, &&, function, string array, file input/output, function calls

**Major Variables:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Type** | **Variable Name** | **Description** | **Location** |
| Integer | inN | Used to Choose car&weapon | Main |
|  | Cash | Keeps Track of players money | Problem(1)…(2)…(3)..(4)  (5)…(6) |
|  | Hp | Keeps track of players health | Problem(1)…(2)…(3)..(4)  (5)…(6) |
|  | Random | Stores Randomly Generated number used to choose events in loop | Problem(1)…(2)…(3)..(4)  (5)…(6) |
|  | Random\_2 | Stores Randomly Generated number used in sub-events | Problem(1)…(2)…(3)..(4)  (5)…(6) |
|  | Sta | Keeps track of the loops | Problem(1)…(2)…(3)..(4)  (5)…(6) |
| Character | hp\_purchase | Keeps track of the HP purchased | Problem(1)…(2)…(3)..(4)  (5)…(6).. |
|  | dummy | Stores dummy variables | Problem(1)…(2)…(3)..(4)  (5)…(6)…Main |
| String | Art | This hold the array for the first ascii art | Main, readfromfile()  Printarray() |
| String | Art2 | This hold the array for the second ascii art | Problem (1)(4) readfromfile()  Printarray() |
| String | Art 3 | This holds the array for the third ascii art | Problem(2)..(5)..readfromfile()  Printarray() |
| String | Art 4 | This holds the array for the fourth Ascii art | Problem(3)..(6)..readfromfile()  Printarray() |
|  |  |  |  |
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**Reference:**

1.Textbook

2.Student Instructors

**Program:**