

Mountain Climber

Overview:

“Mountain Climber” will be a command prompt, text-based game where a player outfits their climber with gear, chooses their skills, and battles seasonal changes in danger and difficulty in order to climb a mountain.

Classes:

Class	Description
Engine	<p>The Engine runs the game. It will do the following:</p> <ul style="list-style-type: none">• Solicit user input• Generate and modify objects• Display game output <p>Methods:</p> <ul style="list-style-type: none">• Play: starts a new instance of the game
Mountain	<p>This Mountain acts as the game map.</p> <ul style="list-style-type: none">• Accepts weather and difficulty information• Generates and stores a randomized number of route objects• Generates and outputs randomized events <p>Methods:</p> <ul style="list-style-type: none">• Weather: Accepts user inputs and uses them to define ranges for more complicated attributes of the mountain climate. Exact values within these ranges are generated via randomization.• Create Routes: Populates the mountain with route objects• Create Event: Generates random events such as falls, storms, etc.
Route	<p>A Route is a component of the mountain that the player interacts with.</p> <ul style="list-style-type: none">• Can be one of four types: Scramble, Rock, Mixed, Ice• Can be a range of difficulties (Yosemite Decimal System)• Can present a range of danger level (PG, R, X) <p>Methods:</p> <ul style="list-style-type: none">• Climb: Allows player to interact with the route• Event: Generate a random event
Climber	<p>A Climber is the object representation of the player</p> <ul style="list-style-type: none">• Has skill attributes (strength, balance, composure, etc.)• Interacts with the Route class to play the game <p>Methods:</p> <ul style="list-style-type: none">• Climb: Initiates interaction with the route• Heal: Player uses healing equipment in inventory
Backpack	<p>A Backpack is the object representation of the player’s inventory</p> <ul style="list-style-type: none">• Can hold various pieces of climbing gear• Has a maximum weight capacity <p>Methods:</p> <ul style="list-style-type: none">• Add: Add item to inventory• Remove: Remove item from inventory• Use: Use an item from inventory

Additional Comments:

- If this game is not already too complex, a Time class may be introduced to make the player race against the clock.
- Much of the game complexity will be from random event generation. Each new instance of the game will create a unique mountain and each time the climber attempts a route, they have the potential to experience a different result.