Planning and Implementation:

The program takes 5 arguments, in order: terrain-image, elevation-file, path-file, season (summer, fall, winter, or spring), output-image-filename.
The speed of the player decreases or increases depending on the type of terrain and season. It also depends on the landscape elevation such as the player will go slower uphill and even slower up steeper hill.Maximum speed of the player around a default landscape is set to 10.The landscape changes throughout the year , i.e for different seasons such as:
Summer : The default picture is assumed to be accurate for the summer season.

Fall: In the fall, leaves fall and hence in the park .i.e around and for easy moment forest the speed of the player decreases as its hard to travel through woods covered with leaves.The image pixels are not changed, though the speed is decreased in the region.

Spring: In the spring, area around the lake gets covered with mud. Hence any pixel that is around the lake but less than a meter elevation of landscape is changed to mud color i.e brown and speed is significantly decreased for the region.

Winter : In winter, water freezes and turns into ice. and difficult to walk on. Hence any pixel up to the range of 7 around water is turned into ice and speed is significantly reduced for the same region.

The F(n) function(Scorecalculate) is calculated by finding the cost to travel G(n) plus the heuristic H(n) i.e the estimated cost(sum of euclidean distance and elevation distance) to travel between two points. Cost is calculated as (Total Distance)/Speed. The size of pixel is determined by that of the National Elevation Dataset, i.e equivalent to 10.29m in longitude and 7.55m in latitude.
To find the optimum path between points A* algorithm is used .While traveling from point A to point B , the ScoreCalculate function is called where the path with minimum score is selected as the optimum path between those points. First all the possible successors are found from the source point and the point with the minimum cost is stored . The process repeats until destination is not reached.
The original image is first processed and altered according to the season .i.e changes in the pixels as per season. The new file is then processed and A* algorithm is applied to find the shortest and quickest path by finding minimum F(n). The path is then stored to an array and then pixelated as the path between those points.