



MIDDLE EAST TECHNICAL UNIVERSITY



DEPARTMENT OF COMPUTER ENGINEERING

CENG491

PROPOSAL REPORT

1. COMPANY

Company Name

Sirius Software

Company Members

Name	ID
Elif Kamer KARATAŞ	1448836
Ayşe TURAN	1449164
Duygu YAPA	1449222
Duygu ALTINOK	1502095

2. PROJECT

Project Title

Climb Planner

Project Description

Mountain climbing is one of the most popular activities. Although the idea of reaching a peak of a mountain attracts many people, climbing is one of the riskiest activities. It includes many potential dangers like weather, falling rocks and equipment failure. To minimize the risks and potential dangers and provide a safe environment to the mountaineers, the necessary precautions should be taken and an activity plan should be prepared. Since, climbing is a very risky activity, the activity plan should be prepared very carefully, many things like equipment list, weather and terrain conditions should be considered simultaneously. Our aim in this project is to develop a software which will provide the best activity plan for the selected mountain peak to the mountaineers. For this purpose, we will develop the Climb Planner Software.

Through the development stages of our software, we will use Geographical Information System (GIS). GIS integrates hardware, software, and data for capturing, managing, analyzing, and displaying all forms of geographically referenced information. Hence, we strongly believe that it will help us during the development of Climb Planner.

The Climb Planner Software will provide the climbing route (fastest route or safest route) and timing (longest range per day or climbing range per day) options to the climbers. Using the given options and considering the factors such as group member information, weather and terrain information, the software will find the best activity plan. Group member information will consist of climbing speed of the member, his/her resting requirement and his/her experience such as climbing, skiing, roughing, etc. Weather and terrain information will include the walking paths, lakes and rivers, forests, rocks, obstacles, raster map, satellite map, and checkpoints.

Using the above information and doing search and optimizations, the Climb Planner Software will generate the best possible climbing plan including the climbing route, expected time to climb, provisions, resting positions, their times and durations. It will also visualize and simulate the climbing by making use of GIS.