Introduction

In this sprint we studied Google maps API and used them to display routes on map. We studied and implemented some algorithm for the route calculation, the algorithms implemented were hill climbing algorithm and stimulated annealing algorithm. These algorithm worked to some extent but for higher accuracy development of other optimized algorithm was necessary. We tried to implement device tracking but the android application development part was decided to continue later so device tracking task was hold on.

Task objectives for sprint 1

1. Study and use Google Maps API.
2. Display routes on map.
3. Data extraction from Map (latitude, longitude).
4. Device tracking.
5. Customer form and database creation.
6. Algorithm Development.

Backlog for sprint 1

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| --- | --- | --- | --- |
| S.N | Task Description | Estimate | Priority |
| 1 | Study Google Maps API | 6 | 1 |
| 2 | Use Google Maps API to display routes in map. | 6 | 2 |
| 3 | Data extraction from Map. | 3 | 3 |
| 4 | Research on Hill Climbing algorithm | 6 | 4 |
| 5 | Implementation of Hill Climbing algorithm | 6 | 5 |
| 6 | Performance assessment of Hill climbing algorithm | 1 | 6 |
| 7 | Customer Form creation | 1 | 7 |
| 8 | Database creation | 2 | 8 |
| 9 | Learn android application development | 8 | 9 |
| 10 | Create module for device tracking | 6 | 10 |

Task Performance table.

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| --- | --- | --- | --- | --- |
| S.N | Task Description | Priority | Assigned | Status |
| 1 | Study Google Maps API | 1 | Prakash Aryal  Sanjay Raut | Completed |
| 2 | Use Google Maps API to display routes in map. | 2 | Prakash Aryal  Sanjay Raut | Completed |
| 3 | Data extraction from Map (latitude, longitude) | 3 | Prakash Aryal  Sanjay Raut | Carried Over |
| 4 | Research on Hill Climbing algorithm | 4 | Nabeen Khadka  Bipin Pandey | Completed |
| 5 | Implementation of Hill Climbing algorithm | 5 | Nabeen Khadka  Bipin Pandey | Completed |
| 6 | Performance assessment of Hill climbing algorithm | 6 | Nabeen Khadka  Bipin Pandey | Completed |  |  |  |  |
| 7 | Customer Form creation | 7 | Prakash Aryal | Carried Over |
| 8 | Database creation | 8 | Sanjay Raut | Carried Over |
| 9 | Learn android application development | 9 | Bipin Pandey | Hold On |
| 10 | Create module for device tracking | 10 | Bipin Pandey | Hold On |

Sprint Review

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| --- | --- |
| Total number of tasks | 10 |
| Total number of tasks completed | 5 |
| Total number of tasks carried over | 3 |
| Total number of tasks hold on | 2 |

Sprint Retrospective

1. Tasks that went well.
   1. All the tasks related with Google Maps API were performed well.
   2. All the tasks taken for algorithm development was performed well

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1. Problems.
   1. We took large number of tasks for this sprint so only 50% of the tasks were completed.
   2. Android apps development task was discussed to be continued later so we had to hold on the task of device tracking.
   3. Hill climbing algorithm was studied and implemented but its performance assessment revealed that its performance was not enough for our system. So we decided to optimize hill climbing by stimulated annealing for next sprint.
2. Correction for next sprint.
   1. In this sprint we became over ambitious and took large number of tasks which we could not complete in time. The number of tasks should be taken considering the estimate so that they can be completed within the sprint.