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College Campus Event Management System

Aher Dipali Balasaheb[1], Bhise Pratiksha Dnyaneshwar[2], Desai Kajal Mukund[3], Khaire Bhaghyashri Raghu[4]

[1]Aher Dipali Balasaheb, Dept. of Information Technology, SND College of Engineering, Maharashtra, India.
[2]Bhise Pratiksha Dnyaneshwar, Dept. of Information Technology, SND College of Engineering, Maharashtra, India.
[3]Desai Kajal Mukund, Dept. of Information Technology, SND College of Engineering, Maharashtra, India.
[4]Khaire Bhaghyashri Raghu, Dept. of Information Technology, SND College of Engineering, Maharashtra, India.

Abstract - *With an increasing number of College Admissions, activities, education and scientific researches organized by college, it is of prominent importance for newcomers to get help from campus navigation. And smart phones being more popular, it is possible to solve the above problem. During the process of setting up one kind of campus navigation system ,the thesis improved the basic A* algorithm: using bidirectional search in the basic implementation of A* algorithm and adding a path cache function and an anticipation mechanism.*

Key Words*: *Keywords-A* algorithm, Campus navigation, Shortest path, Path cache

1. INTRODUCTION

Most college campus area is broad, and the road is complex, which is difficult for the new students or off campus students to participate in activities. And social people, even most of the students who have been living in campus for a year or two have difficulties in understanding the whole picture of campus buildings in detail. They usually need to ask the way many times to get to the designated place. So many college campus navigation terminals, and provide mobile campus navigation services for the general school students and social people. Growth of ownership of intelligent mobile equipment which has the navigation function, this paper mainly focuses on the development of accurate navigation in the campus with a small scale and the study of network navigation research to facilitate the broad masses of teachers and students to quickly target location.

1.1 A* Algorithm Principle

*A** Algorithm Principle

A* algorithm is an effective way to solve the shortest

path in the static network. The evaluation function is

expressed as follows

f(n) = g(n)+h(n)

f(n) is the evaluation function from the initial node through the node n to the target node; g(n) is the real cost from the initial node to node n in the state space; h(n) is the estimated cost of the best path from n to the target node. The key to guarantee to find the shortest path is the selection of evaluation function h(n). If the value of h(n)<=h*(n) (h*(n) is the actual distance value from n to the target node, If h(n) = 0, only g(n) performs, which can guarantee to find the path. If h(n)>h*(n), we need less search nodes and smaller search range, so the efficiency is high but we are not sure to get the optimal solution.

1.2 The Basic Principle of A* Routing Algorithm

If we format the map into a grid map, the key to choose which lattice (node) to pass through is determined by the node with the smallest estimated value f that is calculated in(1.1)

2. SYSTEM MODEL

The system model defines the working of our system and run well as shown in figure(1).

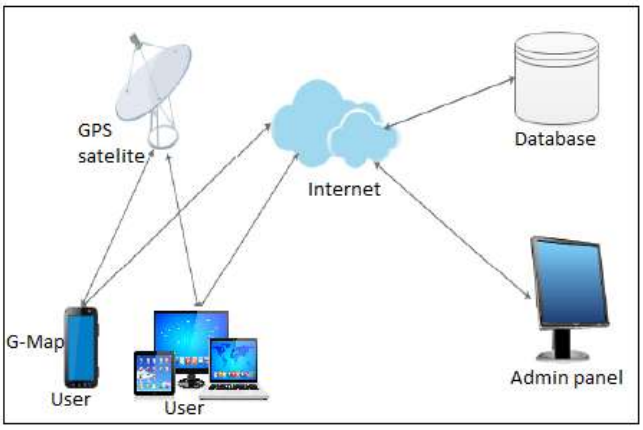

Fig 1. System working model.

The Figure 1 shows that the system at first the application in the user phone request for Google API from the Google server. Then the map is loaded on user's phone. By GPS of the user mobile, current location of the user is track and display on the map. A HTTP GET request is send through the cellular data network services and internet to the Map Information Server.

a. Updated event and location are sent to the user's mobile in response to HTTP GET request from MAP Information Server. There is web page for Map Administrator .Through the form option of the web page, Administrator regularly updates the event information to database. He/ She delete the backdated event information or relocated department during periodic maintenance.

MIS is a database to store event and location data. for storing new location information latitude and longitude are store .

CASE 1:Admin panel

a. First admin login window are open from this window admin enter in the system

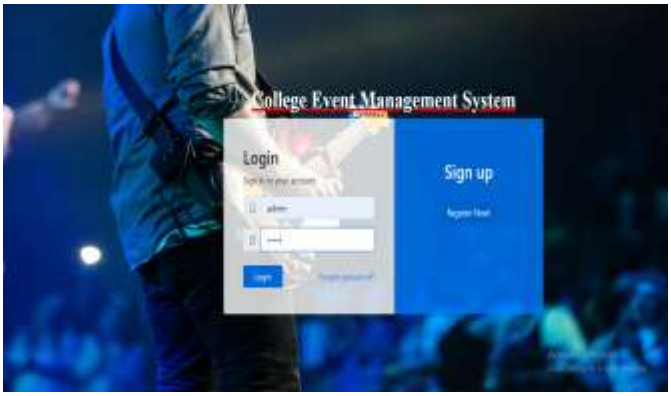

Fig.2 Admin Login.

b. Only admin can add, delete, update the events.

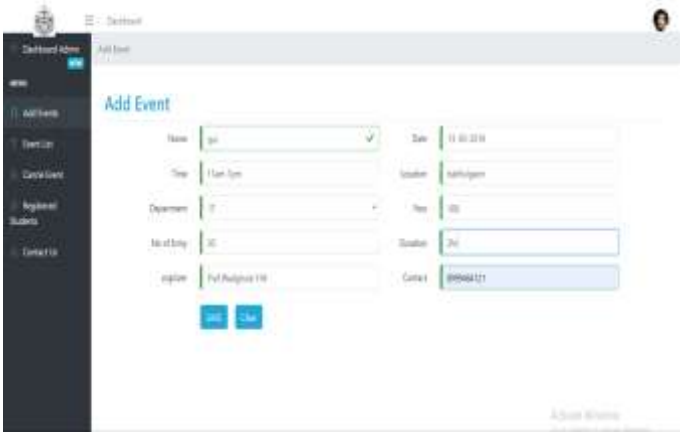

Fig.3 Admin Dashboard.

c. Admin can download the PDF of registered students.

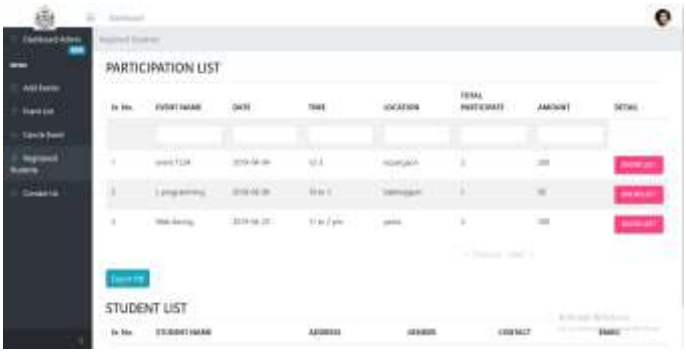

Fig.3 Pdf Downloaded

CASE 2: Student Dashboard

d. First student registration are perform and student has login by there username and password

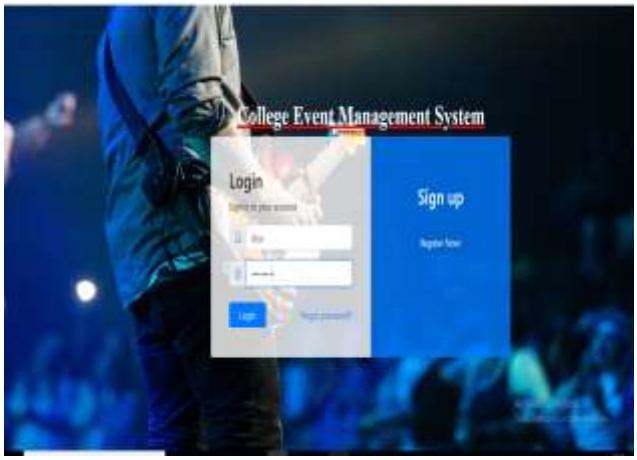

Fig.4 Student Login.

e. Stuents can see as well as registered the events.

Fig.5Registration of events.

f. Register event are added into the cart

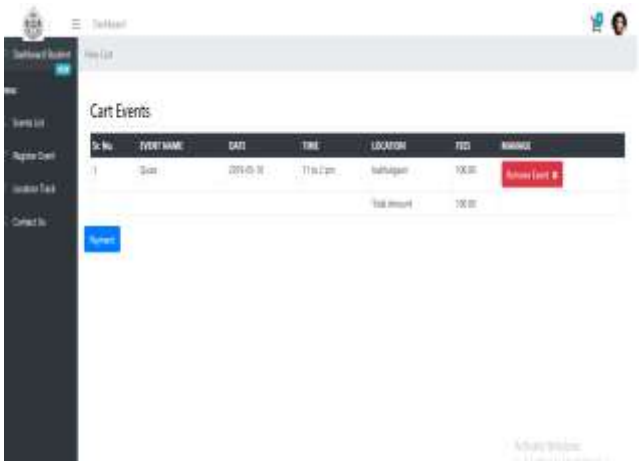

Fig.6 View cart.

g. Student proceed for payment.

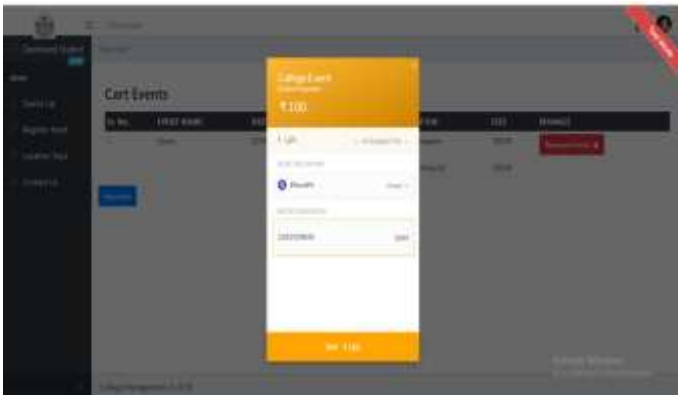

Fig.7 Payment process.

h. Student can see the location of the event place.

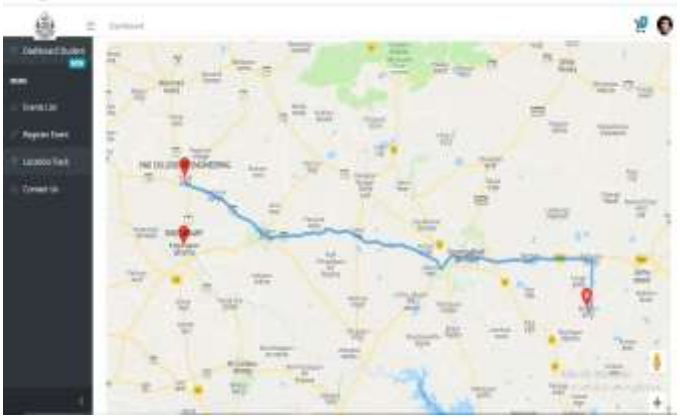

Fig.8Location tracking.

The algorithm pseudo code as follow:

If(start node can reach end node){

Return path;

}else if(cache(start, end)){

Return getPath(start, end);

}

Create tables: sOpen, eOpen, sClose, eClose.

Calculate f(start) and f(end).

sOpen.push(start);

eOpen.push(end).

isForward = true;

While(sOpen != NULL || eOPen != NULL){

If(isForward){

OPEN = sOpen;

CLOSE = sCLose;

}else{

OPEN = eOpen;

CLOSE = eCLose;

}

n=pitchSmallestFNode(OPEN);

if(n in other Close table){

return path;

}

For(node X in node n's around nodes){

If(X is key node || (X not in OPEN or CLOSE){

X.parent = n;

Calculate f(X).

Put node X into OPEN;

}else if(X in OPEN or CLOSE) {

if(f(X) less than f(OPEN) || f(X) less than

f(CLOSE)){

X.parent = n;

updatef(OPEN);

```
}
} else
{
X. parent = n;
Calculate f(X).
 OPEN.push( X ) ;
}
}//end if(X in OPEN or CLOSE)
}//end for
CLOSE.push( n );
Order(OPEN);//order by f
isForward = ! isForward;
}//end while(OPEN!=NULL)
Path = CalculatePath();
Cache(path);
Return path;
```

This work can be included in our system

- Audio Control: If speech is activated control is added with this architecture, visually impaired person will be benefitted.
- Multimedia Based Advertisement: Rich Multimedia based advertisement like poster, audio promotion and video promotion etc. This can be very effective and can reduced the need of physical posters.
- More Sophisticated and Customized Map: It is helpful for any places.

3. CONCLUSIONS

In this paper, an application of an improved A* algorithm in campus navigation system running stability, generating the path faster, and reducing the time required for searching the desired location. it significantly increasing the speed of the program to solve the navigation path. This paper just refers to the preliminary optimization to the campus navigation system.

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