

PROJECT ON
WEATHER APPLICATION

PROJECT GUIDE: SOUMYA BHATTACHARYA

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AUTHENTICATION

I Suryakanta Mazumder hereby declare that Weather application has been carried out in the practical laboratory of Department of Information Technology in NIT under the guidance of Sir Soumya Bhattacharya I also declare this project work has not been submitted anywhere for fulfillment of a course of study to the best of our knowledge.

Mr.....

(IT Dept.)

ACKNOWLEDGEMENT

First I owe to express our almighty “GOD” for his inherent inspiration and being with us through out this venture. No words can contain and convey my intense feeling of dedication, earnestness and gratitude of my learned guidewhose perpetual guidance, encouragement and willingness to help promoted me to steer clear through this project. I would like to express my humble regards to him for providing us with full support, cooperation and his invaluable time with us. We got a very nice learning experience and learnt a lot under his guidance.

We humbly express our deep sense of guidance to Mr Soumya Bhattacharya for helping us by showing simplified way out during many difficult situations which we had faced during the preparation of this project and it also not out of phase to thank some of our good friends who shared their knowledge in some of the tough situations with us . We render our deep sense of guidance to our beloved parents for their constant encouragement, timely assistance, dedication, inspiration, moral support and silence presence throughout the work.

THANK ING YOU ALL

Department of

Information Technology

In the Project Department Of Information Technology of “WEATHER APP” we have arranged the piece of code into three different sections by usingHTML, CSS and JAVASCRIPT in a very simplified manner. The main objective of this Project is to detect the weather forecasts of any cities instantly through this application.

Forecasts are givenfor the present and the following day, textually and in picture format. User friendliness is the aim of the project. It is hoped that this project will be useful for the user.

DEPARTMENT OF
INFORMATION TECHNOLOGY

Table Contents

1. Project Overview Statement	PAGE NO. 6
2.Needs OF Weather App	7
3.1.Product overview	7
4.Feasibilty study	7
5.Economical Feasiblity	8
6.Operational Feasibilty	8
7.Technical Feasiblilty	8
8.Requirements	9
9.Activity Diagram	11
10.Class Diagram	11
11.Use Case Diagram	11
12.Data Flow Diagram	12
13.Gantt Chart	13
14.Gantt Chart Diagram	14
15.User Interface	16
16.Coding and Testing	18
17.Benifits	
18.Future Enhancements	
19.Conclusion	

Project Overview Statement (POS) :

Project Title	Weather Application
Project leader	Suryakanta Mazumder
Department	Information Technology
Project ID	

-

Needs Of Weather Application :--

- To plan journey ahead accordingly.
- To know when its going to rain or going to be cloudy.
- A person travelling in a bus/train etc. might need to know the weather of destination city.

- Sometimes travellers may need to know more details about the weather like visibility, fog, humidity etc.
- To plan meetings/commute timings

▪ **Product Overview:--**

- Headline at the top
- Background image under the headline
- The current local temperature will be displayed in Celsius Along with the local temperature, local time and weather description will also be displayed.
- A search box will be present for searching the weather for other locations .

- The page will ask for access to the user's location on load to update weather information

- **Feasibility study :-**

Feasibility study is an important outcome of preliminary investigation, which is determination of whether the request is feasible or not. During our preliminary investigation at college (Department of Science) we examine that the entire affair concerned with the "Request" is to develop a new project. After getting information we check that the information is economical, technical and operationally feasible or not.

The proposed system is reviewed considering three feasibility studies, which are as follows,

1. Economical Feasibility.
2. Operational Feasibility.
3. Technical Feasibility.

ECONOMICAL FEASIBILITY

The hardware/software setup required is that the proposed system can be easily run on any dual core computer and as the software used to build system in windows98/2000/XP/7 or we can build this in Linux/GNU also. So it does not cost high.

OPERATIONAL FEASIBILITY

One of the objectives of developing and userfriendly application apart from speeding of the operation is that users do not face any problem while making any plans depending on the weather.

TECHNICAL FEASIBILITY

Though, there is no equipment in existing system, essential to implementation new computerized system but are not away from college access. The hardware required is (i.e. P.C.) and software Code editors for write code are available at many developers point .

REQUIREMENTS

HARDWARE & SOFTWARE REQUIREMENTS

The Hardware and Software requirements are as follows:

Hardware Specifications:

PROCESSOR : Cortex A7

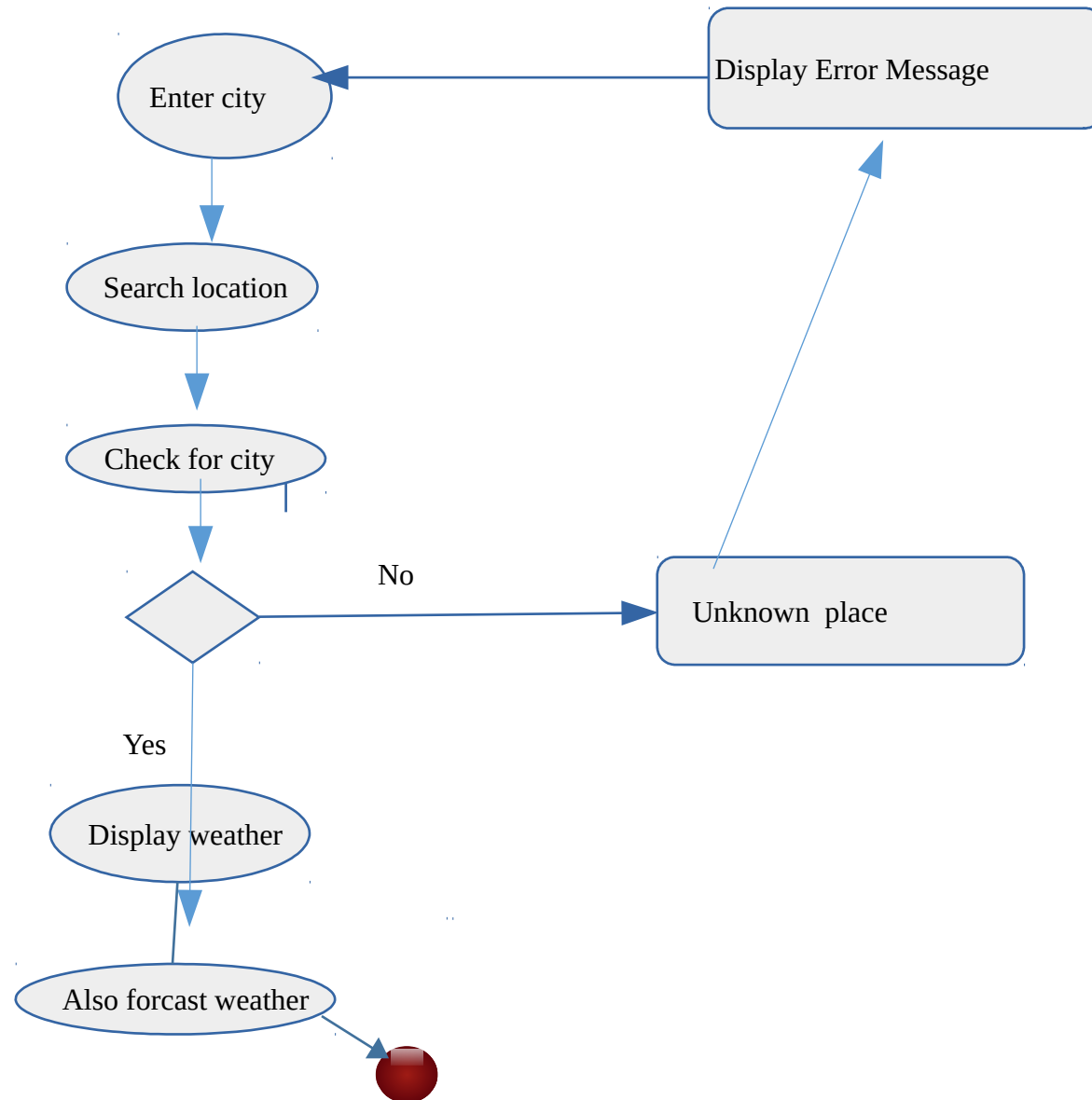
RAM : + 512 MB

Software Requirements:

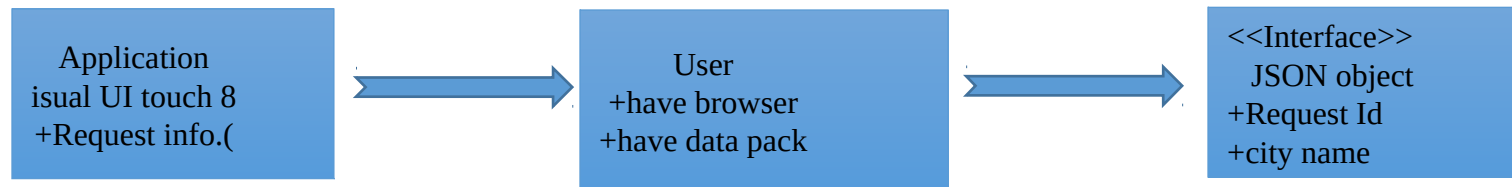
1. Internet Browser

2. Internet Data

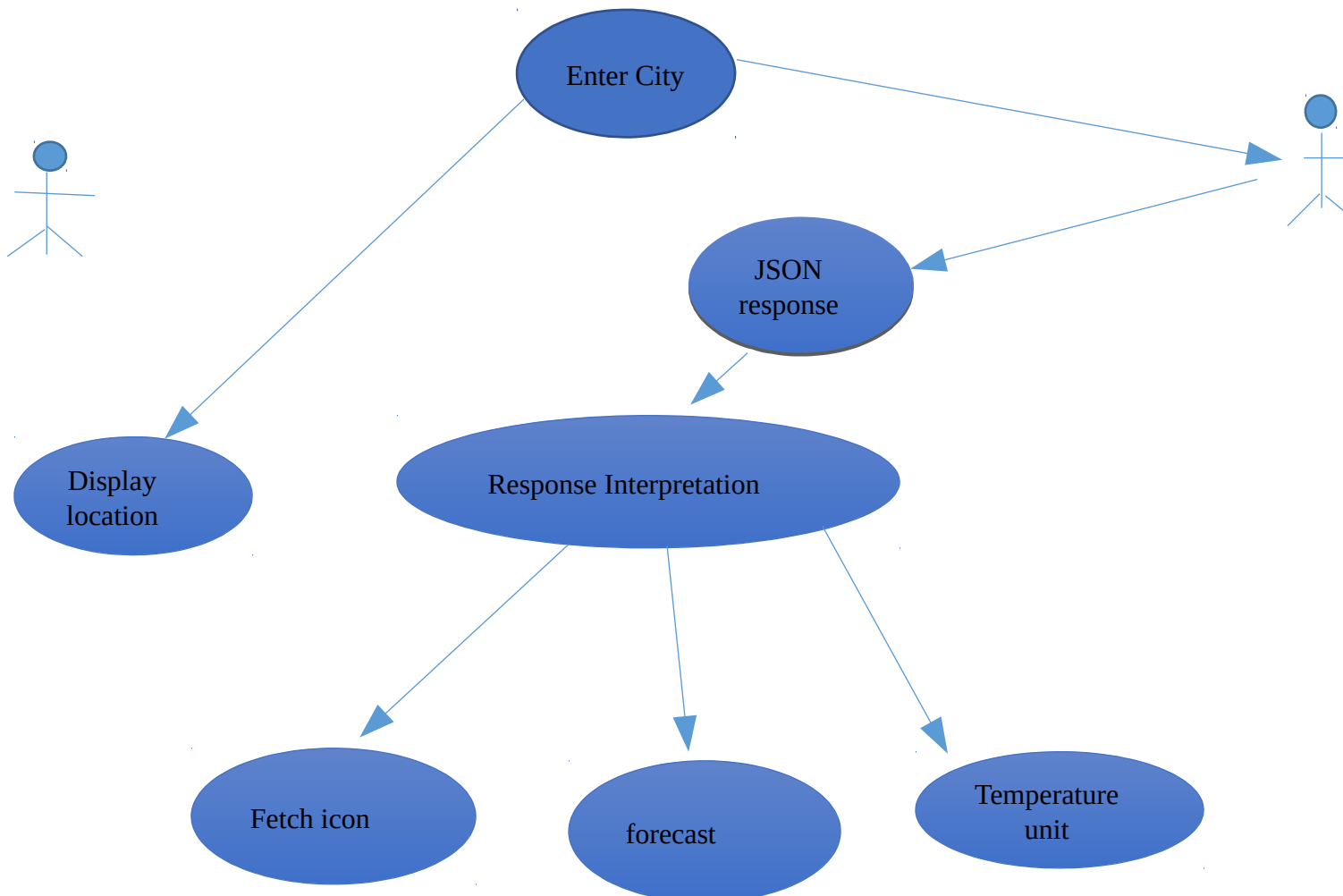
Activity Diagram



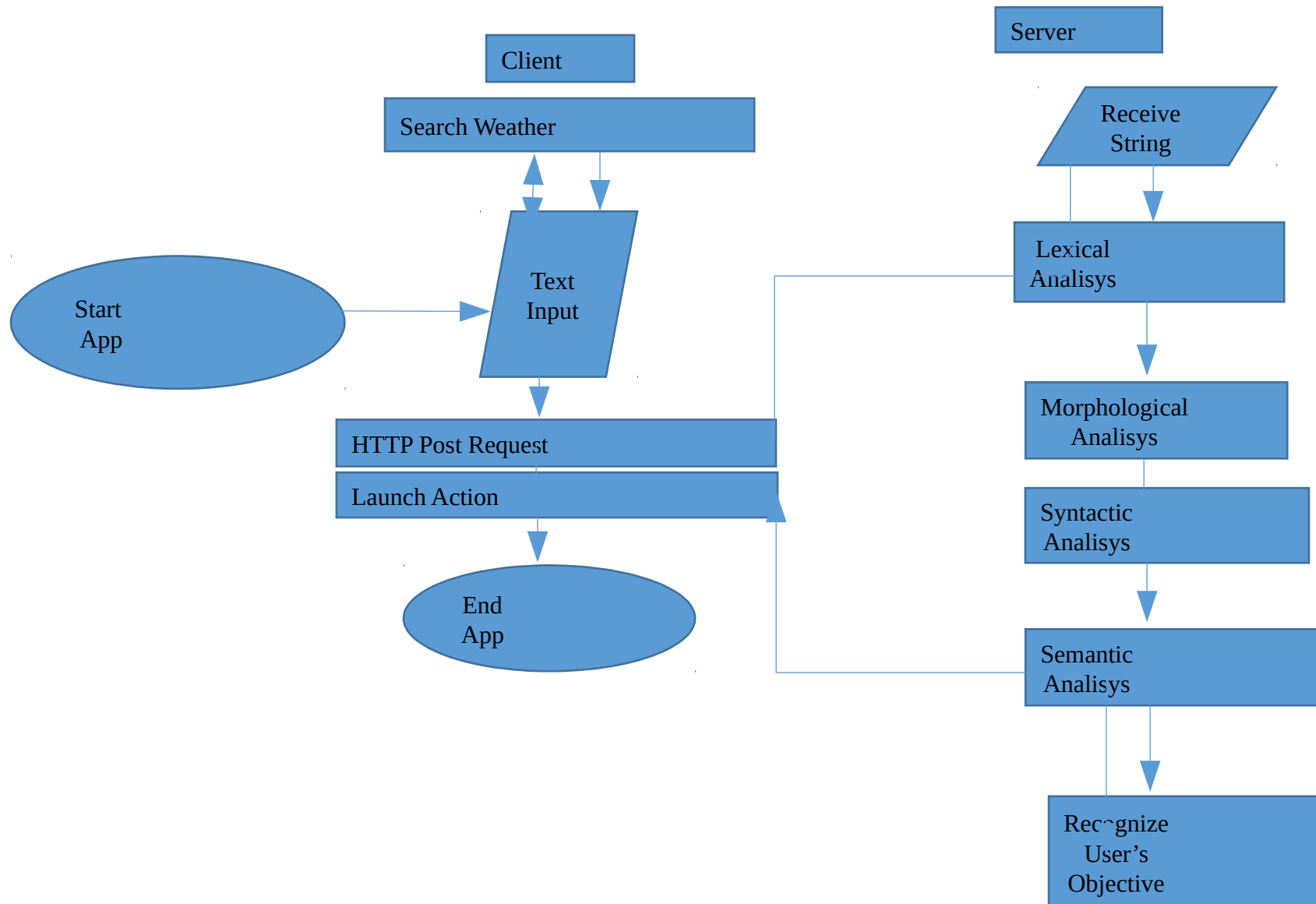
class diagram



Use case diagram



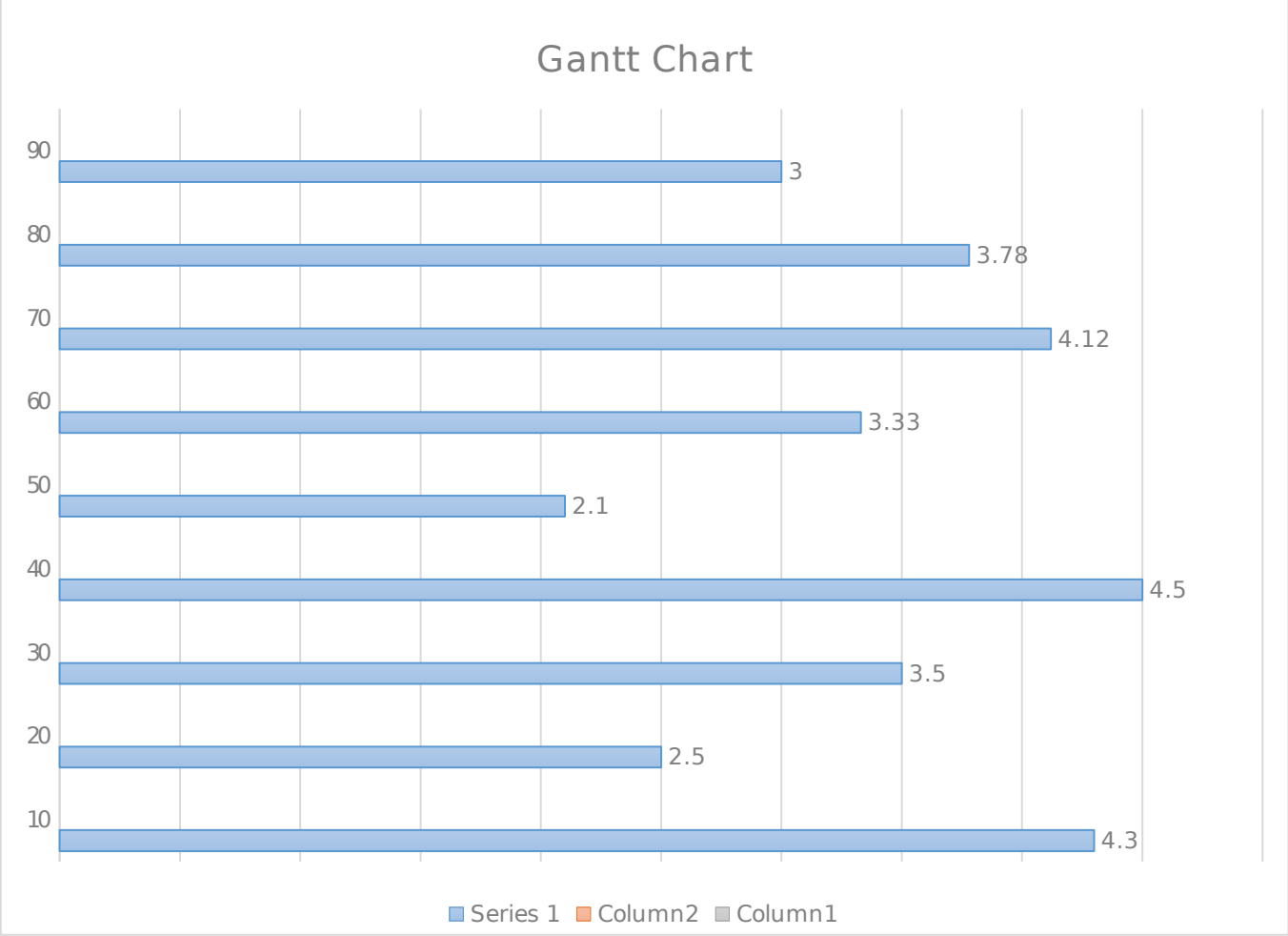
DFD



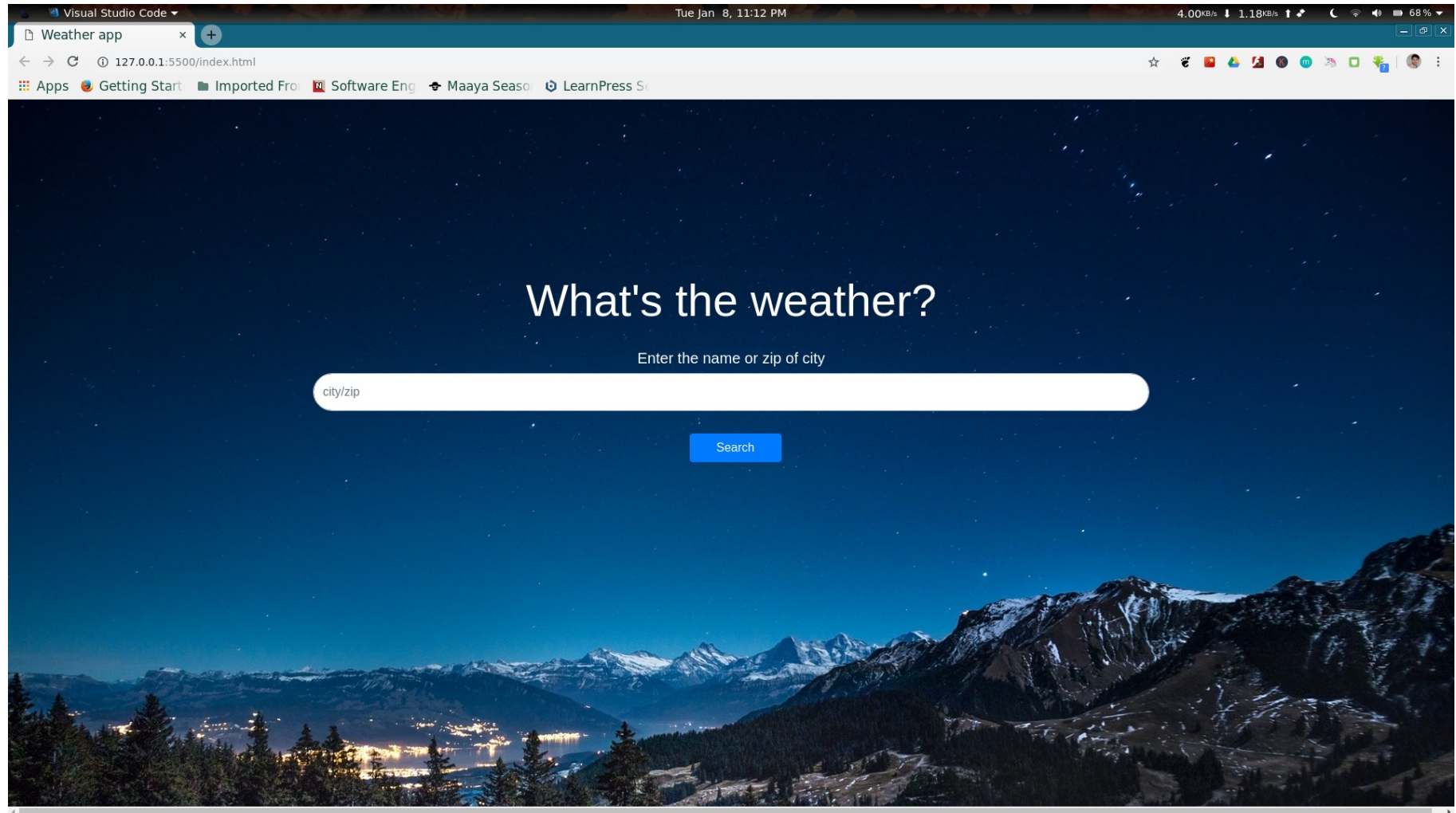
GANTT CHART

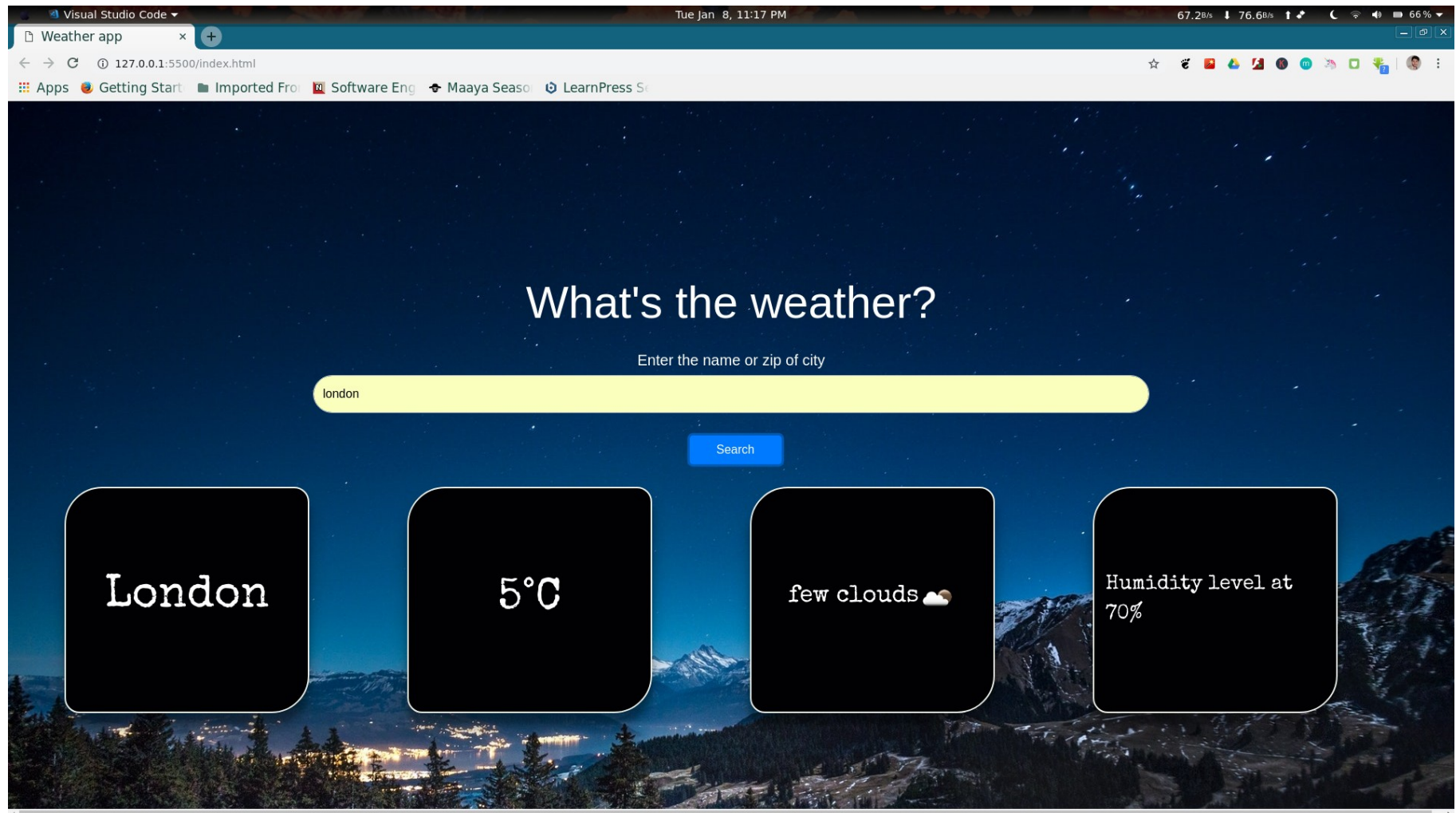
A gantt chart is a horizontal bar chart developed as a production control tool in 1917 by Henry.L.Gantt an American engineer and social scientist.Frequently used in project

management.A gantt chart provides a graphical illustration of a schedule that helps to plan,coordinate,and track specific tasks in a project.



User Interface





Coding and Testing

HTML CODE

```
<!DOCTYPE html>
<html>
<head>
<meta charset="utf-8" />
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<title>Weather app</title>
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css" integrity="sha384-Gn5384xqQ1aoWXA+058RXPxPg6fy4IWvTNh0E263XmFcJlSAwiGgFAW/dAiS6JXm" crossorigin="anonymous">
<script src="https://code.jquery.com/jquery-3.2.1.slim.min.js" integrity="sha384-KJ3o2DKtIkvYIK3UENzmM7KCKRr/rE9/Qpg6aAZGJwFDMVNA/GpGFF93hXpG5KkN" crossorigin="anonymous"></script>
<script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js" integrity="sha384-ApNbgh9B+Y1QKtv3Rn7W3mgPxhU9K/ScQsAP7hUibX39j7fakFPskvXusvfa0b4Q" crossorigin="anonymous"></script>
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js" integrity="sha384-JZR6Spejh4U02d8jOt6vLEHfe/JQGiRRSQQxSfFWpi1MquVdAyjUar5+76PVCmYI" crossorigin="anonymous"></script>
<link href="https://fonts.googleapis.com/css?family=Permanent+Marker|Special+Elite|ZCOOL+KuaiLe" rel="stylesheet">

<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" type="text/css" media="screen" href="weather.css" />
</head>
<body>
<div id="searchContainer" class="container" >
<h1 id="h1">What's the weather?</h1>
<h2 id="enter">Enter the name or zip of city</h2>
<input type="text" class="form-control" id="searchInput" placeholder="city/zip">
<button id="searchbar" class="btn btn-primary">Search</button>
</div>
<div class="row" id="weatherContainer">
```

```

<div class="col-lg-2" id="ci" > <h1 id="city"></h1></div>
<div class="col-lg-2" id="te"> <div id="temp"></div></div>
<div class="col-lg-2" id="im" >
<h2 id="wheader"></h2>
<div><img id="imgdocumentIcon"></div>
</div>
<div class="col-lg-2" id="wi">
<div id="humidity" id="bottom2"></div></div>
</div>

<script src="weather.js"></script>
</body>
</html>

```

CSS CODE

```

body{
background: url('back.jpeg');
background-repeat: no-repeat;
background-size: cover;
}
#searchContainer{
margin: 0 auto;
padding-top: 11%;
}
#h1{
text-align: center;
padding: 20px;
font-size: 60px;
color: white;
}
#enter{

```

```
text-align: center;
font-size: 20px;
color: white;
}
#searchbar{
margin-top: 30px;
margin-left: 45%;
width: 11%;
}
#searchInput{
border-radius: 25px;
height: 50px;
}

#city, #temp{
font-size: 60px;
}
#humidity{
font-size: 27px;
}

}
#te, #im, #wi, #ci{
background-color: rgb(1, 1, 3);
border: 2px solid rgb(233, 236, 227);
width: 200px;
height: 300px;
margin-top: 30px;
margin-bottom: 30px;
margin-right: 40px;
margin-left: 90px;
display: flex;
justify-content: center;
align-items: center;
border-radius: 50px 20px;
box-shadow: 0 19px 38px rgba(0,0,0,0.30), 0 15px 12px rgba(0,0,0,0.22);
font-family: 'Special Elite', cursive;
```

```
color: white;
}
#weatherContainer{
visibility: hidden;
}
```

JAVASCRIPT CODE

// get appkey from openweathermap

```
let appId='dd0d5ca4ece516d3f6852c283f681e2c';
let units='metric';
let searchMethod;
```

//for searching all cities

```
function getSearchMethod(searchTerm){
if(searchTerm.length === 5 && Number.parseInt(searchTerm) + "" === searchTerm){
searchMethod='zip';
}else{
searchMethod='q';
}
}
```

```
function searchWeather(searchTerm) {
getSearchMethod(searchTerm);
fetch(`http://api.openweathermap.org/data/2.5/weather?${searchMethod}=${searchTerm}&APPID=${appId}&units=${units}`).then(result =>{
return result.json();
}).then(result =>{
init(result);
})
}
```



```
}
```

```
function init(result){  
  let city=document.getElementById('city');  
  let temp=document.getElementById('temp');  
  let windspeed =document.getElementById('windspeed');  
  let humidity=document.getElementById('humidity');  
  let ImgdocumentIcon =document.getElementById('ImgdocumentIcon');  
  
  ImgdocumentIcon.src='http://openweathermap.org/img/w/' +result.weather[0].icon+'.png';  
  
  document.getElementById('wheader').innerText=result.weather[0].description;  
  temp.innerHTML=Math.floor(result.main.temp)+ '&#176'+'C';  
  city.innerHTML=result.name;  
  humidity.innerHTML='Humidity level at '+result.main.humidity+'%';  
  
  console.log(result);  
  set();  
}
```

```
function set(){  
  let weatherContainer = document.getElementById('weatherContainer');  
  
  weatherContainer.style.visibility='visible';  
}  
  
document.getElementById('searchbar').addEventListener('click',() =>{  
  let searchTerm=document.getElementById('searchInput').value;  
  if(searchTerm){  
    searchWeather(searchTerm);  
  }  
})
```

BENEFITS

- Improve Operational Efficiency
- Useful For Various Weather Operations
- Less Efforts In Managing Farming Operations
- Easy Availability of Information
- Time Saving Application
- Economically Feasible For Users

FUTURE ENHANCEMENTS:

In the next version we will be launching this application in regional languages also such as Hindi Marathi Gujarati and Tamil. Also if possible we would try to make this application more user-friendly so that more and more people will be able to make good use of it.

Use

Example:

- Farmers
- Shopping Centers
- Picnic Planning
- Disaster Precautions

CONCLUSION

The Design and Development of this Application will significantly enhance the nature of Farming and Agriculture. This application is Economically, Technically and Operationally Feasible.

It is User Friendly, so that every user can handle it with ease. This application is developed such that it will not use much of phone RAM and memory space.

This Application provides detail information with the use of Interactive images.
