



Immediate Shortest Beside Area Search with Query Process

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Abstract: Conventional spatial queries, such as range search and nearest neighbor retrieval, involve only conditions on objects' geometric properties. Today, many modern applications call for novel forms of queries that aim to find objects satisfying both a spatial predicate, and a predicate on their associated texts. For example, instead of considering all the restaurants, a nearest neighbor query would instead ask for the restaurant that is the closest among those whose menus contain "steak, spaghetti, brandy" all at the same time. Currently the best solution to such queries is based on *the IR2-tree*, which, as shown in this paper, has a few deficiencies that seriously impact its efficiency. Motivated by this, we develop a new access method called *the spatial inverted index* that extends the conventional inverted index to cope with multidimensional data, and comes with algorithms that can answer nearest neighbor queries with keywords in real time. As verified by experiments, the proposed techniques outperform the IR2-tree in query response time significantly, often by a factor of orders of magnitude.

I. INTRODUCTION

A spatial database manages multidimensional objects (such as points, rectangles, etc.), and provides fast access to those objects based on different selection criteria. The importance of spatial databases is reflected by the convenience of modeling entities of reality in a geometric manner. For example, locations of restaurants, hotels, hospitals and so on are often represented as points in a map, while larger extents such as parks, lakes, and landscapes often as a combination of rectangles. Many functionalities of a spatial database are useful in various ways in specific contexts. For instance, in a geography information system, range search can be deployed to find all restaurants in a certain area, while nearest neighbor retrieval can discover the restaurant closest to a given address. Today, the widespread use of search engines has made it realistic to write spatial queries in a brand-new way. Conventionally, queries focus on objects' geometric properties only, such as whether a point is in a rectangle, or how close two points are from each other. We have seen some modern applications that call for the ability to select objects based on both of their geometric coordinates and their associated texts. For example, it would be fairly useful if a search engine can be used to find the nearest restaurant that offers "steak, spaghetti, and brandy" all at the same time. Note that this is not the "globally" nearest restaurant (which would have been returned by a traditional nearest neighbor query), but the nearest restaurant among only those providing all the demanded foods and drinks.

II. EXISTING SYSTEM:

Spatial queries with keywords have not been extensively explored. In the past years, the

community has sparked enthusiasm in studying keyword search in relational databases. It is until recently that attention was diverted to multidimensional data. Existing works mainly focus on finding top-k Nearest Neighbours, where each node has to match the whole querying keywords. It does not consider the density of data objects in the spatial space. Also these methods are low efficient for incremental query.

We have finished explaining how to build the leaf nodes of an R-tree on an inverted list. As each leaf is a block, all the leaves can be stored in a blocked SI-index as described in Section 6.1. Building the nonleaf levels is trivial, because they are invisible to the merging-based query algorithms, and hence, do not need to preserve any common ordering. We are free to apply any of the existing R-tree construction algorithms. It is noteworthy that the nonleaf levels add only a small amount to the overall space overhead because, in an R-tree, the number of nonleaf nodes is by far lower than that of leaf nodes.

III. PROPOSED SYSTEM:

A spatial database manages multidimensional objects (such as points, rectangles, etc.), and provides fast access to those objects based on different selection criteria. The importance of spatial databases is reflected by the convenience of modeling entities of reality in a geometric manner. For example, locations of restaurants, hotels, hospitals and so on are often represented as points in a map, while larger extents such as parks, lakes, and landscapes often as a combination of rectangles. Many functionalities of a spatial database are useful in various ways in specific contexts. For instance, in a geography information system, range search can be deployed to find all

restaurants in a certain area, while nearest neighbor retrieval can discover the restaurant closest to a given address.

Modules:

1. **Registration**
2. **Login**
3. **Hotel Registration**
4. **Search Techniques**
5. **Map_view**
6. **Distance_Search**

Modules Description

Registration:

In this module a User have to register first, then only he/she has to access the data base.

Login: In this module, any of the above mentioned person have to login, they should login by giving their email id and password.

Hotel Registration:

In this module Admin registers the hotel along with its famous dish. Also he measures the distance of the corresponding hotel from the corresponding source place by using spatial distance of Google map

Search Techniques:

Here we are using two techniques for searching the document 1) Restaurant Search,2) Key Search.

Key Search:

It means that the user can give the key in which dish that the restaurant is famous for. This results in the list of menu items displayed.

Restaurant Search:

It means that the user can have the list of restaurants which are located very near. List came from the database.

Map_View:

The User can see the view of their locality by Google Map (such as map view, satellite view) .

Distance Search:

The User can measure the distance and calculate time that takes them to reach the destination by giving speed. Chart will be prepared by using these values. These are done by the use of Google Maps.

System Configuration: -

H/W System Configuration: -

- Processor** - Pentium –III
- Speed** - 1.1 GHz
- RAM** - 256 MB (min)
- Hard Disk** - 20 GB
- Floppy Drive** - 1.44 MB
- Key Board** - Standard Windows Keyboard
- Mouse** - Two or Three Button Mouse
- Monitor** - SVGA

S/W System Configuration: -

- Operating System : Windows95/98/2000/XP
- Application Server : Tomcat5.0/6.X
- Front End : HTML, Java, Jsp
- Scripts : JavaScript.
- Server side Script : Java Server Pages.
- Database : My sql
- Database Connectivity: JDBC.

IV. TECHNOLOGIES USED

4.1 Introduction to Java:

Java has been around since 1991, developed by a small team of Sun Microsystems developers in a project originally called the Green project. The intent of the project was to develop a platform-independent software technology that would be used in the consumer electronics industry. The language that the team created was originally called Oak.

The first implementation of Oak was in a PDA-type device called Star Seven (*7) that consisted of the Oak language, an operating system called GreenOS, a user interface, and hardware. The name *7 was derived from the telephone sequence that was used in the team's office and that was dialed in order to answer any ringing telephone from any other phone in the office.

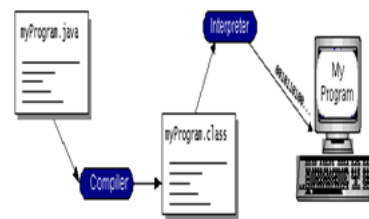


Figure 4.1: Working of Java

You can think of Java byte codes as the machine code instructions for the java virtual machine (Java VM). Every Java interpreter, whether it's a

development tool or a Web browser that can run applets, is an implementation of the Java VM. Java byte codes help make “write once, run anywhere” possible. You can compile your program into byte codes on any platform that has a Java compiler. The byte codes can then be run on any implementation of the Java VM. That means that as long as a computer has a Java VM, the same program written in the Java programming language can run on Windows 2000, a Solaris workstation, or on an iMac.

The Java Platform:

A platform is the hardware or software environment in which a program runs. We’ve already mentioned some of the most popular platforms like Windows 2000, Linux, Solaris, and Mac OS. Most platforms can be described as a combination of the operating system and hardware. The Java platform differs from most other platforms in that it’s a software-only platform that runs on top of other hardware-based platforms.

The Java platform has two components:

The java virtual machine (Java VM)

The java application programming interface (Java API)

You’ve already been introduced to the Java VM. It’s the base for the Java platform and is ported onto various hardware-based platforms.

The Java API is a large collection of ready-made software components that provide many useful capabilities, such as graphical user interface (GUI) widgets. The Java API is grouped into libraries of related classes and interfaces; these libraries are known as *packages*. The next section, What Can Java Technology Do? highlights what functionality some of the packages in the Java API provide.

The following figure depicts a program that’s running on the Java platform. As the figure shows, the Java API and the virtual machine insulate the program from the hardware.

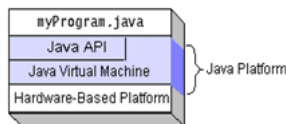


Figure 4.2: The Java Platform

Working of Java:

For those who are new to object-oriented programming, the concept of a class will be new to you. Simplistically, a class is the definition for a segment of code that can contain both data and functions. When the interpreter executes a class, it looks for a particular method by the name of **main**, which will sound familiar to C programmers. The

main method is passed as a parameter an array of strings (similar to the argv[] of C), and is declared as a static method.

To output text from the program, execute the **println** method of **System.out**, which is java’s output stream. UNIX users will appreciate the theory behind such a stream, as it is actually standard output. For those who are instead used to the Wintel platform, it will write the string passed to it to the user’s program.

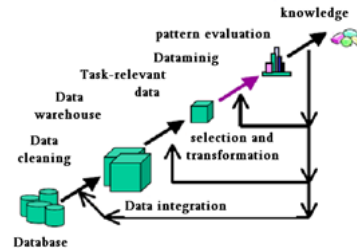


Figure 4.3 knowledge discovery process

FEASIBILITY STUDY:

Introduction:

A feasibility analysis involves a detailed assessment of the need, value and practicality of a p systems development... Feasibility analysis n forms the transparent decisions at crucial points during the developmental process as we determine whether it is operationally, economically and technically realistic to proceed with a particular course of action.

Feasibility analysis can be used in each of the steps to assess the financial, technical and operational capacity to proceed with particular activities.

ECONOMICAL FEASIBILITY:

This study is carried out to check the economic impact that the system will have on the organization. The amount of fund that the company can pour into the research and development of the system is limited. The expenditures must be justified. Thus the developed system as well within the budget and this was achieved because most of the technologies used are freely available. Only the customized products had to be purchased.

SOCIAL FEASIBILITY:

The aspect of study is to check the level of acceptance of the system by the user. This includes the process of training the user to use the system efficiently. The user must not feel threatened by the system, instead must accept it as a necessity. The level of acceptance by the users solely depends on the methods that are employed to educate the user about the system and to make him familiar with it. His level of confidence must be raised so that he is also able to make some constructive criticism,

which is welcomed, as he is the final user of the system.

Functional and Non-Functional Requirements:

1. Functional Requirements:

a. Inputs:

Browsing and uploading of files.

b. Processing:

Cluster server: There are 3 cluster servers Cluster server1 stores files of server1. Cluster server2 stores files of server2. cluster server3 stores files of server3.

Load server: Stores all files

Slip server cluster:

- Browses the file
- Selects the path
- Download the file

V. LITERATURE SURVEY

Literature survey is the most important step in software development process. Before developing the tool, it is necessary to determine the time factor, economy n company strength. Once these things r satisfied, ten next steps are to determine which operating system and language can be used for developing the tool. Once the programmers start building the tool the programmers need lot of external support. This support can be obtained from senior programmers, from book or from websites. Before building the system the above consideration r taken into account for developing the proposed system.

VI. DESIGN ANALYSIS

UML Diagrams:

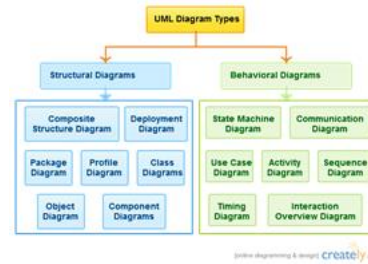
UML is a method for describing the system architecture in detail using the blueprint.

UML represents a collection of best engineering practices that have proven successful in the modeling of large and complex systems.

UML is a very important part of developing objects oriented software and the software development process.

UML uses mostly graphical notations to express the design of software projects.

Using the UML helps project teams communicate, explore potential designs, and validate the architectural design of the software.



Uses of UML:

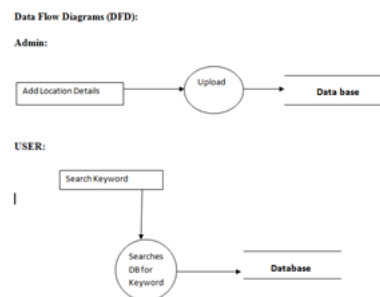
The UML is intended primarily for software intensive systems. It has been used effectively for such domain as

- Enterprise Information System
- Banking and Financial Services
- Telecommunications
- Transportation
- Defense/Aerospace
- Retails
- Medical Electronics
- Scientific Fields
- Distributed Web

Building blocks of UML:

The vocabulary of the UML encompasses 3 kinds of building blocks

- Things
- Relationships
- Diagrams



Testing is a process of executing a program with the intent of finding an error. A good test case is one that has a high probability of finding an as-yet –undiscovered error. A successful test is one that uncovers an as-yet- undiscovered error. System testing is the stage of implementation, which is aimed at ensuring that the system works accurately and efficiently as expected before live operation commences. It verifies that the whole set of programs hang together. System testing requires a test consists of several key activities and steps for run program, string, system and is important in

adopting a successful new system. This is the last chance to detect and correct errors before the system is installed for user acceptance testing.

VII. CONCLUSION

We have seen plenty of applications calling for a search engine that is able to efficiently support novel forms of spatial queries that are integrated with keyword search. The existing solutions to such queries either incur prohibitive space consumption or are unable to give real time answers. In this paper, we have remedied the situation by developing an access method called the spatial inverted index (SI-index). Not only that the SI-index is fairly space economical, but also it has the ability to perform keyword-augmented nearest neighbor search in time that is at the order of dozens of milli- seconds. Furthermore, as the SI-index is based on the conventional technology of inverted index, it is readily incorporable in a commercial search engine that applies massive parallelism, implying its immediate industrial merits.

VIII. REFERENCES

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