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**MULTI DOMAIN ANALYSIS TOOL****R.RAJASHEKARAN****M.Phil Scholar, Department of Computer Science ,Rathnavel College of Arts & Science College,  
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and Science,Sulur,Coimbatore -641 023 , Tamil Nadu****ABSTRACT**

*This paper refers **Multi Domain Analysis Tool** (MDAT) to analyze the multiple domain codes such as Java ,.Net , HTML. The tool is a platform independent tool developed using Data mining techniques in Java, that helps to detect performance bottlenecks by graphically displaying profiling data. The Tool checks for the efficiency of the program. The efficient code reduces memory usage and increases speed , efficiency of applications and is examines based on time and memory factors also fetch system details on which the tool is running. This is an automated tool and hence reduces the time for the client to gain details regarding the system .Testing is a process of executing a program with the intent of finding an error. Testing is the analysis of source/executable code and the controlled execution of executable code to reveal defects that compromise a program's executable integrity.*

**I .INTRODUCTION****I.1 Introduction:**

Multi Domain Analysis Tool (MDAT) is a user - friendly and fully atomized tool for analyzing performance of Java applications. This Performance Analysis Tool is a GUI-based tool .Thus the execution of the Analysis Tool could generate a view that the user is in need of to judge the total performance of Application.

Memory and Time are the main constraints that are considered at the execution of any program. These basic and inevitable constraints are considered as the main part of computerizing and programming. So a program is expected to occupy less memory space and execute as fast as Possible. The objective of this analysis tool is to tune the program so that it can efficiently utilize memory and execute as fast as possible.

**I.2 Data Mining :**

data mining (sometimes called data or knowledge discovery) is the process of analyzing data from different perspectives and summarizing it into useful information - information that can be used to increase revenue, cuts costs, or both. Data mining software is one of a number of analytical tools for analyzing data. It allows users to analyze data from many different dimensions or angles, categorize it, and summarize the relationships identified. Technically, data mining is the process of finding correlations or patterns among dozens of fields in large relational databases.

**II.EXISTING SYSTEM**

Performance of the applications (.Net,Java,HTML ) is usually done in some of the tools by the programmer or the analyst, such as Program analyzer tool , Performance analyzer tool ,Memory Analyzer , Doxygen ,Source Code

Navigator in now a days .The above tools processing takes more time and it is not possible to analyze accurately. Time consumption is more and also the application is not completely tested. The existing tool cost is very high and could not be affordable to very small applications. The available systems are useful and applicable to large sized programming and very well standardized applications and hence could not fit through all small programs. In the existing system any application is analyzed or tested slowly. Here the performance of any application is analyzed slowly & without full security.

### II.1.Disadvantages:

- The tools are not user friendly
- Time overhead and time consumption is more
- Higher chances of missing some conditions in the application
- Complete analysis of the program is not sometimes possible
- Not High security
- The performance and testing tool exist individually
- The cost factor is very high for the existing system
- Some times may leave certain simple flaws undetermined which may later rise as a complex problem
- The tools are not user friendly
- The analysts or programmers alone check for the efficiency which may not be flexible for clients or end users.

### III.PROPOSED SYSTEM

The proposed system is a automated tool. That designed for the performance analysis and testing of Various (.Net, Java,Html) applications together with the system configuration details. As this system runs in Java environment it

overcomes the drawbacks of the existing system by its features. The tool is machine and platform independent. It is GUI based and is at a very economical, affordable cost. The proposed system being user friendly, it enables the entry level users and clients to access easily. The efficiency of the various applications is determined depending upon the system on which it is installed. The tool can be extended to analyze the performance and also conduct testing for Serves, .Net,HTML, EJB and JSP applications.

### III.1 Disadvantages:

- User friendly
- Reduces testing and debugging
- Simple and compact
- Platform and machine independent
- Improves the application reliability
- Prevents the simple errors from becoming complex
- Increases the code reusability
- Any level of users can easily access the tool
- Reduces the maintenance time

### IV .MODULES

#### IV.1 Performance Analysis:

This module checks for the efficiency of the program. The efficient code reduces memory usage and increases speed. The performance analysis module checks for the efficiency of applications (.Net,Java,Html) and is examines based on time and memory factors. The factors that involve performance of Various (.Net, Java, Html) applications. Such as the used variables,

unused variables, optimizing loops, file compiling, memory usage, time computation etc. are determined. This analysis is carried out so as to provide the client with the best optimized application. Time based execution of the loops is done to optimize the loops. A programmer utilizes this timing detail to list out unnecessary loops. The classes and methods used in the applications (.NET, Java, Html) are also listed out.

**MDAT** lists the used and unused variables by which the unused variables can be eliminated by the programmer for efficient memory Utilization. It gives the details about number of classes and methods used in a source code and also the timing details for compilation and execution.

#### IV.2 System Configuration Details:

A system configuration detail gives system details on which the tool is running. This is an automated tool and hence reduces the time for the client to gain details regarding the system. This helps in comparing the performance of the application by executing in systems with different configurations. This module provides detail regarding memory that is memory used and frees memory. The operating system installed is also known. The drives in the system are known and the memory usage is listed in this module. System configuration details are generated by the tool. As this tool is developed using java and hence it can run on any platform and just pressing a tab lists the details about Memory capacity and RAM details

#### IV 3. Testing:

Testing is a process of executing a program with the intent of finding an error. Testing is the analysis of source/executable code and the controlled execution of executable code to reveal defects that compromise a various (.NET

,JAVA ,HTML )program's executable integrity. Defects often lead to erratic behavior or the premature termination of an executing program. A good test is one that has a high probability of finding an error. The objective is to design tests that systematically uncover different classes of errors and to do with a minimum Amount of time and effort. This module performs Testing Is Carried out in This Module

#### ➤ *White-Box Testing*

#### V.ALGORITHM USED: K-Nearest Neighbor (data mining)

Classification (generalization) using an instance-based classifier can be a simple matter of locating the nearest neighbor in instance space and labeling the unknown instance with the same class label as that of the located (known) neighbor. This approach is often referred to as a nearest neighbor classifier. The downside of this simple approach is the lack of robustness that characterizes the resulting classifiers. The high degree of local sensitivity makes nearest neighbor classifiers highly susceptible to noise in the training data.

More robust models can be achieved by locating  $k$ , where  $k > 1$ , neighbors and letting the majority vote decide the outcome of the class labeling. A higher value of  $k$  results in a smoother, less locally sensitive, function. The nearest neighbor classifier can be regarded as a special case of the more general  $k$ -nearest neighbors classifier, hereafter referred to as a  $k$ NN classifier. The drawback of increasing the value of  $k$  is of course that as  $k$  approaches  $n$ , where  $n$  is the size of the instance base, the performance of the classifier will approach that of the most straightforward statistical baseline, the assumption that all unknown instances belong to the class most frequently represented in the training data.

An arbitrary instance is represented by  $(a_1(x), a_2(x), a_3(x), \dots, a_n(x))$

$a_i(x)$  denotes features

Euclidean distance between two instances

$$d(x_i, x_j) = \sqrt{\sum_{r=1}^n (a_r(x_i) - a_r(x_j))^2}$$

Distance-Weighted Nearest Neighbor Algorithm

- Assign weights to the neighbors based on their 'distance' from the query point  
Weight 'may' be inverse square of the distances
- All instances correspond to points in the n-D space
- The nearest neighbor are defined in terms of Euclidean distance,  $\text{dist}(X_1, X_2)$
- Target function could be discrete- or real- valued
- For discrete-valued,  $k$ -NN returns the most common value among the  $k$  training examples nearest to  $x_q$

Distance Calculated:

$$\text{Co efficient} = p/p+q+R$$

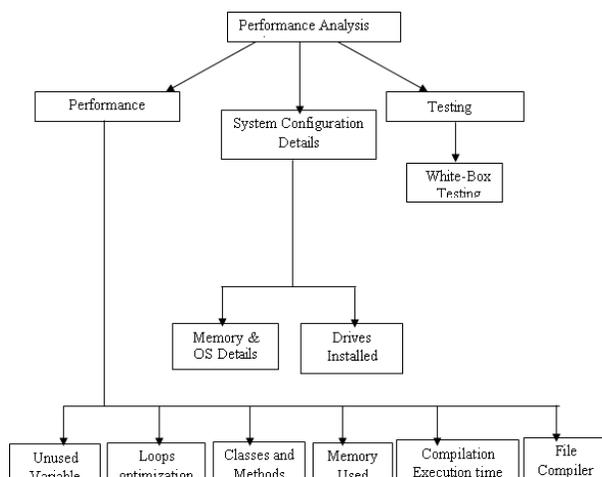
$$\text{Distance} = Q+R/P+Q+R$$

$P$ =No. of Variables Positive for Both Objects

$Q$ = No. of Variables Positive in Q not R

$R$ = No. of Variables Positive in R not Q

## VI.RESULT:



## VII.CONCLUSION:

The MDAT tool is designed with the future in mind. There may occur changes to all the systems. Likewise this system is also subjected to changes and advancements to meet ever the requirements of the customer. The generation of reports is under process which can be an enhancement for the application. It helps the

Care has been taken to assist in the needs for future development. The software is constructed along the lines suggested by the users. By making necessary changes efficiency of the system can be improved

This system can be extended as per advancements and requirements. the future changes the changes in the languages can be made. The security can be highly increased. The generation of methods is under process which can be an enhancement for the application. New modules can be added to the existing system with less effort.

## VIII.ABBREVIATIONS:

MDAT	-	Multiple Domain Analysis Tool
JDK	-	Java Developer's Kit
JVM	-	Java Virtual Machine
OS	-	Operating System
RAM	-	Random Access Memory
MS	-	Mille Second – ms units

## IX.REFERENCES :

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