ONLINE JAVA COMPILER WITH SECURITY EDITOR

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Abstract - *As it may be a competitive world and really quick world, everything within the universes is to be net. During this net world all the items square measure on-line. Therefore we have a tendency to created package referred to as "On-line java compiler with security editor". The most aim of this project we will simply to put in writing a java program and compile it and rectify in on-line. The shopper machine doesn't having java Development Kit . The Shopper machine solely connected to the server. The server having java Compiler. So server executes the java code and turn out the error message to the acceptable shopper machine. During this project is additionally making a security editor. This editor performs encode and decrypts the file. Cryptography and coding method perform victimization MD5 Algorithms. There's heap of security algorithms square measure there, however MD5 algorithmic rule is incredibly economical to encode and decode the file. during this project is employed to look at all variety of java API .It is terribly helpful for writing the java program simply, as an example if any error within the format of API suggests that we are able to read API throw this modules.)*

KEY WORDS: Text mining, classification, software repositories, compiler, software projects, triaging, feature extraction

1.INTRODUCTION

Data mining is that the method of extracting helpful info through information analysis. It's conjointly referred to as information discovery. Helpful information obtained as a results of data processing are often use to chop prices, increase revenues or each. Target information for mining purpose is categorical and numerical having information sorts like whole number, decimal, float, char, varchar2 etc. the most aim of this project is we are able to simply write a java program compile it and correct in on-line. The consumer machine doesn't have java development kit .The consumer machine is just connected to the server having java compiler ,so server executes the java code produces the error message to the acceptable consumer machine. during this project is additionally creates a security editor. This editor performs cryptography and decoding of the file. These processes area unit performed exploitation MD5 Algorithms. there's ton of security algorithms, however MD5 formula is most effective to during this project it's accustomed read all style of java API .It is terribly helpful for writing the java program simply, as an example if any error within the format of API there's an occasion to look at API throw through this module.

1.1 Purpose Of The Project:

The purpose of the project is to compile the java program online which provides java API additionally by providing security mechanisms through MD5 algorithm without having any java development tool kit.

1.2 Vision:

This project is developed for compiling the java programs on-line. The ONLINE-COMPILER FOR JAVA WITH SECURITY EDITOR is a web based application that can be accessed throughout the world.

1.3 Scope:

This system may be used for assembling java programs on-line, additionally save that file on the online, we are able to access the java API categories and that we may perform coding and secret writing operations.

1.4 Overview:

Here user sign in into the applying, once he's registered then he will directly log into the applying with correct user id and countersign.

2. Literature Survey

2.1 Online C, C++, Java Compiler Using cloud computing - a survey:

Cloud Priyadarashani doke, Surabhi Shingote, Sneha Kalbhor, Anumeha Singh, Heena Yeole define that computing model is for enabling convenient moreover as on-demand network access to a shared pool of configurable computing resources that may be quickly provisioned and free with minimum management efforts. In today's world wide use of net. During this net world all the items are on-line. So we have a tendency to produce code on-line compiler.
This project main aim is we are able to simply write program and compile and debug it in on-line. During this paper, we have a tendency to compare 3 on-line compilers, namely, Online C, C++ compiler mistreatment cloud computing that reduces the matter of mobility and space for storing by creating the utilization of cloud computing, centralized c# compiler mistreatment cloud computing that facilitate to reduces drawback of your time, cost, storage space by mistreatment cloud computing idea, on-line java compiler mistreatment cloud computing, that provides most convenient tool to compile code and take away the errors.

2.2 Secure Compilation to Modern

Pieter Agten , Raoul Strackx, Bart Jacobs and Frank Piessens define that We are present a secure (fully abstract) compilation scheme to compile associate object-based problem-oriented language to low-level machine language.

Full abstraction is achieved by wishing on a fine-grained program counter-based operation protection scheme , that is an element of our low-level target language. We discuss why customary compilers fail to supply full abstraction and introduce enhancements required to realize this goal.

We prove that our increased compilation theme provides full abstraction from our high-level linguistic communication to our low-level target language. Lastly, we have a tendency to show by suggests that of a model implementation that our low-level language with fine-grained memory access management will be accomplished with efficiency on trendy commodity platforms.

2.3 Automating Efficient RAM-Model Secure Computation

Chang Liu, Yan Huang, Elaine Shi, Jonathan Katz, Michael Hicks proposed that we have a tendency to describe the primary machine-driven approach for RAM-model secure computation within the semi-honest model. We have a tendency to outline Associate in Nursing intermediate illustration referred to as SCVM and a corresponding kind system fitted to RAM-model secure computation

Leverage compile-time optimizations, our approach achieves order-of-magnitude speedups compared to both circuit-model secure computation and therefore the state-of-art RAM-model secure computation.

2.4 Mashic Compiler: Mashup Sandboxing based on Inter-frame Communication:

Zhengqin Luo INRIA, Tamara Rezk INRIA propose a fresh compiler, called Mashic, for theautomatic generation of secure Javascript-based mashups from existing mashup code. The Mashic compiler can effortlessly be applied to existing mashups supported a wide-range of appliance Apis. It offers security and correctness guarantees. Security is achieved via constant Origin Policy. Correctness is ensured within the presence of benign gadgets, that satisfy confidentiality and integrity constrains with relation to the measuringsystemcode. The compiler has been successfully applied to planet mashups supported Google maps, Bing maps, YouTube, and Zwibbler Apis.

2.5 Design and Evaluation of Automated Scoring Java Programming Assignments:

Yuki Akahane, Hiroki Kitaya, and Ushio Inoue proposed that this paper presents a web-based automatic evaluation system for Java programming assignments, and reports analysis results in associate actual programming course. The system receives Java application programs submitted by students and returns the take a look at results now. The take a look at consists of compiler check, JUnit test, and result take a look at.

The result take a look at is extremely helpful for assignments in elementary programming courses, as a result of a typical program is composed of solely a main methodology that reads/writes knowledge from/to the standard input/output devices. The system was used and evaluated in associate actual course of our university.

we have a tendency to confirmed that the system is very useful for college students to enhance their programming skills. Especially, several students noticed and corrected their mistakes by repeating submission of their programs once more many times

3. PROBLEM FORMULATION

ONLINE-COMPILER FOR JAVA WITH SECURITY EDITOR is a web based application that can be accessed throughout the world

3.1 Existing System:

The existing system is that the manual system. The manual system is liable to error. it's time overwhelming. it's terribly tough for someone to provide the report. There area unit possibilities for dynamical the theme report and do malpractice. this technique involves plenty of manual entries with the applications to perform the specified task.

3.2 Limitations in Existing System:

- info retrieval may be a terribly massive method.
- Lack of organization of the files could rise to info loss owing to accidental deletion of files.
- No security as a result of the files visible to the users.
- Report generation are going to be a square measure giant task

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3.3 Proposed System:

The planned system is intended to eliminate the issues within the existing system. the most aim of this project we will simply to jot down a java program and compile it and rectify in on-line. The shopper machine doesn't having java development kit .The shopper machine solely connected to the server.

The server having java compiler .so server executes the java code and manufacture the error message to the suitable shopper machine

3.4 Advantages over Existing System:

- On-line access is provided for the saved files.
- No have to be compelled to install jdk in our own system.
- we will compile and run our java program on-line.

4. PROJECT SOLUTION MODULES

4.1 Java File creation:

In this module we will produce a java file and put it aside in our native classification system. Any consumer will produce a java file victimisation this web content. The consumer will produce as several java files and put it aside.The web page conjointly used as Associate in Nursing editor for the purchasers to form java files. Victimisation this shopper will simply produce a java file. it's conjointly user friendly for the purchasers.

4.2 Java File Compilation:

In this module, we are able to compile any java application that we have a tendency to are making. The consumer machine isn't needed to possess the JDK put in on their machines. The consumer will use this net application and he will compile the java file.

The consumer machines java application is compiled with the assistance of the JDK put in within the server machine. The JDK put in within the server machine

4.3 Java API Information In this module, we are able to understand the knowledge of all the API (Application programming Interface) obtainable in java. Victimisation this module we are able to understand all the strategies that are obtainable associate exceedingly in a very category or an interface. the applying programming interface could be a assortment of categories and interfaces obtainable in an exceedingly package.
It is impracticable for a computer coder to recollect all the ways out there during a exceedingly in a very category or an interface out there in a very package thus at that point the Programmer will create use of those JAVA API.

4.4 Encryption:

In this module, we are doing encryption using MD5 Algorithm. We are encrypting the file with the help of MD5 Algorithm. For encrypting a file, we need to get binary number from the user. With the help of these binary numbers we are encrypting the file. Now the actual text of the file is converted to a cipher text. So it will not be visible for the user. It will not be in the known format.

4.5 Decryption:

In this module, we are doing decryption using MD5 Algorithm. We are decrypting the file with the help of MD5 Algorithm. For decrypting a file, we need to get binary number from the user. With the help of these binary numbers we are decrypting the file. Now the actual text of the file is converted to a original text. So it will be visible for the user. It will not be in the known format.

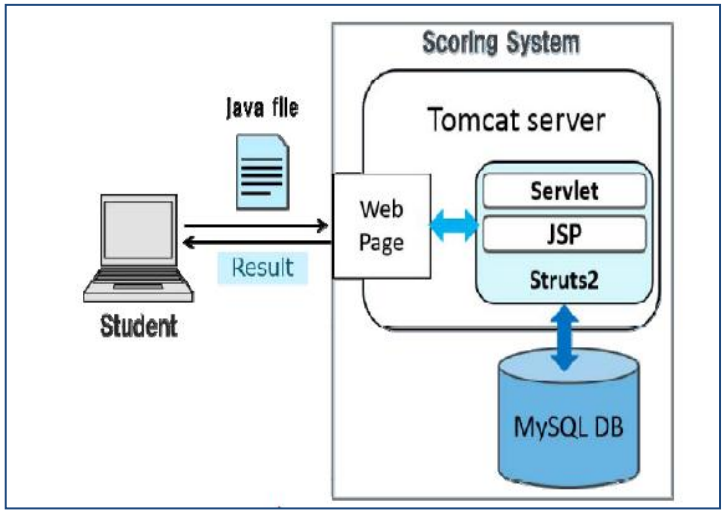

Fig:1 System Structure

5. SYSTEM ANALYSIS

Below design diagram represents principally flow of requests from users to info through servers. During this situation overall system is intended in 3 tires on an individual basis exploitation 3 layers referred to as presentation layer, business logic layer and circuit layer.

This project was developed exploitation 3-tire design.URL pattern represents however the requests area unit flowing through one layer to a different layer and the way the responses have gotten by different layers to presentation layer through server in design diagram.

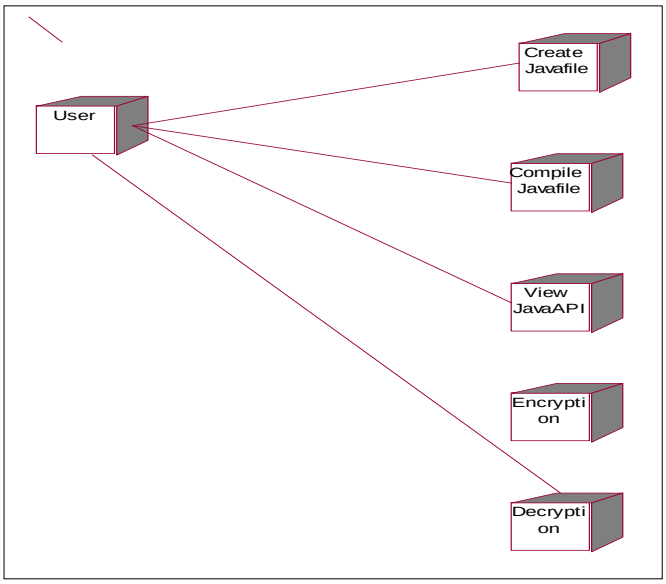

Fig:2 _URL_Diagram

Preliminary investigation examines project feasibility; the probability of the system are going to be helpful to the organization. The most objective of the practicable study is to check the Technical, Operational and Economical practicable for adding new modules and debugging recent running system.

All systems square measure possible if they're given unlimited resources and infinite time.All systems unit of measurement potential if they are given unlimited resources and infinite time.There area unit aspects within the practicability study portion of the preliminary investigation:

- Technical Feasibility
- Operation Feasibility
- Economic Feasibility

6. MD5 Algorrithm:

MD5 uses a buffer that is made up of four words that are each 32 bits long. These words are called A, B, C and D.

They are initialized as:

word A: 01 23 45 67

word B: 89 ab cd ef

word C: fe dc ba 98

word D: 76 54 32 10

MD5 further uses a table K that has 64 elements. Element number i is indicated as Ki. The table is computed beforehand to speed up the computations. The elements are computed using the mathematical sin function:

Ki = abs(sin(i + 1)) * 232

Four auxiliary functions:

In addition MD5 uses four auxiliary functions that each take as input three 32-bit words and produce as output one 32-bit word. They apply the logical operators and, or, not and xor to the input bits.

- F(X,Y,Z) = (X and Y) or (not(X) and Z)
- G(X,Y,Z) = (X and Z) or (Y and not(Z))
- H(X,Y,Z) = X xor Y xor Z
- I(X,Y,Z) = Y xor (X or not(Z))

Processing the blocks:

The contents of the four buffers (A, B, C and D) are now mixed with the words of the input, using the four auxiliary functions (F, G, H and I). There are four rounds, each involves 16 basic operations. One operation is illustrated in the figure below.

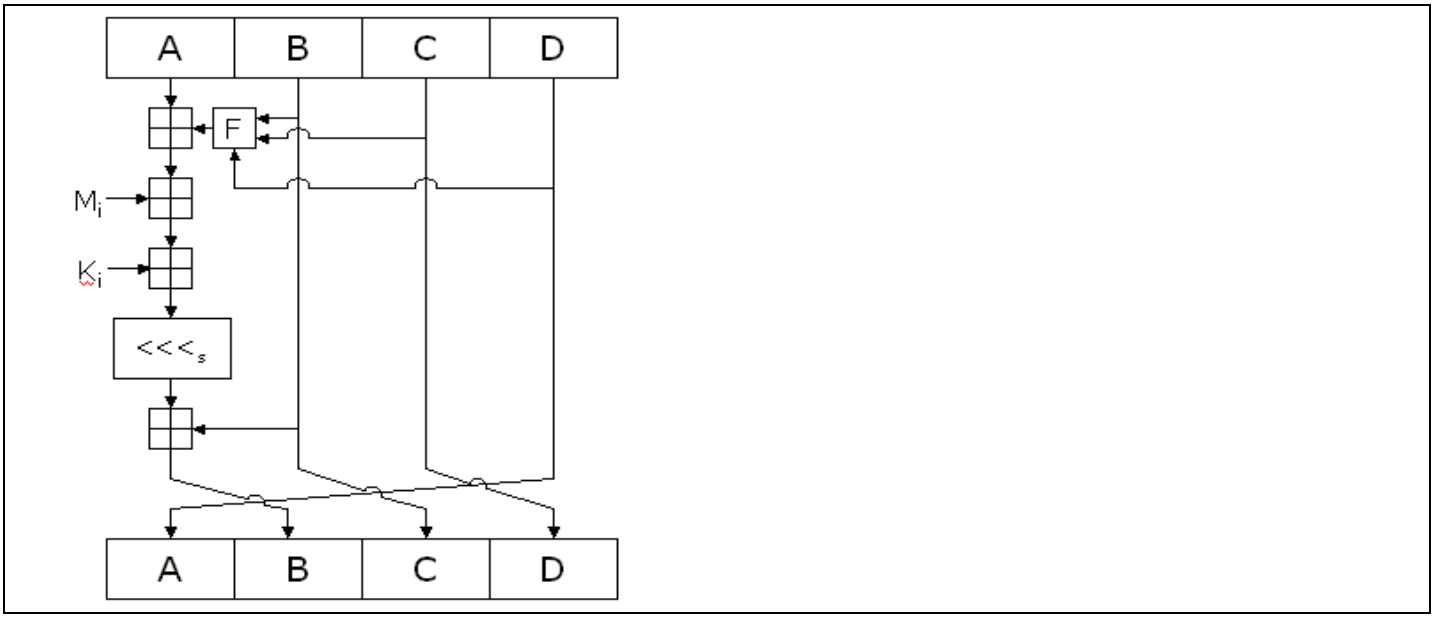

Fig:3 MD5

One operation performed in a round of the MD5 function.The figure shows how the auxiliary function F is applied to the four buffers (A, B, C and D), using message word Mi and constant Ki. The item "<<<s" denotes a binary left shift by s bits.

The output:

After all rounds have been performed, the buffers A, B, C and D contain the MD5 digest of the original input.

7. CONCLUSION

In this project we are able to simply to write down a java program and compile it and right in on-line. The user machine doesn't having java development kit .The user machine solely connected to the server. The server having java compiler .so server executes the java code and turn out the error message to the acceptable user's machine.

The proposal which is used to provide such forms of application which might execute thejava program on mobile using cloud server, earlier picture demonstrate the system architecture of operating vogue of defined compiler. MD 5 is the used for encoding and secret writing on cloud server.

In addition MD5 uses four auxilary function that's take as input 3 thirty two bits words and turn out as output 132 bits words they apply the logical operaters AND , OR , NOT and XOR to the input bits.After all rounds are performed , the buffers A,B,C and D contain the MD5 digest of the original input

8.REFERENCES

[1] S. Diehl, H. C. Gall and A. E. Hassan, "Special issue on mining software repositories," in *Empirical Software Engineering An International Journal © Springer .Science+Business Media*, 2009.
[2] O. B. Michael and G. C. Robin, "A Bug You Like: A Framework for Automated Assignment of Bugs.," *IEEE 17th international conference,* 2009.
[3]A. Hotho, A. Nürnberger and G. Paaß, "A Brief Survey of Text Mining," vol. 20, GLDV Journal for Computational Linguistics and Language Technology, 2005, pp. 19-62.
[4]A. E. Hassan, "The Road Ahead for Mining Software Repositories," *IEEE Computer society,* pp. 48-57, 2008.
[5]C. Zhang, H. Joshi, S. Ramaswamy and C. Bayrak, "A Dynamic Approach to Software Bug Estimation," in *SpringerLink*, 2008.
[6]L. Yu, C. Kong, L. Xu, J. Zhao and H. Zhang, "Mining Bug Classifier and Debug Strategy Association Rules for Web-Based *Applications*," in *08 Proceedings of the 4th international conference on Advanced Data Mining and Applications* , 2008.
[7]N. *Jalbert* and W. Weimer, "Automated Duplicate Detection for Bug Tracking Systems," in *IEEE computer society*, 2008.
[8]T. Bruckhaus, C. X. Ling, N. H. Madhavji and S. Sheng, "Software *Escalation* Prediction with Data Mining," in *Data Mining, Fifth IEEE International Conference*, 2006.
[9][Online]. *Available*: https://bugzilla.mozilla.org/. [10][Online].*Available*:https://bugs.eclipse.org/bugs/