AMRITSAR GROUP OF COLLEGES

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Six Weeks Training Synopsis

On

Uni Learning Management System

Submitted in the partial fulfillment of the requirement of the award of degree of

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

(2020-2024)

Submitted to:

Dr. Sandeep Kad

Head of Department

(CSE)

Submitted By:

Chandpreet Singh (2000088)

Navish Mehta (2000154)

Tusharbir Singh (2000225)

DEPARTMENT OF COMPUETER SCIENCE AND ENGINEERING

Amritsar Group of Colleges, Amritsar

DECLARATION

I the undersigned solemnly declare that the synopsis on project ***Uni Learning Management System*** is based on my own work carried out during the course of our study.

I assert the statements made and conclusions drawn are an outcome of my researchwork. I further certify that

1. The work contained in the synopsis is original and has been done by me.
2. The work has not been submitted to any other Institution for any other degree/diploma/certificate in this college or any other of India or abroad.
3. I have followed the guidelines provided by the college in writing the synopsis.
4. Whenever I have used materials (data, theoretical analysis and text) from othersources, I have given due credit to them in the text of the synopsis and giving their details in the references.

Chandpreet Singh
(2000088)

Navish Mehta
(2000154)

Tusharbir Singh
(2000225)

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INTRODUCTION TO PROJECT

Uni Learning Management System is a free service that allows you to share files, create assignments, grade assignments and communicate with your students in a paperless way. It is a blended learning platform for schools that aims to simplify creating, distributing and grading assignments in an entirely electronic format. It enables instructors to create and organize assignments quickly, provide feedback efficiently, and easily communicate with their classes.

OBJECTIVES OF PROJECT

- It is easy to set up in a few steps.
- Effective communication and sharing.
- It will speed up the assignment process.
- Clean and user-friendly interface.
- File transmission. This function pertains to the transfer of data over a digital channel of communication, which involves either a point-to-point transmission or a point-to-multipoint transfer. The mode of transfer and its average speed are the key aspects of this process.
- Data Storage. Once a file is transferred, it is stored in a folder that file-owners/users can access using a browser-based or a mobile app, which can then be readily shared with fellow users. How much storage space you must avail will depend on your business requirements.
- Dashboards. A key component of today's generation of sharing platforms nowadays is the intuitive, integrated dashboard which functions as the control center of all app activities, including file sharing permissions, monitoring, etc.
- Password Protection. Once a file is shared online, it automatically becomes vulnerable to various forms of malicious attack, which is why it best to choose a vendor **with reliable data and user information security.**

FEATURES OF PROJECT

Admin Interface

- Admin can login.
- Admin have access to add teachers.
- Admin will create login id info for students.
- Admin will be able to manage teachers.
- Admin and teacher can manage students.
- Admin has access to manage courses.

Teacher Interface

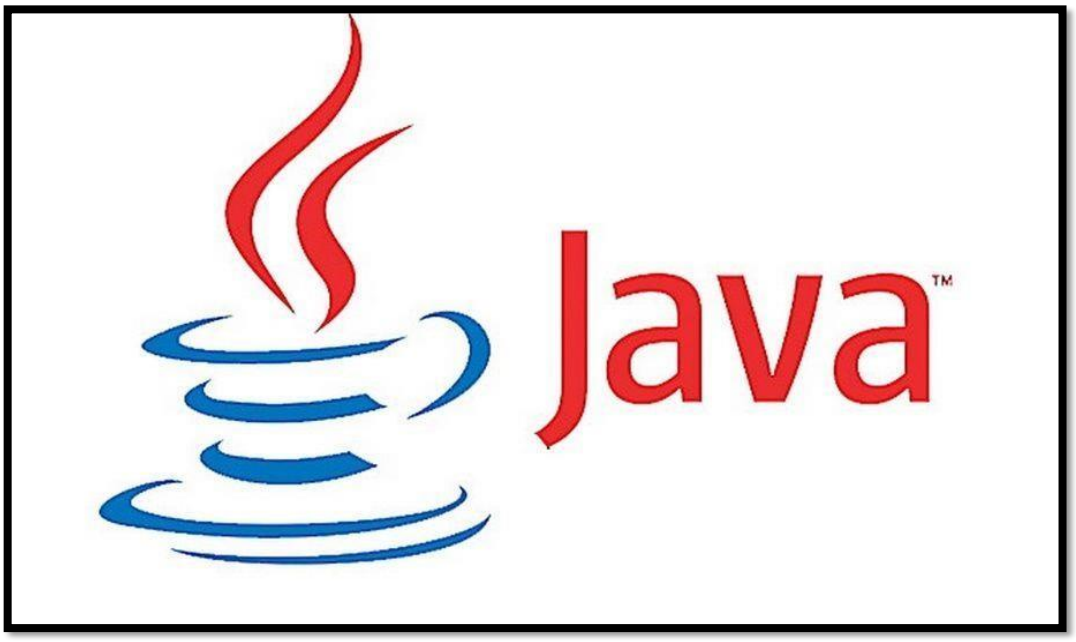
- Teacher will Login with the login details provided by admin.
- Teacher will be able to change the password in case if teacher forgets password.
- Teacher can upload their lectures.
- Teacher can upload assignments.
- Teacher can go through queries of students.

Student Interface

- Student will Login with the login details provided by admin.
- Student will be able to change the password in case if student forgets password.
- Students can go through courses in which they are enrolled.
- Students can view lectures.
- Students can submit their assignment.

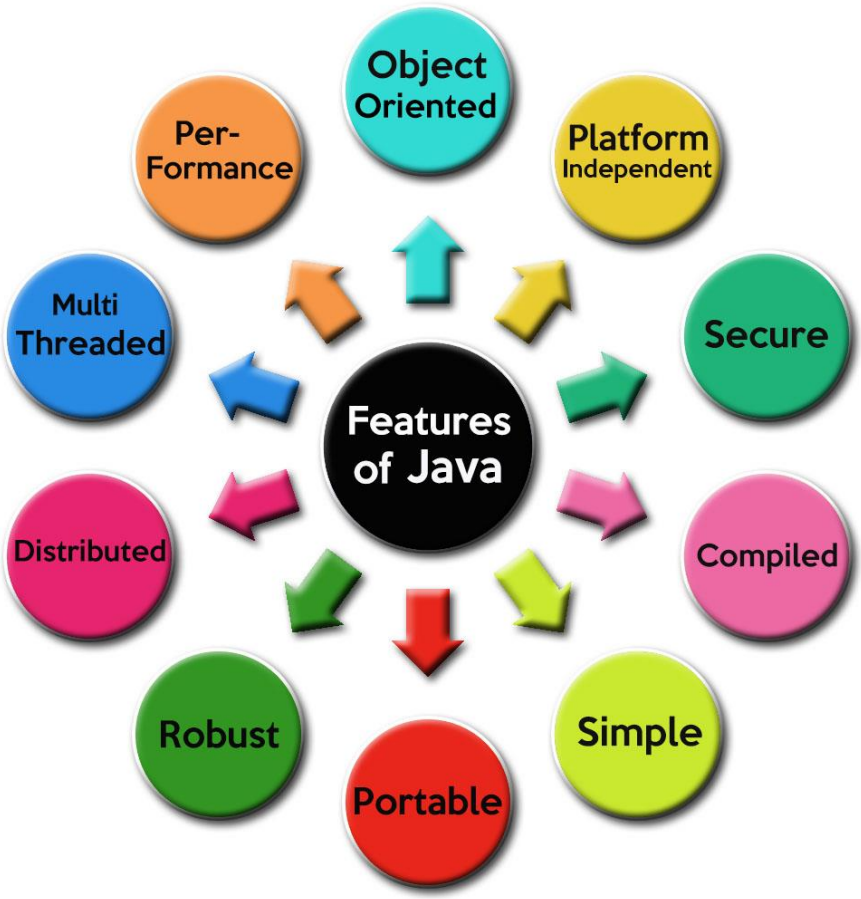
FRONT END

Java is a general purpose and the most popular object-oriented programming language. Java was developed by James Gosling and his colleagues at Sun Microsystems in the early 1990's.



Due to its simplicity and easy to learn and advanced features, we opted this language for our six months industrial training. This language supports many interesting features that make it an ideal language for software development. In addition to the object-oriented features, it also provides features such as platform independence, security, multithreading, portability; etc which makes it well suited for the web and networked services, applications, platform-independent desktops, robotics and any other embedded devices.

FEATURES OF JAVA



- **Simple**: Java is a compact and simple language. Programs are easy to write and debug as it omits many clumsy, poorly understood and confusing features of other programming languages such as C++.

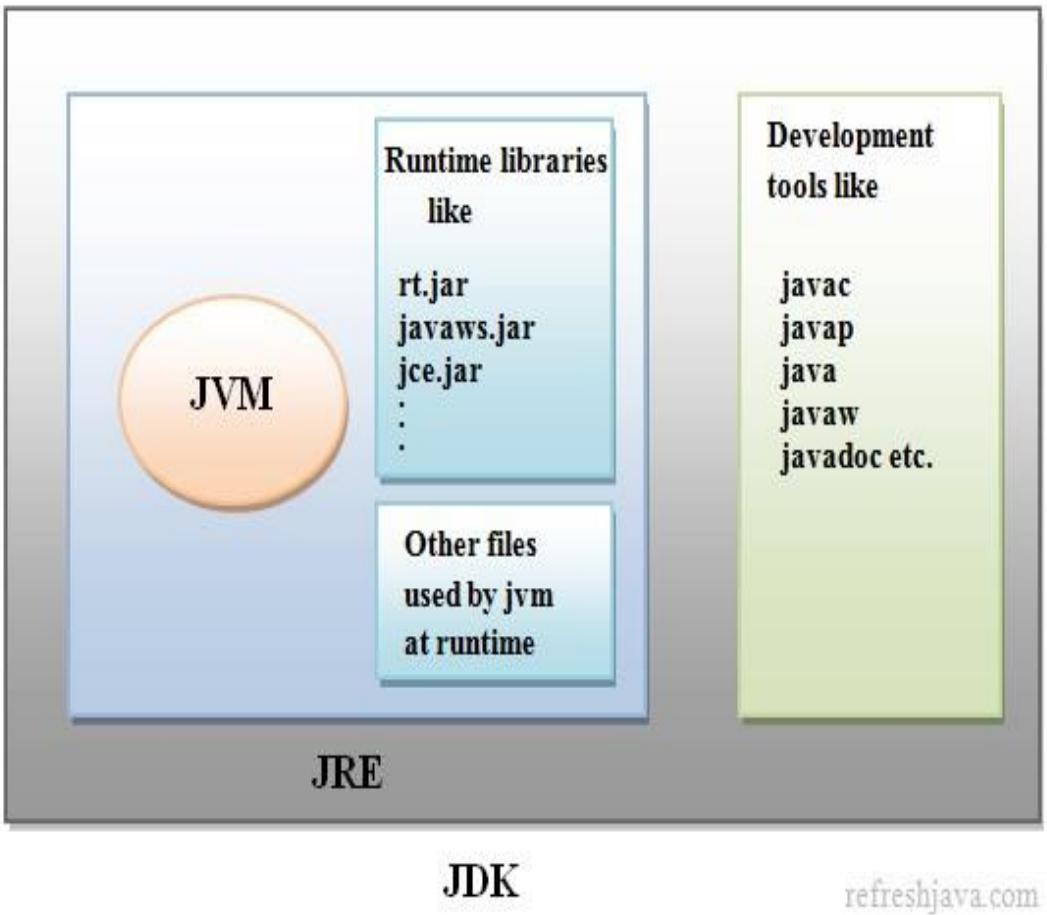
- **Object-oriented:** Java is purely object-oriented language because programming in java is centered on creating objects; manipulating objects and making objects work together.

- **Distributed:** Java is a distributed language which means that the programs can be designed to run on computer networks. Java provides an extensive library of classes for communicating using TCP/IP protocols such as HTTP and FTP. This makes creating network connections much easier.

- **Robust:** Java is designed for writing programs that are highly robust. By robust, we mean reliable.
- **Secure:** As java is intended to be used in networked/distributed environments so it implements several security mechanisms to protect you against malicious code that might try to invade your file system.
- **Architectural Neutral:** This means that the programs written on one platform can run on any other platform without having to rewrite or recompile them. It follows 'Write-once-run-anywhere' approach.
- **Portable:** In Java, the size of the primitive data types is machine independent. These consistencies make java program portable among different platforms such as Windows, UNIX and Mac.
- **Interpreted:** Java is such a language that is both compiled and interpreted. The two steps of compilation and interpretation allow extensive code checking and improved security.
- **High performance:** Java programs are complied with portable intermediate form known as byte codes, rather than to native machine level instructions and JVM executes java byte codes on any machine on which it is installed. This architecture means that java programs are faster.
- **Multithreaded:** Java is also a multithreaded programming language. It allows you to write a program that can do many tasks simultaneously.
- **Dynamic:** Java is designed to be dynamic. Classes are stored in separate files and are loaded into the Java Interpreter only when they are needed.
- **Platform Independent:** Java is platform independent. Because the Java compiler converts the source code to bytecode, which is Intermediate Language. Bytecode can be executed on any platform (OS) using JVM (Java Virtual Machine).

JAVA DEVELOPMENT KIT (JDK)

The Java Development Kit (JDK) is a software package that sun has made available to public. It includes all the basic components that makeup the java environment. These include the Java compiler, Java Interpreter, an applet viewer that lets you see applets without opening a Java-compatible web browser.



APPLICATIONS OF JAVA

Java has evolved from a simple language providing interactive dynamic content for webpage to a predominant enterprise-enables programming language suitable for developing significant and critical applications.

Today, Java is used for many applications like:

- Web based applications
- Financial applications
- Gaming applications
- Embedded applications
- Distributed enterprise applications
- Mobile applications
- Image applications
- E-business applications
- Desktop applications and many more.

BACK END

MySQL

MySQL is open source Relational Database Management System. MySQL is very fast, reliable and flexible Database Management System. It provides a very high performance and it is multi-threaded and multi user Relational Database management system.

MySQL is one of the most popular relational database Management System on the web. The MySQL Database has become the world's most popular open source Database, because it is free and available on almost all the platforms. The MySQL can run on Unix, window, and Mac OS.

MySQL source code is available that's why now you can recompile the source code.

Features:-

The following list describes some of the important **Features of MySQL** Database Software.

- Internals and Portability
  - Written in C and C++.
  - Tested with a broad range of different compilers.
  - Works on many different platforms.
  - The **MySQL** code is tested with Purify (a commercial memory leakage detector) as well as with Valgrind, a GPL tool.
  - The server is available as a separate program for use in a client/server networked environment. It is also available as a library that can be embedded (linked) into standalone

applications. Such applications can be used in isolation or in environments where no network is available.

- Many column types: signed/unsigned integers 1, 2, 3, 4, and 8 bytes long, FLOAT, DOUBLE, CHAR, VARCHAR, TEXT, BLOB, DATE, TIME, DATETIME, TIMESTAMP, YEAR, SET, ENUM, and OpenGIS spatial types.
- Fixed-length and variable-length records.
- Statements and Functions.
- Full operator and function support in the SELECT and WHERE clauses of queries.
- Full support for SQL GROUP BY and ORDER BY clauses. Support for group functions (COUNT(), COUNT(DISTINCT ...), AVG(), STD(), SUM(), MAX(), MIN(), and GROUP_CONCAT()).
- Support for LEFT OUTER JOIN and RIGHT OUTER JOIN with both standard SQL and ODBC syntax.
- Support for aliases on tables and columns as required by standard SQL.
- DELETE, INSERT, REPLACE, and UPDATE return the number of rows that were changed (affected). It is possible to return the number of rows matched instead by setting a flag when connecting to the server.

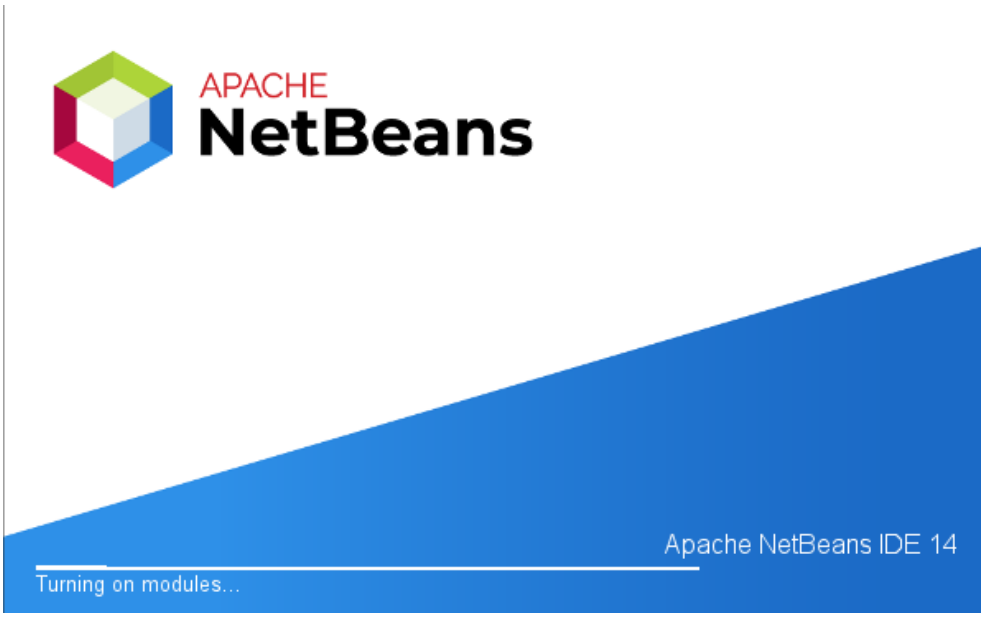
- Security
  - A privilege and password system that is very flexible and secure, and that allows host-based verification. Passwords are secure because all password traffic is encrypted when you connect to a server.
- Scalability and Limits
  - Handles large databases. We use **MySQL** Server with databases that contain 50 million records. We also know of users who use **MySQL** Server with 60,000 tables and about 5,000,000,000 rows.
  - Up to 64 indexes per table are allowed (32 before **MySQL** 4.1.2). Each index may consist of 1 to 16 columns or parts of columns. The maximum index width is 1000 bytes (500

before **MySQL** 4.1.2). An index may use a prefix of a column for CHAR, VARCHAR, BLOB, or TEXT column types.

- Connectivity
  - Clients can connect to the **MySQL** server using TCP/IP sockets on any platform. On Windows systems in the NT family (NT, 2000, XP, or 2003), clients can connect using named pipes. On Unix systems, clients can connect using Unix domain socket files.
  - In **MySQL** versions 4.1 and higher, Windows servers also support shared-memory connections if started with the --shared-memory option. Clients can connect through shared memory by using the --protocol=memory option.
  - The Connector/ODBC (MyODBC) interface provides **MySQL** support for client programs that use ODBC (Open Database Connectivity) connections. For example, you can use MS Access to connect to your **MySQL** server. Clients can be run on Windows or Unix. MyODBC source is available. All ODBC 2.5 functions are supported, as are many others.
  - The Connector/J interface provides **MySQL** support for Java client programs that use JDBC connections. Clients can be run on Windows or Unix. Connector/J source is available.
- Localization
  - The server can provide error messages to clients in many languages.
  - Full support for several different character sets, including latin1 (ISO-8859-1), german, big5, ujis, and more. For example, the Scandinavian characters 'â', 'ä' and 'ö' are allowed in table and column names. Unicode support is available as of **MySQL** 4.1.
  - All data is saved in the chosen character set. All comparisons for normal string columns are case-insensitive.

TOOLS USED

NetBeans - integrated development environment



NetBeans IDE is a free, open source, popular integrated development environment used by many developers. Out of the box, it provides built-in support for developing in Java, C, C++, XML, and HTML. And this author especially likes the support for editing JSPs, including syntax highlighting, HTML tag completion, JSP tag completion, and Java code completion.

The basic steps for making a new project in java are as follows.

1. Create a new project

2. Mount a directory - specify a location to save project files

3. Add a new class to the project

4. Compile and run a Java program

MYSQL Workbench 8.0 CE

MySQL Workbench is a unified visual tool for database architects, developers, and DBAs. MySQL Workbench provides data modeling, SQL development, and comprehensive administration tools for server configuration, user administration, backup, and much more.

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Features of MySQL Workbench:

Design

MySQL Workbench enables a DBA, developer, or data architect to visually design, model, generate, and manage databases. It includes everything a data modeler needs for creating complex ER models, forward and reverse engineering, and also delivers key features for performing difficult change management and documentation tasks that normally require much time and effort.

Develop

MySQL Workbench delivers visual tools for creating, executing, and optimizing SQL queries. The SQL Editor provides color syntax highlighting, auto-complete, reuse of SQL snippets, and execution history of SQL.

Administer

MySQL Workbench provides a visual console to easily administer MySQL environments and gain better visibility into databases. Developers and DBAs can use the visual tools for

configuring servers, administering users, performing backup and recovery, inspecting audit data, and viewing database health.

Visual Performance Dashboard

MySQL Workbench provides a suite of tools to improve the performance of MySQL applications. DBAs can quickly view key performance indicators using the Performance Dashboard. Performance Reports provide easy identification and access to IO hotspots, high cost SQL statements, and more.

Database Migration

MySQL Workbench now provides a complete, easy to use solution for migrating Microsoft SQL Server, Microsoft Access, PostreSQL, and other RDBMS tables, objects and data to MySQL.

Minimum Hardware Configurations

- Microsoft Windows XP Professional SP3/Vista SP1/Windows 7 Professional:
  - Processor: 800MHz Intel Pentium III or equivalent
  - Memory: 512 MB
  - Disk space: 750 MB of free disk space
- Solaris OS version 10 (SPARC):
  - Processor: Ultra SPARC II 450 MHz
  - Memory: 512 MB
  - Disk space: 650 MB of free disk space
- Solaris OS version 10 (x86/x64 Platform Edition):
  - Processor: AMD Opteron 1200 Series 1.8 GHz
  - Memory: 512 MB
  - Disk space: 650 MB of free disk space
- Macintosh OS X 10.5 Intel:
  - Processor: Dual-Core Intel (32 or 64-bit)
  - Memory: 512 MB
  - Disk space: 650 MB of free disk space

HARDWARE REQUIREMENTS

Hardware requirements include that hardware which is required for its working. It includes:

- Pentium 4 Computer
- 512 MB RAM
- High Speed Internet Connection (DSL/Cable)

SOFTWARE REQUIREMENTS

The technical specifications of requirements for the software are as follows:

- Any Operating System (Windows, Linux, MAC)
- Java run time environment
- Netbeans (Java IDE)
- Java SDK (Software Development Kit)
- Any web browser(Chrome , Firefox , etc)