

Online Survey System

A PROJECT REPORT

for

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Submitted by

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**Under the Supervision of
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CERTIFICATE

Certified that **Riya Goyal (2200290140127)** has/ have carried out the project work having “**Online Survey System**” (**Project-KCA451**) for **Master of Computer Application** from Dr. A.P.J. Abdul Kalam Technical University (AKTU) (formerly UPTU), Lucknow under my supervision. The project report embodies original work, and studies are carried out by the student himself/herself and the contents of the project report do not form the basis for the award of any other degree to the candidate or to anybody else from this or any other University/Institution.

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ABSTRACT**

In today's digital age, feedback is invaluable for businesses, organizations, and academic institutions alike. The ability to collect, analyze, and interpret data from surveys provides vital insights that drive decision-making processes, product enhancements, and service improvements. Traditional paper-based surveys are increasingly being replaced by online survey systems due to their convenience, efficiency, and ability to reach a wider audience.

Our project aims to develop a cutting-edge online survey system that revolutionizes the way feedback is collected and utilized. By leveraging modern web technologies and user-centered design principles, our system will offer a seamless and intuitive experience for both survey creators and respondents.

Traditional methods of gathering feedback, such as paper-based surveys or in-person interviews, are not only cumbersome but also limited in scope and efficiency. With the digital landscape rapidly evolving, there's a growing demand for a more streamlined and accessible approach to feedback collection. Survey Sense emerges as the answer to this demand, offering a comprehensive solution that combines convenience, flexibility, and insightful analytics.

Survey Sense represents more than just a survey tool; it's a catalyst for change, empowering organizations to listen, learn, and adapt in an ever-evolving landscape. With its intuitive interface, advanced features, and commitment to data security, SurveySense stands poised to revolutionize the way feedback is gathered and acted upon, ushering in a new era of informed decision-making and continuous improvement.

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CHAPTER-1

INTRODUCTION

1.1 INTRODUCTION TO ONLINE SURVEY SYSTEM

In the digital age, “Online Survey System” researches have become an important tool for gathering information in various fields such as education, business research, healthcare and analytics. Their versatility, accessibility, and scalability make them useful for researchers and organizations looking to collect information, collect information, and make informed decisions. However, existing online surveys often fail to meet the changing needs of users, leading to the development of online surveys.

This project aims to solve the limitations of existing solutions by creating and using advanced online analytics. An online survey that uses digital technology and best practices in creating user experience. The system will provide a user-friendly interface, dynamic survey design capabilities, real-time responses and powerful data analysis tools to streamline the survey process and improve data quality.

The importance of this study lies in its ability to change the path of research, enabling researchers and organizations to overcome problems related to the information collection process. Providing an intuitive and useful platform to create, apply and analyses research, the system will enable users to make insightful and evidence-based on the decisions.

In addition, the project will prioritize security and privacy to ensure the confidentiality and integrity of research data. Strong encryption, access control and authentication procedures will be used to protect sensitive information and reduce risks associated with data breaches.

Through rigorous evaluation, feedback development and user feedback, this project strives to provide an efficient and reliable online survey that can meet the needs of many users in different industries. Offering solutions that include usability, reliability, security and robustness, the system aims to set new standards for online research platforms and support innovation and excellence in data collection processes.

1.2 LITRATURE REVIEW

The literature surrounding online survey systems encompasses a wide range of topics, including user experience design, technological advancements, methodological considerations, and applications across various fields. This literature review aims to provide a comprehensive overview of key findings and trends in the domain, highlighting existing challenges and opportunities for the development of an innovative online survey system. The literature on online survey systems underscores the importance of user experience design, technological innovations, methodological rigor, and diverse applications. By synthesizing insights from existing studies, this literature review informs the development of an advanced online survey system that addresses current challenges and aligns with best practices in field.

1.3 PROBLEM STATEMENT

After analyzing many existing Survey System we have now the obvious vision of the project to be developed. Before we started to build the application team had many challenges. We defined our problem statement as

To make desktop based application of Online Survey System.. To make the system easily managed and can be secured.

To cover all the categories in one application so that no need to surf another web app.

To secure the application we need to authenticate the email or phone number.

1.4 OBJECTIVE AND SUCCESS CRITERIA OF THE PROJECT

The main objective of project are:

- Provide a system through which user's online will do survey of their product's, also get opinion of people's online what they think about the particular problem.
- Advertising of the survey System so that it used by many people online.
- Less time consuming and reduce the burden of database
- To get the information in easy and efficient way.
- To make work simple and user friendly.

1.5 FEATURES OF PROJECT

The key features of online survey system project are:

- The project has been coded in Java programming language with MySQL server database.
- It has the facility of hiding the identity of users or voters in the system. So, the system can be utilized in collecting ideas secretly.
- Besides the survey facility, it provides the e-mail notification feature for organization.
- Radio button or check box is used to intake the vote.
- It can be installed anywhere to provide effective survey facility at an affordable cost.

1.6 SCOPE OF THE APPLICATION

This software system will be an Online Survey System (OSS) for individuals, organizations and business owners. Whether you need to understand the factors that shape faculty satisfaction or feedback from students on a new course offering, an online survey can reveal data that will improve programs, processes, and overall achievement. Parents, students, teachers, professors, and administrators can all benefit from the OSS. Benefits of the OSS includes a faster, cheaper, more accurate ways of collecting information from a large audience, quick to analyze results of surveys at any time, easy to use for participants and researchers also. Functionalities offered by the OSS include creation of surveys (which include ability to add, delete and modify surveys). Assign surveys to specific guest users or a group of guest users or public (visitor).

CHAPTER 2

SYSTEM ANALYSIS

2.1 REQUIREMENT ANALYSIS

2.1.1 PROBLEM DEFINITION

The problem faces by the service that is maintain the records manually which creates lots of confusion and causes mismanagement. The workload is biased to a single worker as the records are maintained manually. The status of all the records is not updated regularly. This manual data recording system is time consuming and takes lot of efforts to maintain it. And major problem through manual entry is that it doesn't provide the technical specification of the particular product. And the major problem faced by employee is that they have to go for each place and collects the information about polling system. By this it take lots of time and take more labor works. This project is also used by survey department for surveying of country.

2.1.2 FEASIBILITY STUDY

It is a procedure that identifies, describes, and evaluates candidate systems and selects the best systems for the job. The feasibility study of the project is essentially made. It was feasible. So the project is taken up. User needs/features of the product are captured at the beginning of the project. An estimation of the size of the projects in fiction points is done. In some cases, it may be difficult to make accurate estimates.

2.1.3 TECHNICAL FEASIBILITY

This study checks the technical aspects of system. It also checks the available software technology and manpower. In this project PHP Framework 5.0 is used. PHP is Object Oriented nature, Multiplatform application development, significant improvements in code

reuse, Code specify, Automatic resource management, Security, Ease of deployment and Administration. This software is simple to use and manage.

2.1.4 BEHAVIORAL FEASIBILITY

Our system follows behavioral feasibility because of its friendliness in nature. Anyone can operate easily, for this we have developed user interface and user-friendly system. An old person who works on his own style cannot shift on another style. So no one wants a change, that's why project should be feasible. This project is windows based and we provide graphical user interface which makes it easy to use. No technical training is required to use this software.

2.1.5 ECONOMICAL FEASIBILITY

This study is mainly concerned with cost-benefit analysis i.e. how much money the user is investing in any system and how much he is getting as a benefit in output. Our project is Economical Feasible because anyone uses this software would need not to buy this machine. Our hardware requirement is not too expensive. So as compare to benefit the project is economically feasible.

2.2 PERFORMANCE REQUIREMENTS

The following performance characteristics should be taken care of while developing the system:

- **Security:** The system shall use appropriate security measures to protect data from unauthorized access.
- **Performance:** The system shall be able to handle a large number of users and transactions without experiencing significant performance degradation.
- **Scalability:** The system shall be scalable to accommodate future growth in the number of users and transactions.

2.3 SYSTEM REQUIREMENTS

2.3.1 FUNCTIONAL REQUIREMENTS

Functional requirements for an online survey system typically encompass the features and capabilities needed to create, distribute, collect, analyze, and report survey data effectively. Here's a comprehensive list:

- **User Registration and Management:**

1. Allow users to register accounts.
2. Manage user roles and permissions (admin, moderator, participant).
3. Enable password recovery and account management features.

- **Survey Creation and Design:**

1. Customize survey layouts and themes.
2. Create various types of questions (multiple choice, open-ended, rating scales, etc.)
3. Include logic branching for conditional questions based on previous responses
4. Support multimedia elements like images and videos in questions.

- **Survey Distribution:**

1. Provide multiple distribution channels (email invitations, social media sharing, website embedding)
2. Generate unique survey links for tracking responses.
3. Schedule surveys for future distribution.

- **Data Collection:**

1. Ensure security measures to protect respondent data
2. Support multiple languages for international surveys.
3. Allow anonymous responses if needed.
4. Enable response validation to ensure data accuracy.

- **Real-time Response Tracking:**

1. Track response rates and completion status in real-time.
2. Send automated reminders to non-respondents.
3. Monitor survey progress and trends.

- **Data Analysis:**
 1. Offer robust reporting and analytics tools.
 2. Generate graphical representations (charts, graphs) of survey results.
 3. Allow filtering and segmentation of data for in-depth analysis.
 4. Support export of data in various formats (CSV, Excel, PDF).
 - **Security and Compliance:**
 1. Implement robust data encryption to protect sensitive information.
 2. Comply with data protection regulations (GDPR, CCPA).
 3. Conduct regular security audits and updates.
 - **Collaboration and Sharing:**
 1. Enable collaboration among multiple users in survey creation and management.
 2. Allow sharing of survey templates and results with team members.
 - **Scalability and Performance:**
 1. Ensure the system can handle a large volume of survey responses.
 2. Optimize performance for quick loading and response times, even with high traffic.
- These functional requirements can serve as a foundation for designing and developing effective online survey system that meets the needs of various users and organizations.

2.3.2 NON-FUNCTIONAL REQUIREMENT

Non-functional requirements define the qualities or attributes that describe how a system performs rather than what it does. For an online survey system, non-functional requirements are crucial for ensuring reliability, security, usability, and performance. Here's a list of non-functional requirements for an online survey system

1. Performance:

- **Response Time:** The system should respond to user actions (e.g., loading pages, submitting responses) within an acceptable time frame (e.g., under 3 seconds)
- **Throughput:** The system should be able to handle a certain number of concurrent users or survey responses per unit of time without degradation in performance.
- **Scalability:** The system should be able to scale seamlessly to accommodate an increasing number of users and surveys.

2. Reliability:

- Availability: The system should be available for use during specified hours of operation, with minimal downtime for maintenance or upgrades.
- Fault Tolerance: The system should continue to function properly even in the event of hardware or software failures, ensuring that survey data is not lost.

3. Security:

- Data Privacy: Survey responses and user data should be encrypted during transmission and storage to protect against unauthorized access or disclosure.
- Authentication and Authorization: Only authorized users should be able to access and modify survey data, with proper authentication mechanisms in place.
- Audit Trails: The system should maintain logs of user activities and survey modifications for accountability and traceability purposes.
- Compliance: The system should comply with relevant data protection regulations (e.g., GDPR, HIPAA) and industry standards for security

4. Usability:

- Accessibility: The system should be accessible to users with disabilities, following accessibility guidelines such as WCAG (Web Content Accessibility Guidelines).
- User Interface: The user interface should be intuitive and easy to navigate, with clear instructions and feedback provided throughout the survey process.

5. Maintainability:

- Modularity: The system should be designed with modular components to facilitate updates, maintenance, and enhancements.
- Documentation: Comprehensive documentation should be provided for system administrators, survey creators, and end-users to facilitate troubleshooting and support.

6. Interoperability:

- Integration: The system should be able to integrate seamlessly with other systems and platforms (e.g., CRM software, analytics tools) through standard APIs or protocols.
- Compatibility: The system should be compatible with a wide range of devices, operating systems, and web browsers to ensure a consistent user experience.

7. Performance under Load:

- The system should be tested under simulated load conditions to ensure it can handle peak usage periods without performance degradation.
- Load testing should verify that the system's performance remains within acceptable limits even when subjected to high levels of concurrent user activity.

These non-functional requirements are essential for ensuring the overall quality, reliability, and security of an online survey system, it helps positive user experience and effective data collection and analysis.

2.4 HARDWARE REQUIREMENTS

- **Processor:** Core i3 7Gen
- **RAM:** 8GB
- **Hard Disk:** 128GB

2.5 SOFTWARE REQUIREMENT

- **Front-end :** PHP
- **Back-end :** XAMPP or MySQL

2.6 ARCHITECTURAL REVIEW

This desktop based application is based on 3-tier architecture of .Net Framework. The 3-tier includes the three hierarchy of the flow of programming logic from user interface to database and again database to user interface with the desired information requested by the clients. In between there involves the logic layer for effectively and correctly manipulating the request. The 3-tier includes the following :

2.6.1 Client tier

The visual part is implemented using all kinds of swing components, which does not make database calls. The main function of this tier is to display information to the user upon user's request generated by user's inputs such as firing button events.

2.6.2 Business Logic tier

The middle tier, business logic, is called by the client to make database queries. It provides core function of the system as well as connectivity to the data tier, which simplify tasks that were done by the clients tier.

2.6.3 Database tier

Data layer is also the class which gets the data from the business tier and sends it to the database or gets the data from the database and sends it to business tier. This is the actual DBMS access layer or object layer also called the business object. The database backend stores information which can be retrieved by using the MySQL Connectivity. MySQL connectivity is used to manage the communication between the middle tier and the backend database by issuing complex database queries.

CHAPTER 3

SYSTEM DESIGN

Designing is the most important phase of software development. It requires a careful planning and thinking on the part of the system designer. Designing software means to plan how the various parts of the software are going to achieve the desired goal. It should be done with utmost care because if the phase contains any error then that will effect the performance of the system, as a result it may take more processing time, more response time, extra coding workload etc.

Software design sits at the technical kernel of the software engineering process and is applied regardless of the software process model that is used. After the software requirements have been analyzed and specified, software design is the first of the three technical activities Designing, Coding and Testing that are required to build and verify the software. Each activity transforms information in such a manner that ultimately results in validated computer software.

3.1 DESIGN GOALS

The design goals of an Online Survey System project typically aim to achieve the following objectives:

- **User-Friendly Interface:** Design an intuitive and user-friendly interface that allows survey creators to easily create surveys and participants to navigate and respond to surveys efficiently.
- **Scalability:** Ensure the system can handle a large number of surveys, respondents, and responses without sacrificing performance or user experience.
- **Customization:** Provide flexibility for survey creators to customize survey questions, formats, and themes to suit their specific needs and branding requirements.
- **Security:** Implement robust security measures to protect survey data, prevent unauthorized access, and ensure the confidentiality and integrity of responses.
- **Accessibility:** Design the system to be accessible to users with disabilities, adhering to accessibility standards such as WCAG (Web Content Accessibility Guidelines).

- **Real-Time Analytics:** Provide real-time analytics and reporting features that allow survey creators to track response rates, analyze results, and generate reports to gain insights into survey responses.
- **Multi-Platform Compatibility:** Ensure compatibility with various devices and platforms, including desktops, laptops, tablets, and smartphones, to reach a wide audience of respondents.
- **Integration:** Allow integration with other systems and platforms, such as customer relationship management (CRM) systems or email marketing tools, to streamline survey distribution and data management processes.
- **Data Management:** Implement features for data validation, cleaning, and storage to ensure the accuracy, completeness, and consistency of survey responses.
- **Feedback Mechanisms:** Incorporate mechanisms for collecting feedback from survey creators and respondents to continuously improve the system's usability, functionality, and performance.

By focusing on these design goals, an Online Survey System project can deliver a comprehensive and user-friendly solution that meets the needs of both survey creators and respondents while maintaining security, scalability, and accessibility.

3.2 USE CASE DIAGRAM

A use case is a methodology used in system analysis to identify, clarify, and organize system requirements. The use case is made up of a set of possible sequences of interactions between systems and users in a particular environment and related to a particular goal.

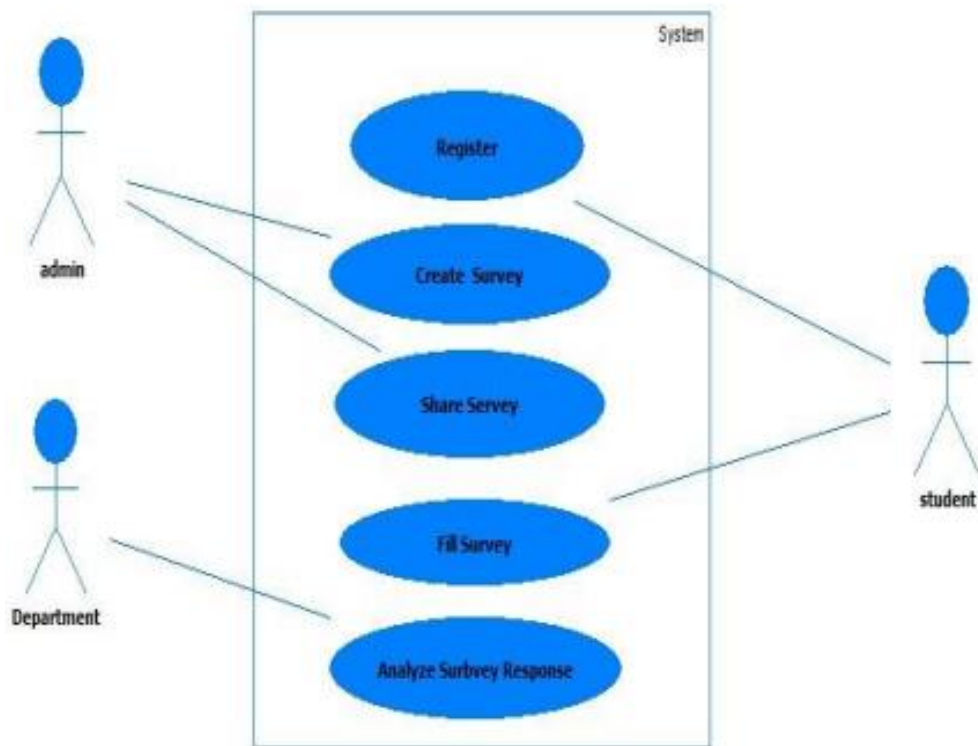


Fig 3.2 Use Case Diagram of Online Survey System

3.3 FUNCTIONAL FLOW OF THE SYSTEM

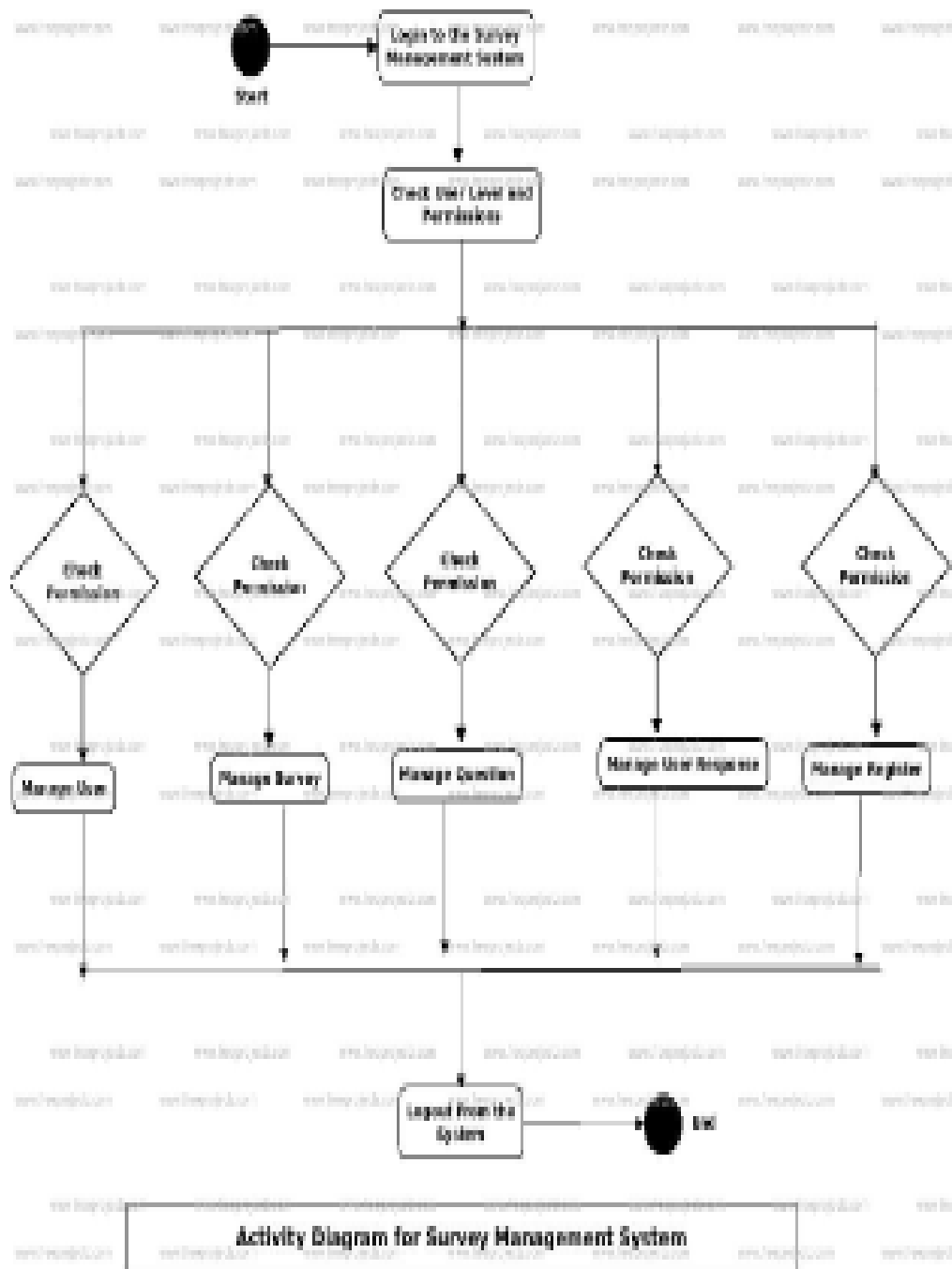


Fig 3.3 Functional Flow of Online Survey System

3.4 Design

A database is usually a fundamental component of the information system, especially in business oriented systems. Thus database design is part of system development. The following picture shows how database design is involved in the system development lifecycle. The phases in the middle of the picture (Database Design, Database Implementation) are the phases that you concentrate on in the Database Design course. The other phases are briefly described. They are part of the contents of the Systems Analysis and Design courses, for example. There are various methods of how the different phases of information system design, analysis and implementation can be done. Here the main tasks or goals are described but no method is introduced.

3.5 Database design

The process of constructing a model of the data used in an enterprise independent of all physical consideration ,(important entities, relationship, And attributes) The database design phase is divided into three steps:

- **Conceptual Database Design:** In the conceptual database design phase, the model of the data to be used independent of all physical considerations is to be constructed. The model is based on the requirements specification of the system.
- **Logical Database Design:** In the logical database design phase, the model of the data to be used is based on a specific data model, but independent of a particular database management system is constructed. This is based on the target data model for the database e.g. relational data model.
- **Physical Database Design:** In the physical database design phase, the description of the implementation of the database on secondary storage is created. The base relations, indexes, integrity constraints, security, etc. are defined using the SQL language. Entity : Real-world object distinguishable from other object Relation : A table with columns and rows. Attribute: A named column of a relation . Relational database : A collection of normalized tables Database Management System Selection: This in an optional phase. When there is a need for a new database management system (DBMS), this phase is done. DBMS means a database system like Access, SQL Server, MySQL, Oracle. Application Design: In the application design phase, the design of the user interface and the application programs that use and process the database are defined and designer.

3.6 Relational Database (RD)

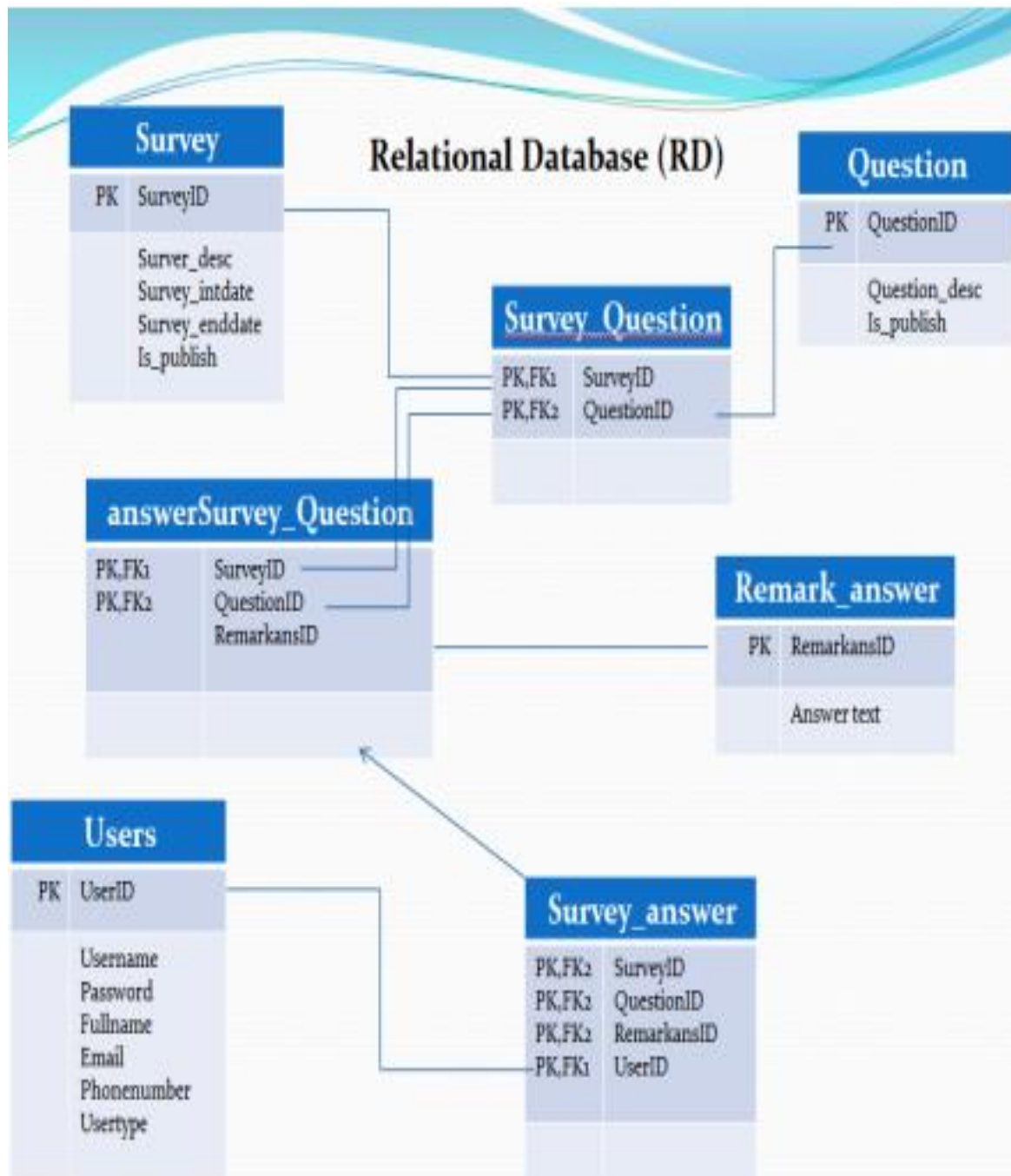


Fig3.6 Relational Database of Online Survey System

3.7 Entity Relationship Diagram (ER Diagram)

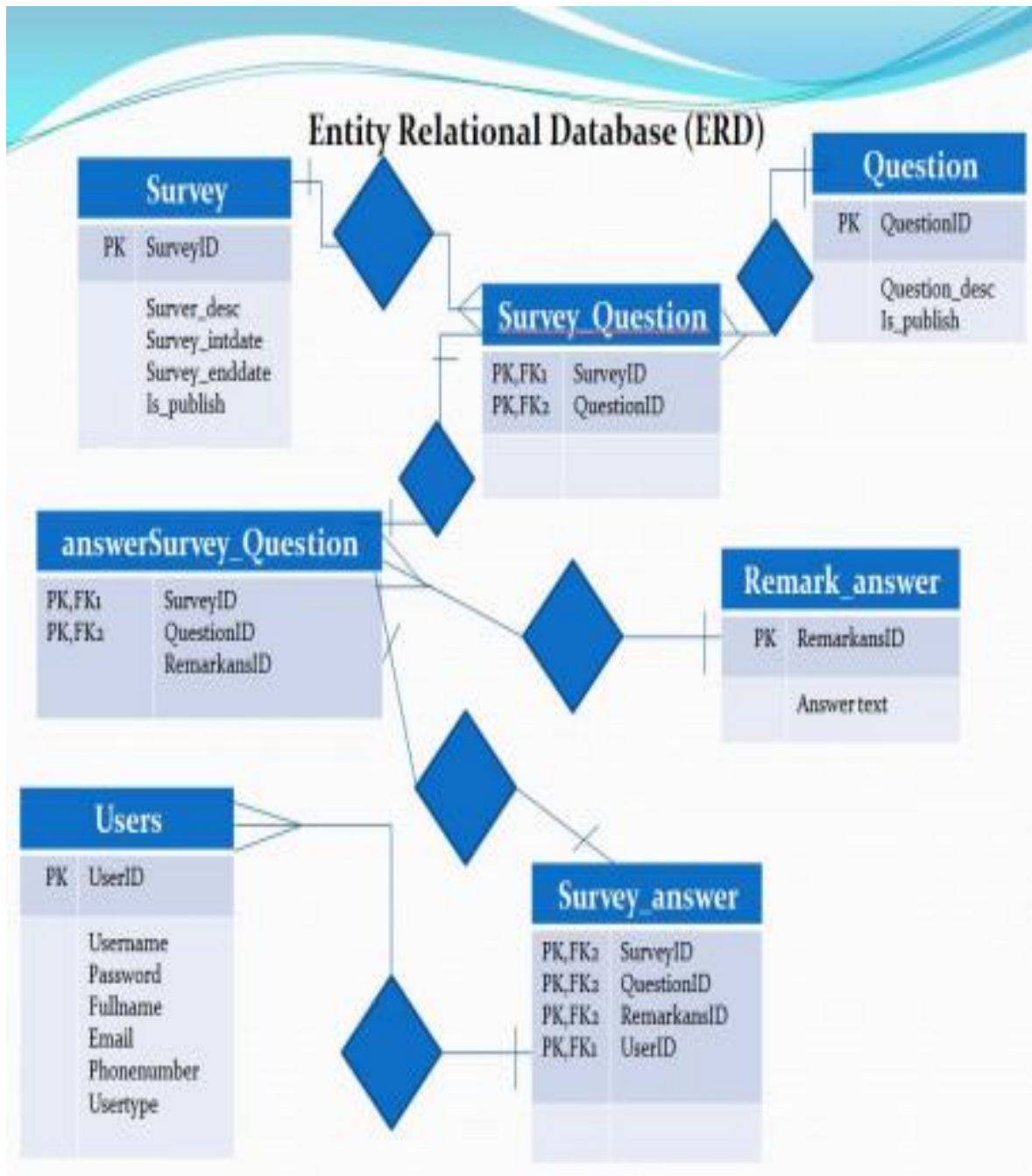


Fig.3.7 ER Diagram of Online Survey System

3.8 DATABASE TABLES

3.8.1 Table : Survey

Survey		
note	Column name	Data type
PK	SurveyID	Integer
	Surver_desc	String
	Survey_intdate	Date
	Survey_enddate	Date
Yes/no	Is_publish	Boolean

Table 3.8.1 : Survey

3.8.2 Database Table : Question

Question		
note	Column name	Data type
PK	QuestionID	Integer
	Question_desc	String
Yes/no	Is_publish	Boolean

Table 3.8.2 : Question

3.8.3 Table: Question

Question		
note	Column name	Data type
PK,FK1	SurveyID	Integer
PK,FK2	QuestionID	Integer

Table 3.8.3 : Question

3.8.4 Database Table: answerSurvey_Question

answerSurvey_Question		
note	Column name	Data type
PK,FK1	SurveyID	Integer
PK,FK2	QuestionID	Integer
PK,FK2	RemarkansID	Integer

Table 3.8.4: answerSurvey_Question

3.8.5 Table : User (Remark_answer)

Remark_answer		
note	Column name	Data type
PK	UserID	Integer
	Username	String
	Password	String
	Fullname	String
	Email	String
	Phonenumber	String
Admin/Student/department	Usertype	Integer

Table 3.8.5 : User (Remark_answer)

CHAPTER 4

TECHNOLOGY USED

4.1 HARDWARE REQUIREMENTS

S. N.	Description
1 .	PC with 5 GB or more Hard disk.
2 .	PC with 2 GB RAM.
3 .	PC with core i3 or above processor.

4.1.1 PC with 5 GB or more Hard disk:

This specifies the storage requirement for the PC. It should have a hard disk with a capacity of 5 gigabytes (GB) or more. This is where you store your operating system, software applications, and data.

4.1.2 PC with 2 GB RAM:

This sets the minimum random-access memory (RAM) requirement for the PC. It should have at least 2 gigabytes of RAM. RAM is essential for running applications and the operating system efficiently.

4.1.3 PC with core i3 or above processor:

This specifies the processor requirement for the PC. It should have an Intel Core i3 processor or a more powerful one. The processor is a crucial component that determines the computer's overall speed and performance.

4.2 SOFTWARE REQUIREMENTS

4.2.1 PHP

PHP, an acronym for Hypertext Preprocessor, is a widely-used, open-source scripting language primarily designed for web development. Born in 1994 as a personal project by Danish-Canadian programmer Rasmus Lerdorf, PHP has grown into one of the most popular server-side languages globally. Its journey has been marked by evolution, community contributions, and adaptation to the changing landscape of web development.

PHP's popularity in web development stems from its versatility and simplicity. Developers appreciate its ease of use, flexible syntax, and seamless integration with HTML, making it an ideal choice for server-side scripting. PHP scripts execute on the server, generating dynamic content that is then sent to the client's web browser, resulting in dynamic and interactive web applications.

One of PHP's primary use cases is building dynamic websites and web applications. Whether it's a simple blog, an e-commerce platform, or a social networking site, PHP provides the tools necessary to handle complex tasks such as user authentication, form processing, file uploads, and database interactions. Its compatibility with various database management systems, including MySQL, PostgreSQL, and SQLite, further enhances its utility in web development.

PHP is open-source and supported by a large community of developers worldwide. It runs on various platforms and is compatible with most web servers, including Apache and Nginx. Despite criticisms over its syntax and some historical security concerns, PHP remains a dominant force in web development due to its accessibility and widespread adoption.

4.2.2 What is MySql?

MySQL is a powerful open-source relational database management system (RDBMS) known for its speed, reliability, and ease of use. Developed by MySQL AB (now owned by Oracle Corporation), MySQL is widely used in web development and other applications requiring structured data storage and retrieval. It is particularly popular in conjunction with PHP, forming the LAMP (Linux, Apache, MySQL, PHP) stack, although it is compatible with various programming languages and platforms.

As an RDBMS, MySQL organizes data into tables with rows and columns, following the principles of relational database design. It uses SQL (Structured Query Language) for querying and manipulating data, allowing users to perform tasks such as creating, modifying, and querying databases and tables. MySQL supports a wide range of SQL features, including transactions, indexes, views, triggers, stored procedures, and user-defined functions, providing developers with powerful tools for data management and manipulation.

MySQL is highly scalable and can handle both small-scale applications with a few hundred records and large-scale systems with millions of records. It offers excellent performance through efficient indexing, caching mechanisms, and optimization techniques. Additionally, MySQL supports various storage engines, each optimized for different use cases, such as InnoDB for transactional processing and MyISAM for read-heavy workloads.

Furthermore, MySQL is well-supported by a vibrant community of developers and users, with extensive documentation, forums, and online resources available for assistance. It is actively developed and maintained, with frequent updates and new features added to enhance performance, security, and usability. Overall, MySQL is a robust and versatile database solution suitable for a wide range of applications, from simple websites to complex enterprise systems.

4.2.3 PHP + MySql

PHP combines with MySql are cross-platform(you can develop in Windows and serve on a Unix Platform).

PHP (Hypertext Preprocessor) and MySQL are commonly used together for web development, forming a powerful duo for building dynamic and interactive websites and web applications. PHP is a server-side scripting language known for its versatility and ease of integration with HTML, while MySQL is a popular relational database management system (RDBMS) known for its speed, reliability, and scalability.

In this combination, PHP is used to generate dynamic content, interact with databases, handle user input, and perform various server-side tasks. MySQL, on the other hand,

provides the backend database functionality, allowing developers to store, retrieve, and manipulate data efficiently using SQL (Structured Query Language) queries.

Together, PHP and MySQL enable developers to create feature-rich web applications that can store and manage large amounts of data, interact with users in real-time, and provide personalized experiences. This combination is widely used in content management systems (CMS), e-commerce platforms, social networking sites, and many other types of web applications.

4.2.4 Why PHP

PHP has maintained its popularity and relevance in web development for several reasons:

- **Ease of Use:** PHP is renowned for its simplicity and ease of use, especially for beginners. Its syntax is similar to C and Perl, making it accessible to developers from various programming backgrounds. Additionally, PHP's integration with HTML allows developers to embed PHP code directly within web pages, facilitating the creation of dynamic content effortlessly.
- **Versatility:** PHP is incredibly versatile and can be used for a wide range of web development tasks. Whether it's building simple websites, complex web applications, content management systems, e-commerce platforms, or APIs, PHP provides the tools and libraries necessary to get the job done efficiently.
- **Speed of Development:** PHP's rapid development cycle enables developers to prototype, iterate, and deploy web applications quickly. Its extensive ecosystem of frameworks, libraries, and tools streamlines development by providing pre-built components and abstractions for common tasks, reducing development time and effort.
- **Strong Community Support:** PHP boasts a large and active community of developers, contributors, and enthusiasts who continuously contribute to its growth and improvement. The PHP community maintains extensive documentation, provides support through forums and online communities, and develops open-source projects and libraries that benefit developers worldwide.

- **Compatibility:** PHP is compatible with various operating systems, web servers, and databases, making it highly versatile and adaptable to different environments. Whether you're deploying on Linux, Windows, Apache, Nginx, MySQL, PostgreSQL, or SQLite, PHP ensures compatibility and smooth operation across platforms.
- **Scalability:** While PHP's scalability has been a topic of debate in the past, modern PHP frameworks like Laravel, Symfony, and Yii provide robust solutions for building scalable and maintainable web applications. These frameworks incorporate best practices, design patterns, and features like caching, queuing, and scalability tools to ensure optimal performance as applications grow.
- **Cost-effectiveness:** PHP's open-source nature makes it an affordable option for web development projects of all sizes. There are no licensing fees associated with using PHP, and the availability of free tools, libraries, and resources further reduces development costs. Additionally, PHP's widespread adoption means there's a vast pool of PHP developers available for hire, driving down labor costs.
- **Legacy Codebase:** Many existing websites and applications are built on PHP, contributing to its continued relevance and demand in the industry. The vast ecosystem of PHP-based projects, frameworks, and CMS platforms ensures that developers proficient in PHP will find ample opportunities for employment and collaboration.

Overall, PHP's combination of ease of use, versatility, community support, compatibility, scalability, cost-effectiveness, and legacy codebase makes it a compelling choice for web development projects across industries and scales.

4.2.4 XAMPP

XAMPP, standing for Cross-Platform (X), Apache (A), MySQL (M), PHP (P), and Perl (P), is a comprehensive software package that serves as a web server solution stack. Developed by Apache Friends, XAMPP simplifies the process of setting up a local web server environment for developers, enabling them to create, test, and debug web applications or websites offline before deploying them to a live server.

At its core, XAMPP consists of several key components:

- **Apache:** Apache HTTP Server, commonly referred to as Apache, is an open-source web server software renowned for its reliability and performance. It serves as the foundation of the XAMPP stack, handling HTTP requests and delivering web content to users' browsers.
- **MySQL:** MySQL is a popular open-source relational database management system (RDBMS) known for its speed, scalability, and ease of use. It provides the database functionality within the XAMPP environment, allowing developers to store and manage data for their web applications.
- **PHP:** PHP, originally standing for Personal Home Page but now recursively defined as PHP: Hypertext Preprocessor, is a server-side scripting language widely used for web development. PHP enables developers to create dynamic web pages by embedding code within HTML, facilitating interactions with databases, file systems, and more.
- **Perl:** Perl is a high-level, general-purpose programming language known for its powerful text-processing capabilities and extensive library of modules. While less commonly used in web development compared to PHP, Perl is included in XAMPP to provide additional flexibility for developers who prefer its syntax and features.

XAMPP is designed to be cross-platform, meaning it can run on various operating systems including Windows, macOS, and Linux, making it accessible to a wide range of developers. Its ease of installation and configuration makes it particularly popular among beginners and those who require a local development environment without the complexity of setting up individual components manually.

Setting up XAMPP typically involves downloading the appropriate installer for your operating system from the Apache Friends website and following the installation instructions provided. Once installed, XAMPP provides a control panel interface that allows users to start, stop, and configure the Apache web server, MySQL database server, and other associated services with just a few clicks.

One of the primary benefits of XAMPP is its all-in-one nature, which eliminates the need for developers to install and configure each component separately. This streamlines the setup process and reduces the likelihood of compatibility issues between different software

versions. Additionally, XAMPP includes several pre-configured modules and tools that are commonly used in web development, such as phpMyAdmin for database management and FileZilla FTP server for file transfers.

XAMPP is not only useful for individual developers working on personal projects but also for teams collaborating on larger-scale web applications. Its portability allows developers to easily share their local development environments with team members, ensuring consistency across different development environments and reducing the risk of configuration discrepancies.

4.2.5 Apache XAMPP Server

MySQL is a powerful open-source relational database management system (RDBMS) known for its speed, reliability, and ease of use. Developed by MySQL AB (now owned by Oracle Corporation), MySQL is widely used in web development and other applications requiring structured data storage and retrieval. It is particularly popular in conjunction with PHP, forming the LAMP (Linux, Apache, MySQL, PHP) stack, although it is compatible with various programming languages and platforms.

As an RDBMS, MySQL organizes data into tables with rows and columns, following the principles of relational database design. It uses SQL (Structured Query Language) for querying and manipulating data, allowing users to perform tasks such as creating, modifying, and querying databases and tables. MySQL supports a wide range of SQL features, including transactions, indexes, views, triggers, stored procedures, and user-defined functions, providing developers with powerful tools for data management and manipulation.

MySQL is highly scalable and can handle both small-scale applications with a few hundred records and large-scale systems with millions of records. It offers excellent performance through efficient indexing, caching mechanisms, and optimization techniques. Additionally, MySQL supports various storage engines, each optimized for different use cases, such as InnoDB for transactional processing and MyISAM for read-heavy workloads.

Furthermore, MySQL is well-supported by a vibrant community of developers and users, with extensive documentation, forums, and online resources available for assistance. It is

actively developed and maintained, with frequent updates and new features added to enhance performance, security, and usability. Overall, MySQL is a robust and versatile database solution suitable for a wide range of applications, from simple websites to complex enterprise systems.

4.2.6 Localhost

"Localhost" refers to the standard hostname assigned to the loopback network interface of a computer, typically with the IP address 127.0.0.1 in IPv4 or ::1 in IPv6. In simpler terms, it's a way for a computer to refer to itself. When you type "localhost" into a web browser's address bar, the browser sends a request to the web server running on your own computer.

In the context of web development, developers often use localhost to test and develop websites and web applications locally before deploying them to a live server. They can set up a web server environment on their own computer, such as using software like XAMPP or WAMP, and access their projects via localhost in a web browser. This allows them to view and interact with their websites as if they were live on the internet, but without the need for an internet connection or publicly accessible server.

Using localhost for development provides several benefits, including:

- **Isolation:** Developers can work on their projects in a controlled environment without affecting the live website or application.
- **Speed:** Accessing a website via localhost is typically faster than accessing it over the internet, as there is no network latency involved.
- **Security:** Local development environments are typically more secure than publicly accessible servers, as they are not exposed to potential security threats from the internet.
- **Convenience:** Developers have full control over their local environment and can quickly make changes and test new features without waiting for server deployment or worrying about breaking the live site.

Overall, localhost is a valuable tool for web developers, providing a convenient and efficient way to develop and test websites and web applications locally before they go live.

CHAPTER 5

TESTING AND DEBUGGING

Software testing is a critical element of the ultimate review of specification design and coding. Testing of software leads to the uncovering of errors in the software functional and performance requirements are met. Testing also provides a good indication of software reliability and software quality as a whole. The result of different phases of testing are evaluated and then compared with the expected results. If the errors are uncovered, they are debugged and corrected. A strategy approach to software testing has the generic characteristics:

- Testing begins at the module level and works “outwards” towards the integration of the entire computer-based system.
- Different testing techniques are appropriate at different points of time.
- Testing and debugging are different activities, but debugging must be accommodated in the testing strategy

5.1 UNIT TESTING

The module interface is tested to ensure that information properly flows into and out of the program unit under test. The unit testing is normally considered as an adjunct step to coding step. Because modules are not a standalone program, drivers and/or stubs software must be developed for each unit. A driver is nothing more than a “main program” that accepts test cases data and passes it to the module. A stub serves to replace the modules that are subordinate to the modules to be tested. A stub may do minimal data manipulation, prints verification of entry and returns.

Approaches used for Unit Testing were:

- **Functional Test:** Each part of the code was tested individually and the panels were tested individually on all platforms to see if they are working properly.
- If they all work individually, they should work when we put them together. The problem of course is “putting them together”. This can be done in two ways:
- **Top-down integration:** Modules are integrated by moving downwards through the control hierarchy, beginning with main control module are incorporated into the structure in either a depth first or breadth first manner.
- **Bottom-up integration:** It begins with construction and testing with atomic modules i.e. modules at the lowest level of the program structure. Because modules are integrated from the bottom up, processing required for the modules subordinate to a given level is always available and the need of stubs is eliminated.

5.1.1 TESTING INCLUDES VERIFICATION AND VALIDATION

- **Verification :-** is a process of confirming that software meets its specification.
- **Validation :-** is the process of confirming that software meets the customer's requirements.

5.2 SYSTEM TESTING

System testing is a type of software testing that evaluates the overall functionality and performance of a complete and fully integrated software.

5.2.1 SYSTEM TESTING PROCESS:

System Testing is performed in the following steps:

- **Test Environment Setup:** Create testing environment for the better quality testing.
- **Create Test Case:** Generate test case for the testing process.
- **Create Test Data:** Generate the data that is to be tested
- **Execute Test Case:** After the generation of the test case and the test data, test cases are executed.
- **Defect Reporting:** Defects in the system are detected.
- **Regression Testing:** It is carried out to test the side effects of the testing process.

- Log Defects: Defects are fixed in this step.
- Retest: If the test is not successful then again test is performed.

5.3 ACCEPTANCE TESTING

It is formal testing according to user needs, requirements, and business processes conducted to determine whether a system satisfies the acceptance criteria or not and to enable the users, customers, or other authorized entities to determine whether to accept the system or not.

Acceptance Testing is the last phase of software testing performed after System Testing and before making the system available for actual use.

5.4 DEBUGGING

Debugging occurs as a consequence of successful testing i.e. when a test case uncovers an error, debugging is the process that results in identifying the location of error and the removal of error. The poorly understood mental process that connects a symptom to cause is debugging.

- This process will always have one of the two outcomes.
- The cause will be found, corrected and then removed or
- The cause will not be found. In the latter case the person performing debugging may suspect a cause, design a test case to help validate his suspicion, and then work towards the correction of errors in the interactive fashion.

Following three approaches of debugging were used:

- Debugging by Induction
- Debugging by Deduction
- Backtracking

CHAPTER 6

IMPLEMENTATION

Once the system was tested, the implementation phase started. A crucial phase in the system development life cycle is successful implementation of new system design. Implementations simply mean converting new system design into operation. This is the moment of truth the first question that strikes in every one's mind that whether the system will be able to give all the desired results as expected from system. The implementation phase is concerned with user training and file conversion.

The term implementation has different meanings, ranging from the conversion of a basic application to a complete replacement of computer system. Implementation is used here to mean the process of converting a new or revised system design into an operational one. Conversion is one aspect of implementation. The other aspects are the post implementation review and software maintenance.

There are three types of implementations

- Implementation of a computer system to replace a manual system
- Implementation of a new computer system to replace an existing one
- Implementation of a modified application to replace an existing one.

6.1 MODULES

In computer software, a module is an extension to a main program dedicated to a specific function. In programming, a module is a section of code that is added in as a whole or is designed for easy reusability

The proposed system of “Online Survey System” has the following modules

1. Login
2. Admin
3. Staff
4. Subscriber

CHAPTER 7

SCREENSHOTS

7.1 LOGIN PAGE

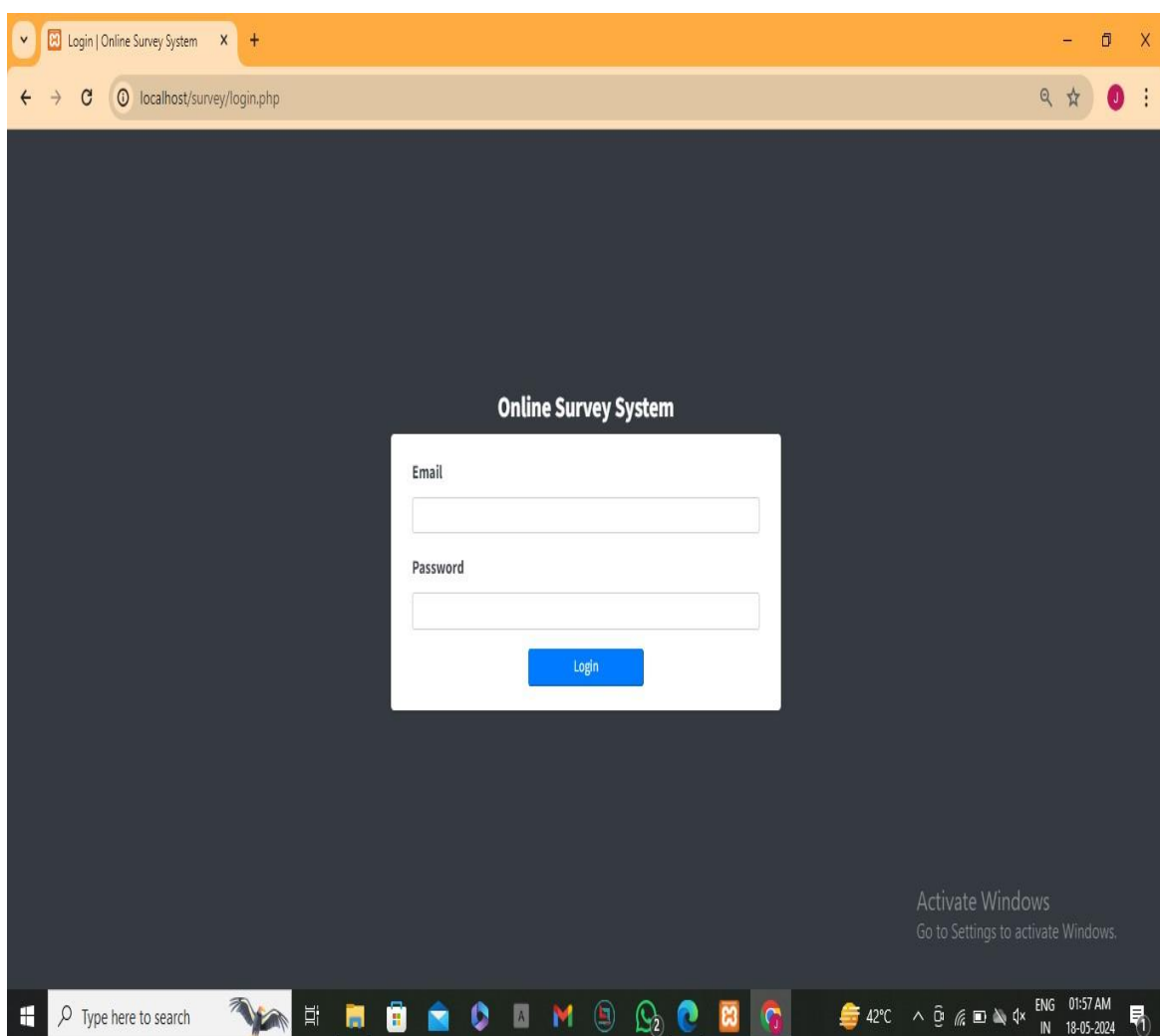


Fig. 7.1 Login Page of Online Survey System

7.2 Dashboard for Online Survey System

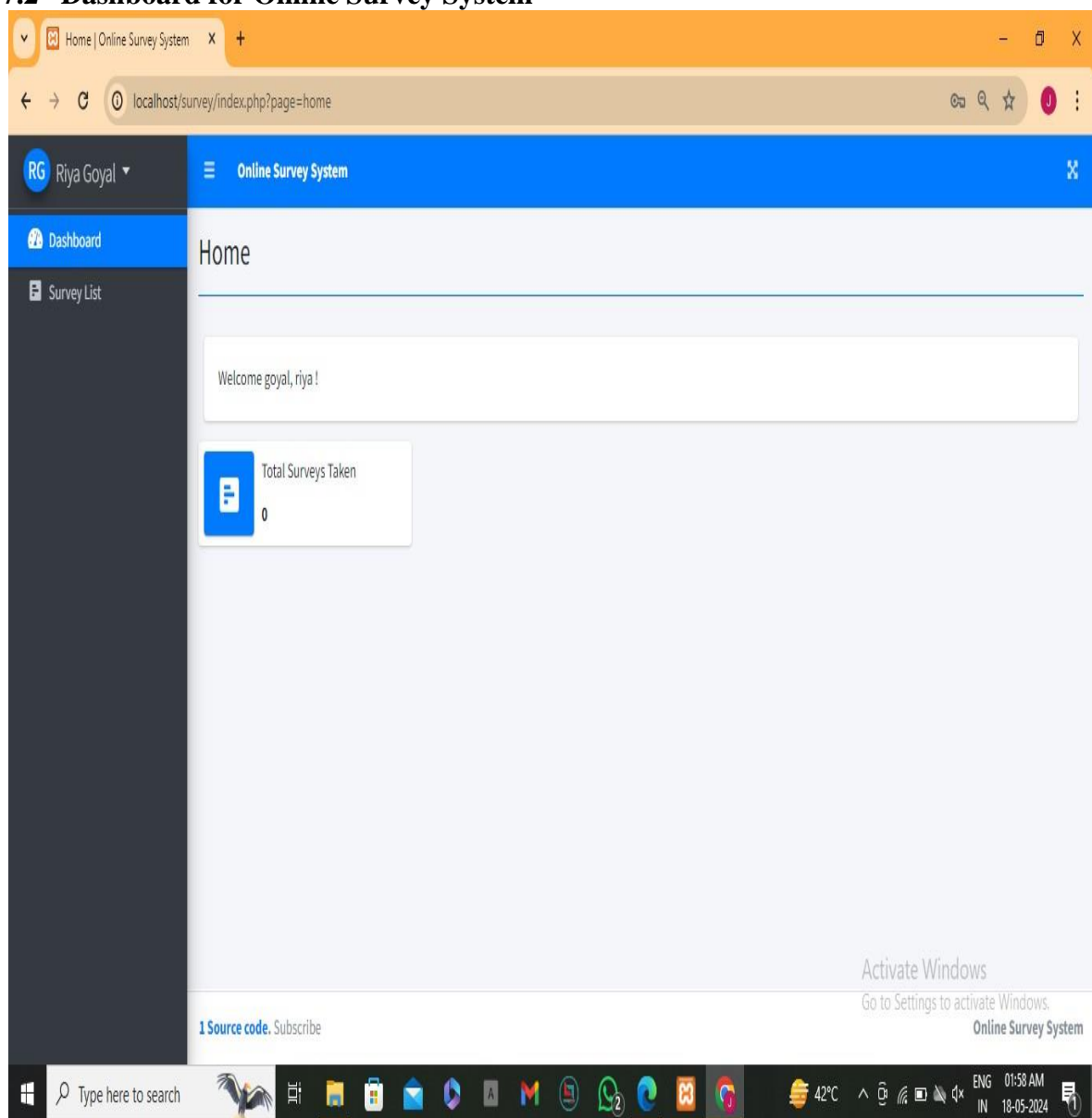


Fig 7.2 Dashboard for Users Survey

7.3 ADMIN CAN ADD NEW USERS

New User

Personal Information	System Credentials
First Name <input type="text" value="pq"/>	User Role <input type="text" value="Staff"/>
Middle Name <input type="text"/>	Email <input type="text" value="pq@gmail.com"/>
Last Name <input type="text" value="s"/>	Password <input type="password" value="..."/>
Contact No. <input type="text" value="9988776655"/>	Confirm Password <input type="password" value="..."/>
Address <input type="text" value="Delhi"/>	Password Matched.

1 Source code. Subscribe

Activate Windows
Go to Settings to activate Windows.
Online Survey System

Fig 7.3 Admin can Add New Users

7.4 Admin Page to view Survey List

The screenshot displays the 'Survey List' page of an 'Online Survey System'. The page is accessed via a web browser at the URL `localhost/survey/index.php?page=survey_list`. The interface includes a sidebar with navigation options: Dashboard, Users, Survey (selected), Add New, List, and Survey Report. The main content area shows a table of surveys with the following data:

#	Title	Description	Start	End	Action
1	Survey 2	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Donec in tempus turpis, sed fermentum risus...	Sep 01, 2020	Nov 27, 2020	[Edit] [Add] [Delete]
2	Survey 23	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Donec in tempus turpis, sed fermentum risus...	Sep 10, 2020	Nov 27, 2020	[Edit] [Add] [Delete]
3	Sample Survey 101	Sample only	Oct 01, 2020	Nov 23, 2020	[Edit] [Add] [Delete]
4	Survey 1	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Donec in tempus turpis, sed fermentum risus...	Oct 15, 2020	Dec 30, 2020	[Edit] [Add] [Delete]
5	Sample Survey	Sample Only	Nov 06, 2020	Dec 10, 2020	[Edit] [Add] [Delete]

The page also includes a search bar, a 'Show 10 entries' dropdown, and a 'Previous 1 Next' pagination control. The bottom of the page features a Windows taskbar with various application icons and system information, including the date and time (01:55 AM, 18-05-2024).

Fig.7.4 Admin Page: To view the survey the list

7.5 USER SEARCH FOR SURVEY

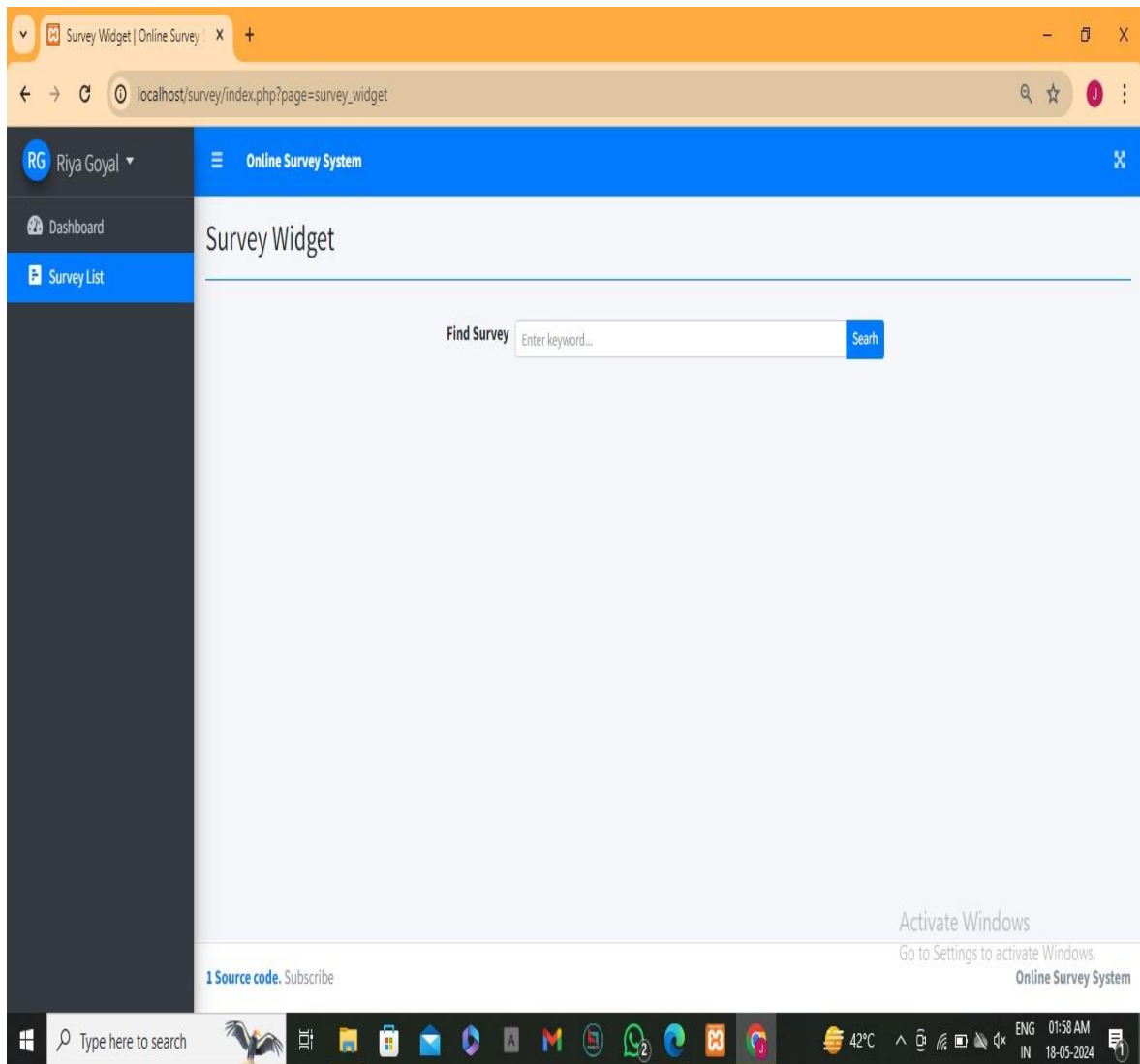


Fig 7.5 User Search for Survey

7.6 SURVEY REPORT GENERATED BY ADMIN

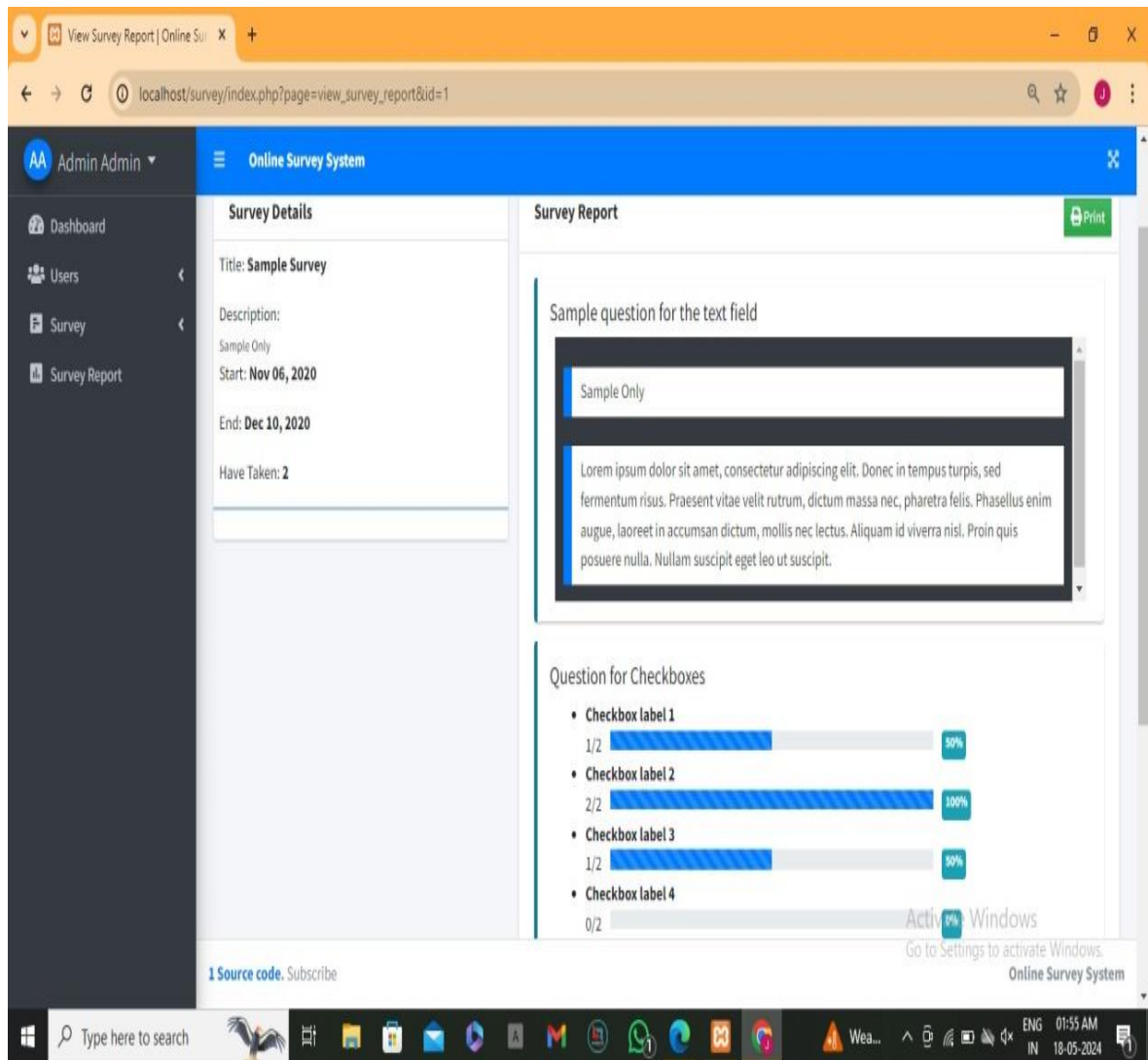


Fig. 7.6 Survey Report Generated by Admin

7.7 XAMPP CONTROL PANEL

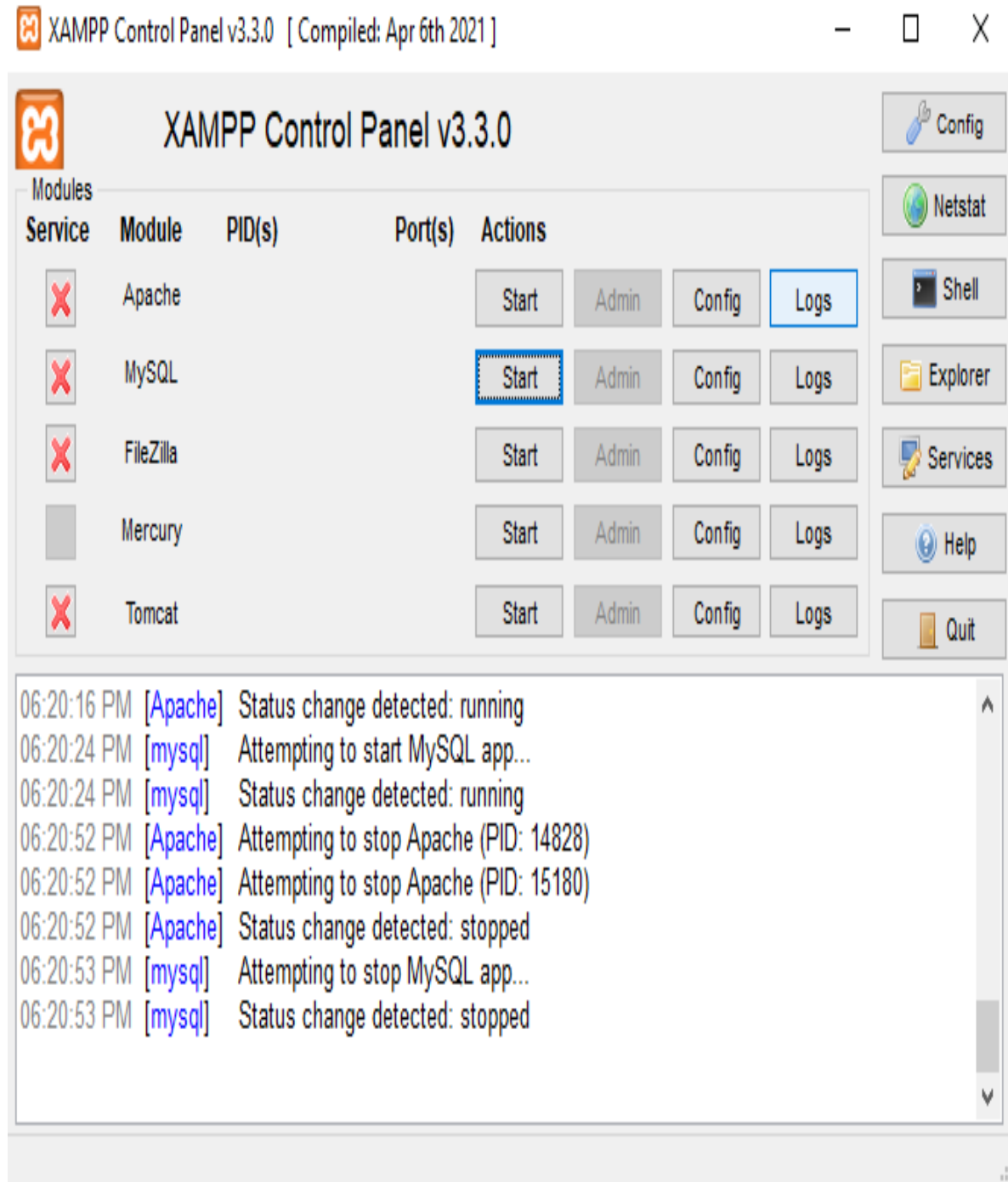


Fig 7.7. XAMPP Control Panel

7.8 TO START THE APACHE AND MYSQL ON XAMPP

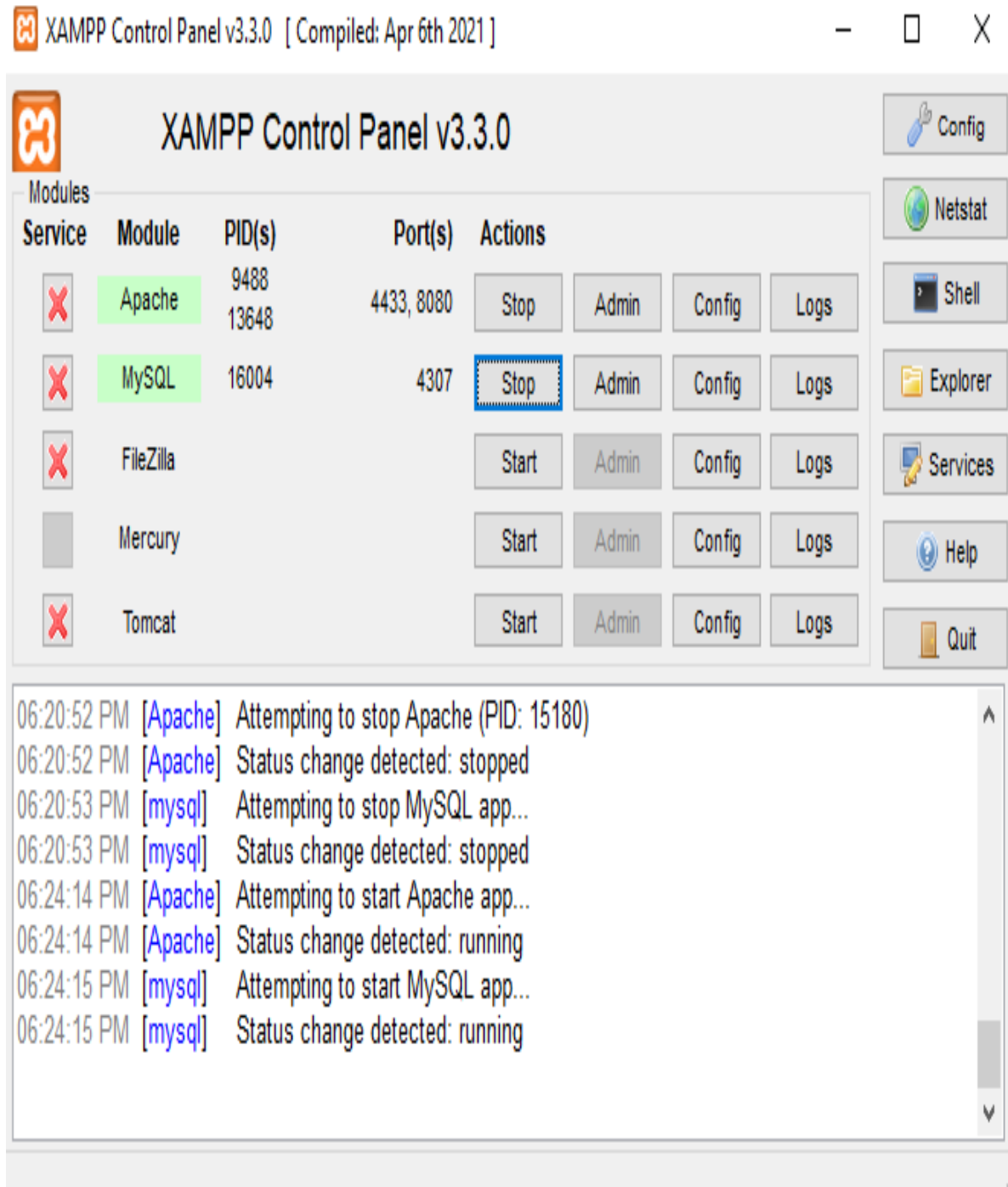


Fig 7.8 To start the Apache and MySQL on XAMPP

7.9 MYPHPADMIN ON XAMPP

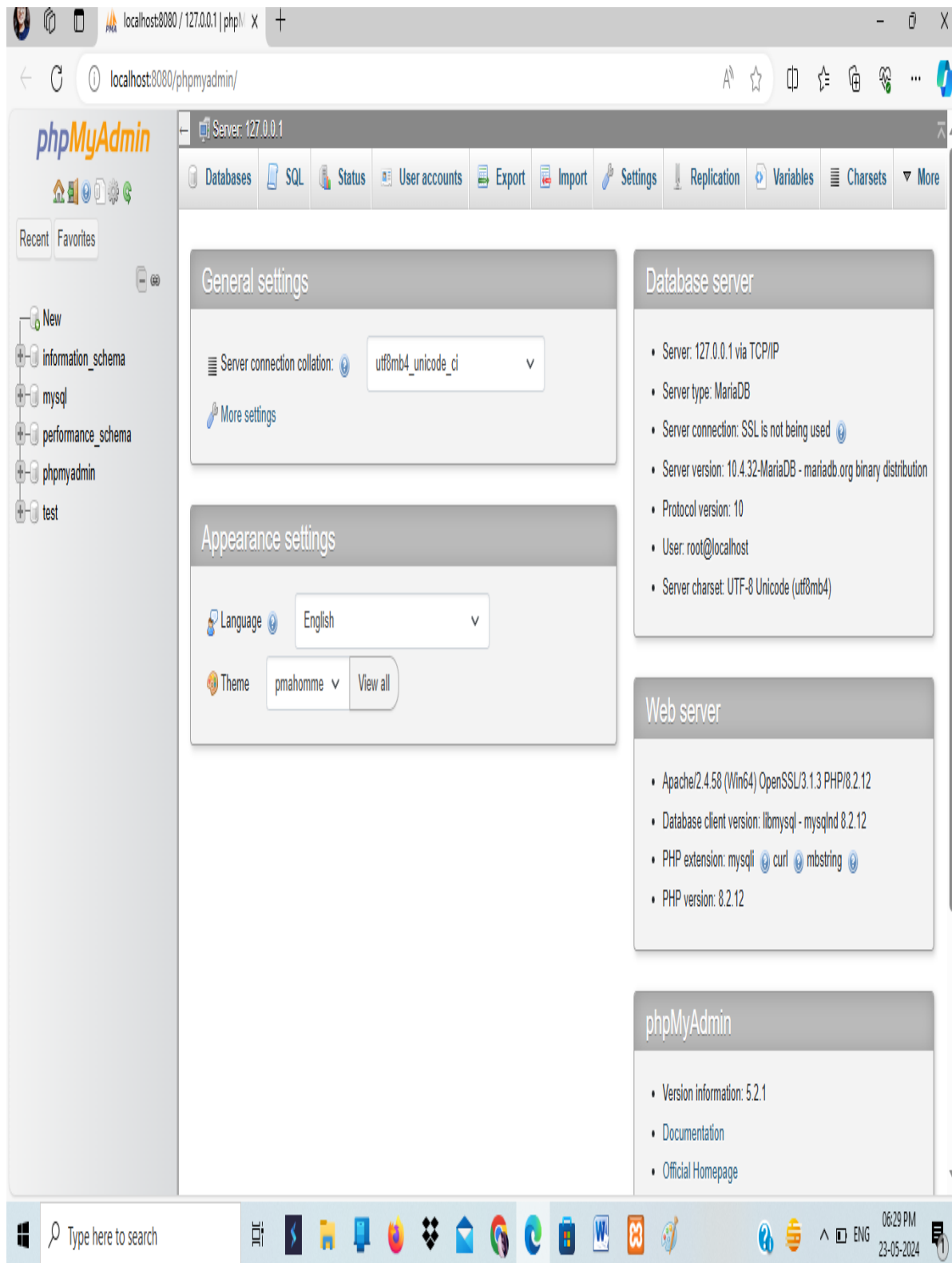


Fig 7.9 XAMPP MYPHPADMIN

7.10 INSERT DATA ON XAMPP



Fig 7.10 Data storage on XAMPP for Online Survey System

7.11 DATABASE TABLES

Server: 127.0.0.1 Database: survey_db

Structure SQL Search Query Export Import Operations Privileges Routines Events Triggers

Filters

Containing the word:

Table	Action	Rows	Type	Collation	Size	Overhead
<input type="checkbox"/> answers		6	InnoDB	utf8mb4_general_ci	16.0 KiB	-
<input type="checkbox"/> questions		3	InnoDB	utf8mb4_general_ci	16.0 KiB	-
<input type="checkbox"/> survey_set		5	InnoDB	utf8mb4_general_ci	16.0 KiB	-
<input type="checkbox"/> users		4	InnoDB	utf8mb4_general_ci	16.0 KiB	-
4 tables	Sum	18	InnoDB	utf8mb4_general_ci	64.0 KiB	0 B

☐ Check all With selected:

Table name: Number of columns:

Console

Fig 7.11 Database Tables of the Online Survey System

CHAPTER 8

CONCLUSION

8.1 LIMITATION OF THE PROJECT

Due to less knowledge in particular fields and limited time we were not able to fulfil all our expectations that we expected we could do while the project got started.

We hope these limitations are considerable. Some of the project limitations are:

- User must have a valid email id.
- User can vote only one time.
- Only registered users can add and edit the details and categories

8.2 CONCLUSION

Our aim was to develop an online computerized system which would be able to fulfill all the basic requirements of users (owner/user's) and we are successful to achieve most of the features, which have been proposed by us, but certain limitations are also there. Our software is user friendly. It can be easily understandable by any person who is able to operate a computer. Database is used to store information so that it will be useful in the future. On the basis of testing, we find that our project is working properly and correctly without any error in all cases. This project satisfies all validity constraints, which we applied. At last, we find that the project is successfully running.

8.3 FUTURE ENHANCEMENTS

“Online Survey System” is an effort to make a system through which we can find out the result of survey online among valid categories of the user’s easily and instantly. In the future we enhance our system in the following ways:

- We add our system in various social networking sites in which many people communicate with each other and also we get the opinion of those people what they think about the particular problem.
- We also add functionalities like Orkut in which user’s can send scrap’s to each other.
- Used in future as online market profile analysis
- In future we can add a chatting facility, and a quiz game etc.

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