A Mini Project Report

on

SOCIAL SPARK

by

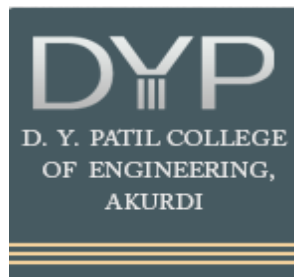**Sudhanshu Mishra (T1751104)**
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<u>CERTIFICATE</u>

This is to certify that,

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of class T.E IT; have successfully completed their mini project work on "**SOCIAL SPARK**''
at D. Y. Patil College of Engineering in the partial fulfillment of the Graduate Degree course
in T.E at the Department of **Information Technology**, in the academic **Year 2019-2020**
Semester – I as prescribed by the **Savitribai Phule Pune University,Pune-07**.

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ABSTRACT

There is a huge problem that is found in the students of this generation and that is, "they hesitate to have a communication". Either it be communicating with teacher talking about a doubt or it be communicating with an unknown in order to make new friends. They all have cultivated this fear of rejection within them, and this comes along with using social media platforms. Students even worry if teachers would insult them in front of a class for asking a silly doubt, or his class mates might bully him/her.

The power of social media is not hidden from the world now. Around 3 billion of the entire population uses Facebook today, and it's a known fact that this platform provides a user friendly interface to communicate within your community through the globe. It is really very easy to text anyone, the rejection here is not real, it doesn't bother you much as it's a virtual "you". The biggest factor that kills your conversations is lack of trust . Social Media gives you awesomely efficient way to build that trust.

The idea of social spark is to connect the teachers and students of the an university or a campus over a platform where students could discuss about their doubts, talk about events, activities going within campus and a lot more. This is like solving their problem in a way they understand the best. They would love to use this platform as they are familiar with social media. This platform "SOCIAL SPARK" is more of a open discussion forum very familiar to the Facebook.

Chapter 1
Introduction

1.1 Motivation

We are living in the 21ˢᵗ century, where technology is evolving every passing minute,. Social media is one of the best and the worst thing that happened to humans in this century. It's very important to know the limits. The excessive use of social media is affecting the kids of this generation, they hesitate to have a conversation. This is affecting the students in classrooms where they fear to ask doubts, make new friends. It is important to address this issue and use this same technology to solve the current problem.

1.2 Problem Statement

The problem is here to create a platform that will help connect teachers and students in such a way that they could interact without any sort of hesitation. This platform should bridge the communication gap between both of them. It should also allow each of them to upload images and send text messages.

1.3 Framework of the proposed work in project

1.3.1 MySQL

MySQL is a fast, easy-to-use RDBMS being used for many small and big businesses. MySQL is developed, marketed and supported by MySQL AB, which is a Swedish company. MySQL is becoming so popular because of many good reasons:

- MySQL is released under an open-source license. So, you have nothing to pay to use it.
- MySQL is a very powerful program in its own right. It handles a large subset of the functionality of the most expensive and powerful database packages.
- MySQL uses a standard form of the well-known SQL data language.
- MySQL works on many operating systems and with many languages including PHP, PERL, C, C++, JAVA, etc.
- MySQL works very quickly and works well even with large data sets.
- MySQL is very friendly to PHP, the most appreciated language for web development.
- MySQL is customizable. The open-source GPL license allows programmers to modify the MySQL software to fit their own specific environments.

1.3.2 XAMPP Server:

- XAMPP is an open source software developed by <u>Apache friends.</u> XAMPP software package contains Apache distributions for Apache server, MariaDB, PHP, and Perl. And it is basically a local host or a local server. This local server works on your own desktop or laptop computer. The use of XAMPP is to test the clients or your website before uploading it to the remote web server. This XAMPP server software gives you the suitable environment for testing MYSQL, PHP, Apache and Perl projects on the local computer.

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- The full form of XAMPP is X stands for Cross-platform, (A) Apache server, (M) MariaDB, (P) PHP and (P) Perl. The Cross-platform usually means that it can run on any computer with any operating system.

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- Next MariaDB is the most famous database server and it is developed by MYSQL team. PHP usually provides a space for web development. PHP is a server-side scripting

- language. And the last Perl is a programming language and is used to develop a web application. The XAMPP installation process is very simple and fast. Once XAMPP is installed on your local computer it acts as a local server or localhost. You can test the websites before uploading it to the remote web server. This XAMPP server software gives you a suitable environment for testing MYSQL, PHP, Apache and Perl applications on a local computer.

1.3.3 PHP:

- PHP is typically used as a server-side language (as opposed to a language like JavaScript that's generally executed on the client-side). So what does that mean? In programming terms, client-side refers to website activity that takes place locally on a user's computer through the user's web browser. Client-side languages like HTML, CSS, and JavaScript give instructions that web browsers can parse and translate into content on your computer screen. Notice JavaScript (a scripting language like PHP) is on that list. Again, the processes scripted by JavaScript take place on the client-side—JS provides instructions that can be understood by and executed in your web browser. Client-side is the side you see when you're using the internet.

1.3.4   Visual Code Studio:

- Visual Studio Code combines the simplicity of a source code editor with powerful developer tooling, like IntelliSense code completion and debugging.

- First and foremost, it is an editor that gets out of your way. The delightfully frictionless edit-build-debug cycle means less time fiddling with your environment, and more time executing on your ideas.
- Available for macOS, Linux, and Windows
- Edit, build, and debug with ease
- At its heart, Visual Studio Code features a lightning fast source code editor, perfect for day-to-day use. With support for hundreds of languages, VS Code helps you be instantly productive with syntax highlighting, bracket-matching, auto-indentation, box-selection, snippets, and more. Intuitive keyboard shortcuts, easy customization and community-contributed keyboard shortcut mappings let you navigate your code with ease.
- Customize every feature to your liking and install any number of third-party extensions. While most scenarios work "out of the box" with no configuration, VS Code also grows with you, and we encourage you to optimize your experience to suit your unique needs. VS Code is an open-source project so you can also contribute to the growing and vibrant community on GitHub.
- Built with love for the Web. Code includes enriched built-in support for Node.js development with JavaScript and TypeScript, powered by the same underlying technologies that drive Visual Studio. VS Code also includes great tooling for web technologies such as JSX/React, HTML, CSS, SCSS, Less, and JSON.

Chapter 2
Requirement Specifications

2.1 Hardware Specifications

1. Intel Octa core Processor (Minimum).

2. 8GB RAM Recommended, 1GB RAM

3. Storage – 20GB

4. Processor (CPU) with 2 gigahertz (GHz) frequency or above

5. A minimum of 2 GB of RAM.

6. Monitor Resolution 1024 X 768 or higher

7. A minimum of 20 GB of available space on the hard disk

8. Internet Connection Broadband (high-speed) Internet connection with a speed of 4 Mbps or higher

9. Keyboard and a Microsoft Mouse or some other compatible pointing device.

2.2 Software Specifications

1. Front End: HTML, CSS, Bootstrap.
2. Back End: PHP.
3. Database: MySQL.

2.3Browsers:

1. Chrome* 36+
2. Edge* 20+
3. Mozilla Firefox 31+
4. Internet Explorer 11+ (Windows only)
5. Safari 6+ (MacOS only)

Chapter 3
Entity-Relationship Diagram

An entity–relationship model (or ER model) describes interrelated things of interest in a specific domain of knowledge. A basic ER model is composed of entity types (which classify the things of interest) and specifies relationships that can exist between entities (instances of those entity types).

In software engineering, an ER model is commonly formed to represent things a business needs to remember in order to perform business processes. Consequently, the ER model becomes an abstract data model, that defines a data or information structure which can be implemented in a database, typically a relational database.

Entity–relationship modelling was developed for database and design by Peter Chen and published in a 1976 paper. However, variants of the idea existed previously. Some ER models show super and subtype entities connected by generalization-specialization relationships, and an ER model can be used also in the specification of domain-specific ontologies.

An ER diagram is a means of visualizing how the information system produces is related.

Following are the components of ER Diagram

1. Entity:

An entity is an object or component of data. An entity is represented as rectangle in an ER diagram.

For example: In the following ER diagram we have two entities Student and College and these two entities have many to one relationship as many students study in a single college. We will read more about relationships later, for now focus on entities.

2. Attribute:

An attribute describes the property of an entity. An attribute is represented as Oval in an ER diagram. There are four types of attributes: Simple, Composite, Multivalued, Derived

3. Relationship:

A relationship is represented by diamond shape in ER diagram, it shows the relationship among entities. There are four types of relationships.

4. **Actions:**

   Actions are represented by diamond shapes, shows how two entities share information in the database.

5. **Connecting Lines:**

   Solid lines that connects attributes to show the relationship of entities in the diagram.

6. **Cardinality:**

   Cardinality specifies how many instances of an entity of an entity relate to one instance of another entity. Ordinality is also linked closely to Cardinality.
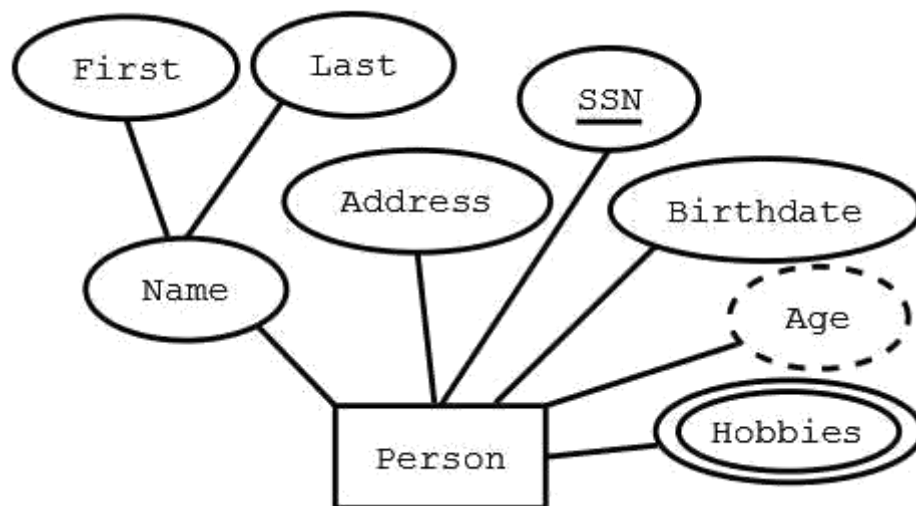

Figure 3.1. Graphical Representation of E-R Diagram. (Courtesy: Wikipedia)

Entity Relationships and Semantic modeling:

Semantic model

A semantic model is a model of concepts, it is sometimes called a "platform independent model". It is an intensional model. At the latest since Carnap, it is well known that:

"...the full meaning of a concept is constituted by two aspects, its intension and its extension. The first part comprises the embedding of a concept in the world of concepts as a whole, i.e. the totality of all relations to other concepts. The second part establishes the referential meaning of the concept, i.e. its counterpart in the real or in a possible world".

Extension model

An extensional model is one that maps to the elements of a particular methodology or technology, and is thus a "platform specific model". The UML specification explicitly states that associations in class models are extensional and this is in fact self-evident by considering the extensive array of additional "adornments" provided by the specification over and above those provided by any of the prior candidate "semantic modelling languages "UML as a Data Modeling Notation, Part 2"

Entity–relationship origins

Peter Chen, the father of ER modeling said in his seminal paper:

"The entity-relationship model adopts the more natural view that the real world consists of entities and relationships. It incorporates some of the important semantic information about the real world."

In his original 1976 article Chen explicitly contrasts entity–relationship diagrams with record modelling techniques:

"The data structure diagram is a representation of the organization of records and is not an exact representation of entities and relationships."

SOCIALSPARK : ER DIAGRAM
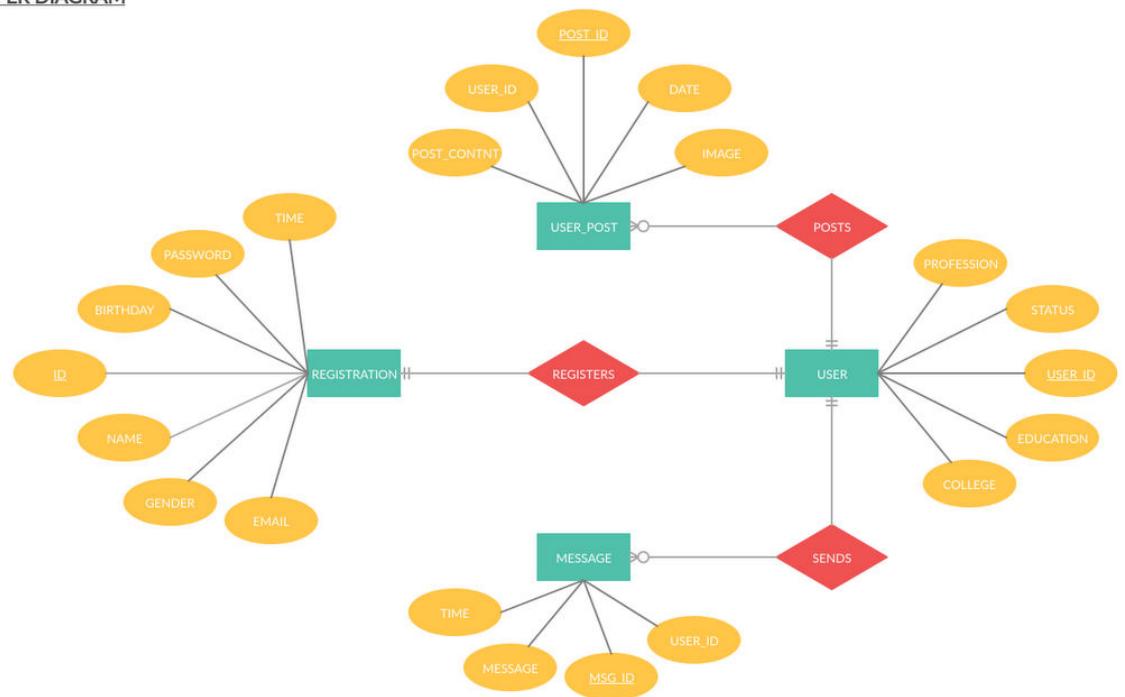
E-R Diagram – SOCIAL SPARK

Chapter 4
Tables / Collections/ Use Case Diagram

4.1 LIST OF TABLES
4.1.1 Register Table

Field	Description	Extra
time	timestamp	current_timestamp() (default)
id	int(11)	
first name	varchar(255)	
last name	varchar(255)	
email	varchar(255)	
password	Date	
birthday	varchar(255)	
gender	varchar(255)	
user_image	varchar(255)	user_black_profile.jpg(default image)
cover_image	varchar(255)	

4.1.2 User Details Table

Field	Description
id	int(11)
user_id	int(11)
status	varchar(20)
profession	varchar(20)
education	varchar(20)
college	varchar(255)

4.1.3 User Post Table

Field	Description
post_id	int(255)
user_id	int(255)
post_content	text
upload_image	varchar(255)

4.1.4 Message Table

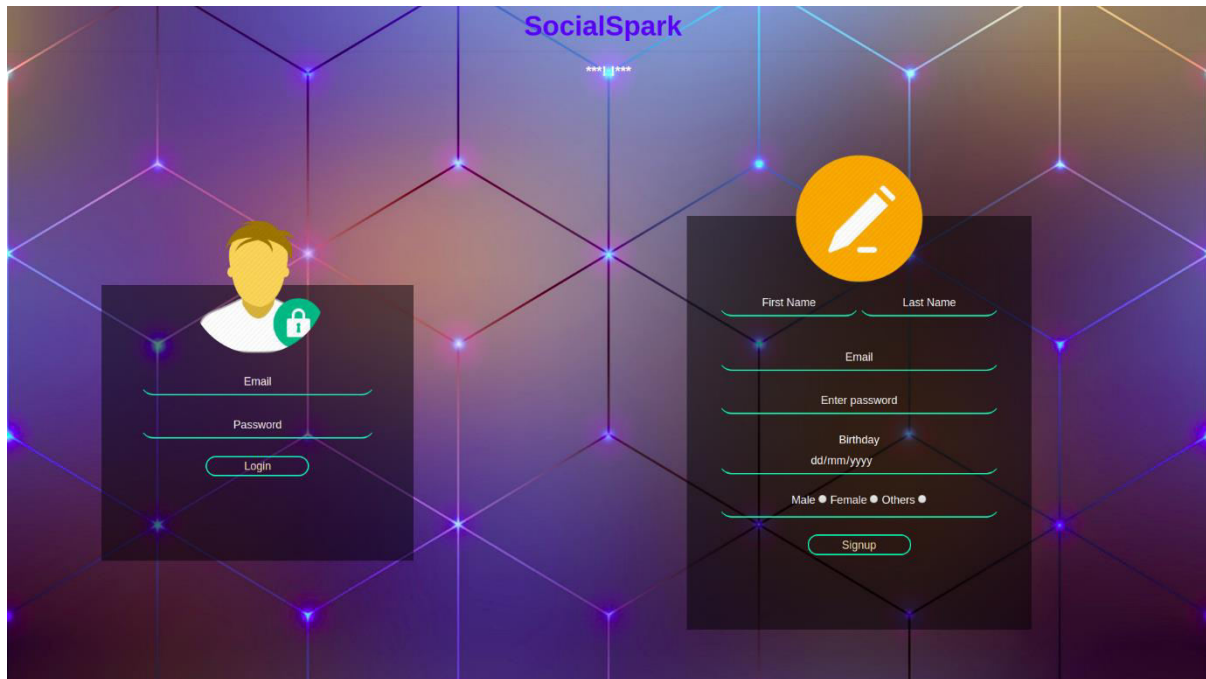| Field	Description
message_id	int(11)
User_id	int(11)
message	text
time	timestamp

4.2 Use Case Diagram
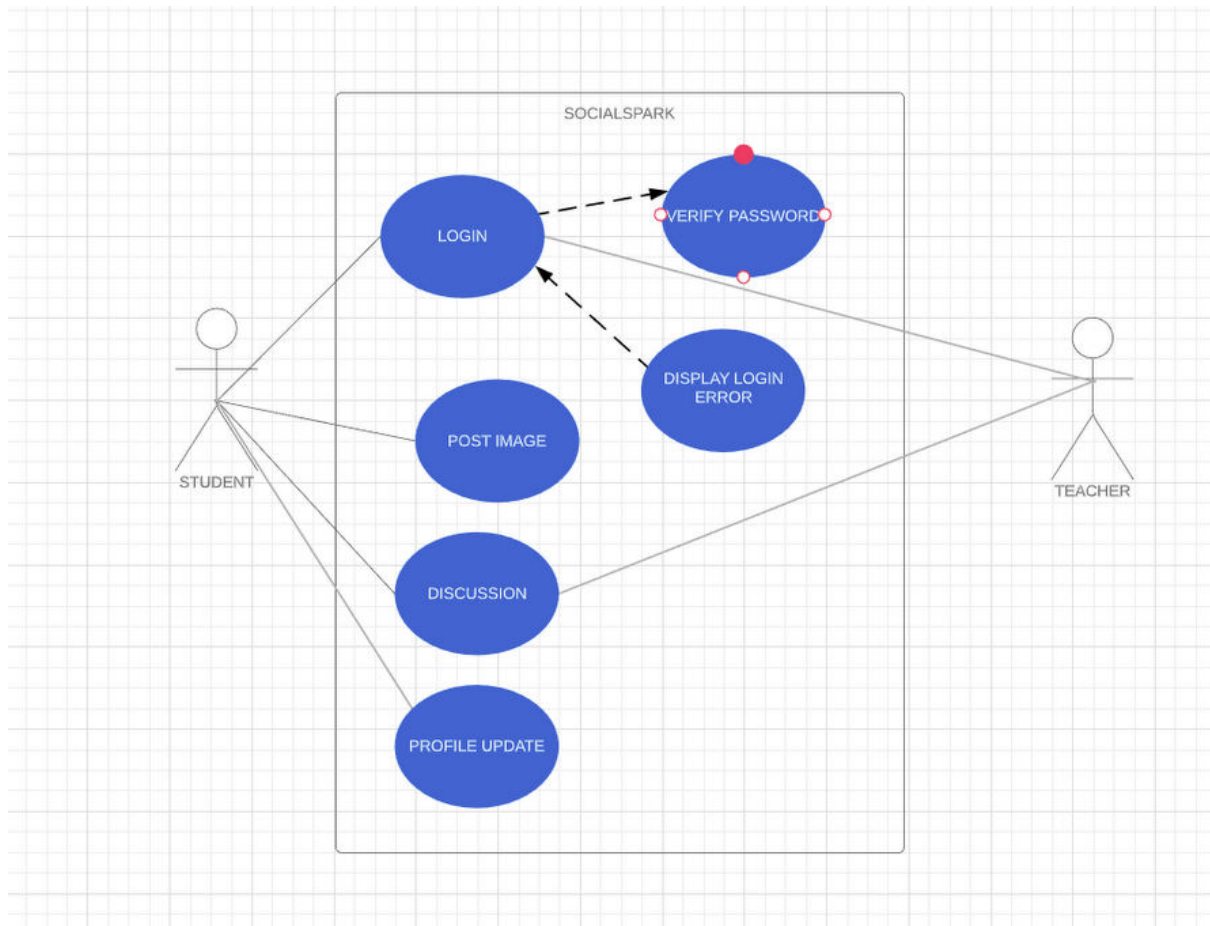
4.2 Use Case Diagram

Chapter 5
Forms/JFrames

5.1. Register and login form

- While registration there are validation checks and also a welcome mail is send to the registered Email Id. The password is encrypted by hashing.

5.2. Update form

5.2. Upload Image

5.2. Sending Message

Chapter 6
Features

- **User Friendly UI:**

  This application is easy to use for students. It's not hectic for users. Also, all actions can be performed quickly that they don't have to scratch their brains looking for help.

- **Time saving:**

  Having a doubt at 9PM, no worries! Just drop your query and any teacher having knowledge of that subject will help you out.

- **Use full for Updates:**

  It provides a common platform for teachers and students therefore no need to forward a single message to all the groups/ classes , just upload it on social spark and everybody would know the message/ notice.

- **Email Validation:**

  Every user gets a welcome mail from social spark.

- **Protected Passwords:**

  We don't know your secret password. It is encrypted using hashing. So your password is still protected! No worries!

Chapter 7
Conclusion

Socialspark is the website which is intended to fill the increasing gap between teachers and students. Day by day students are getting more friendly with the technology and they find it difficult to communicate their doubts with teachers. Students find it easy to communicate over the digital platforms such as WhatsApp, Facebook, open discussion forums such as Stackoverflow.

At Socialspark, we have combined the comfort of Social network and the discussion forum making it easy to use. Since it provides features of discussion forum, other students can also help students clearing their doubts. This gives the flexibility to the platform.

The final conclusion is that Socialspark is different approach from the students perspective to the fill in the gap between teachers and students. Also we got to learn many things while building Social Spark.

References

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